

**COMMERCE, JUSTICE, SCIENCE, AND RE-  
LATED AGENCIES APPROPRIATIONS FOR  
FISCAL YEAR 2022**

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 THE AMERICAN BAR ASSOCIATION

April 1, 2021

The Honorable Jeanne Shaheen,  
*Chair*  
Subcommittee on Commerce, Justice,  
Science, and Related Agencies  
Committee on Appropriations  
United States Senate  
Washington, DC 20510

The Honorable Jerry Moran,  
*Ranking Member*  
Subcommittee on Commerce, Justice,  
Science, and Related Agencies  
Committee on Appropriations  
United States Senate  
Washington, DC 20510

The Honorable Matt Cartwright,  
*Chair*  
Subcommittee on Commerce, Justice,  
Science, and Related Agencies  
Committee on Appropriations  
United States House of Representatives  
Washington, DC 20515

The Honorable Robert Aderholt,  
*Ranking Member*  
Subcommittee on Commerce, Justice,  
Science, and Related Agencies  
Committee on Appropriations  
United States House of Representatives  
Washington, DC 20515

Re: Funding for Tribal Courts to Ensure Access to Justice Following the U.S. Supreme Court Decision in *McGirt v Oklahoma*

DEAR CHAIR SHAHEEN, RANKING MEMBER MORAN, CHAIR CARTWRIGHT, AND RANKING MEMBER ADERHOLT:

On behalf of the American Bar Association (ABA), the largest voluntary association of lawyers and legal professionals in the world, I write to express our concerns over inadequate funding of Tribal criminal justice that has contributed to staggering rates of violent crime and victimization on many Indian reservations. This is not a new problem.

The underfunding of the Tribal justice systems has been well-documented in report after report for over two decades.<sup>1</sup> Most recently, in 2020, the Bureau of Indian

<sup>1</sup>U.S. Civil Rights Commission 1991 Report *The Indian Civil Rights Act: A Report of the United States Commission on Civil Rights*; the U. S. Civil Rights Commission 2003 Report *A Quiet Crisis: Federal Funding and Unmet Needs in Indian Country*; the Indian Law and Order Commission 2013 report *A Roadmap for Making Native America Safer: Report to the President*

Continued

Affairs (BIA) submitted a *Report to Congress on Spending, Staffing, and Estimated Funding Costs for Public Safety and Justice Programs in Indian Country* estimating that \$1.2 billion was needed for Tribal courts to provide a minimum base level of service to all federally recognized Tribal nations in 2018. A recent Supreme Court decision leaves no doubt that even this level of funding, which was never achieved, will not be sufficient to meet current needs.

In July 2020, the United States Supreme Court recognized the inherent Tribal jurisdiction over Native American sovereign lands in Oklahoma. In its decision in *McGirt v Oklahoma*, the Court recognized that simply because a State encroaches onto sovereign Indian Lands, that does not give the State authority to exercise jurisdiction to prosecute State law crimes in contravention of treaty provisions.

As a result, Tribal and Federal courts and law enforcement must now devote substantial resources to criminal cases that had been heard in State court prior to the decision in *McGirt*. On March 11, 2021, the Oklahoma Court of Criminal Appeals confirmed that both the Cherokee Nation and Chickasaw Nation reservations are intact based on *McGirt*, and the State courts within each of the reservation counties have started releasing defendants to be retried before Tribal and or Federal courts. (The Oklahoma Court of Criminal Appeals has not yet ruled on cases involving the Seminole Nation and the Choctaw Nation.) Consequently, several thousand cases will now be redirected to Tribal courts in Oklahoma, creating an even greater need for funding to ensure adequate numbers of judges, support staff, facilities, and equipment to address these long overdue proceedings. The need will, of course, be much greater if *McGirt* impacts treaties outside of Oklahoma.

The American Bar Association has long affirmed that Tribal justice systems are the primary and most appropriate institutions for maintaining order in Tribal communities. We have repeatedly urged the United States Government “to support quality and accessible justice by ensuring adequate, stable, long-term funding for Tribal justice systems”.<sup>2</sup> Despite urgent pleas by Tribes, Tribal courts, and concerned organizations representing myriad disciplines for the U.S. Government to appropriate the funds that are needed to provide the more than 350 Tribal justice systems with the resources they need to do this important work, there is a critical funding shortfall that needs to be recognized and rectified as we enter the fiscal year 2022 budget cycle.

We appreciate the recent attention given to the needs of Native Americans in the COVID 19 relief bill. However, the funds included in that legislation do not begin to address the funding needed to support the specific responsibilities of Tribal Courts. The funding of Tribal Courts is an area of long-standing neglect and requires immediate attention.

Therefore, we urge you to address this important funding priority this year and we stand ready to assist you in whatever way we can.

[This statement was submitted by Patricia Lee Refo, President.]

#### PREPARED STATEMENT OF THE AMERICAN EDUCATIONAL RESEARCH ASSOCIATION

FISCAL YEAR 2022 APPROPRIATIONS FOR THE NATIONAL SCIENCE FOUNDATION: EDUCATION AND HUMAN RESOURCES AND SOCIAL, BEHAVIORAL AND ECONOMIC SCIENCES DIRECTORATES 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). I want to begin by recognizing your longstanding support for the National Science Foundation and thank you and your staff for your strong commitment to maintaining agency flexibility in funding cutting edge science. AERA recommends that the National Science Foundation (NSF) receive at least \$10 billion in fiscal year 2022. This recommendation is consistent with that of the Coalition for National Science Funding (CNSF), in which AERA is a long-term active member. Furthermore, this request aligns with the Biden administration’s request and the dear colleague letter led by Senator Markey. AERA also recommends \$2 billion for the Census Bureau, consistent with the recommendation of The Census Project.

<sup>1</sup> *& Congress of the United States*; the U.S. Department of Justice, Attorney General’s Advisory Committee on American Indian/Alaska Native Children Exposed to Violence 2014 Report *Ending Violence So Children Can Thrive*; and the U. S. Civil Rights Commission 2018 report *Broken Promises: Continuing Federal Funding Shortfall for Native Americans*.

<sup>2</sup> The ABA has adopted extensive policy supporting Tribal court funding, accessible at: <https://www.americanbar.org/content/dam/aba/administrative/crsj/native-american-concerns.pdf>.

AERA is the major national scientific association of 25,000 faculty, researchers, graduate students, and other distinguished professionals dedicated to advancing knowledge about education, encouraging scholarly inquiry related to education, and promoting the use of research to serve public good. Many of our members are engaged in science, technology, engineering, and mathematics (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 expertise of the AERA membership, my testimony will focus on the importance of the Education and Human Resources (EHR) and the Social, Behavioral and Economic (SBE) Sciences Directorates at NSF. In addition, many of our members depend on an accurate Census count and data from the American Community Survey to do their work.

#### NATIONAL SCIENCE FOUNDATION

The Federal investment in research and scientific knowledge at NSF has led to innovation and discoveries that are applied in our daily lives. We appreciate the bipartisan interest in maintaining U.S. leadership and global partnerships in basic research through the Federal investments made in NSF.

The EHR 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. EHR 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 EHR and SBE Directorates are also inextricably linked to the science and research of the other directorates (for example, Computer and Information Science and Engineering).

Furthermore, the EHR 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 economic well-being. I also wish to highlight the National Science Board Vision 2030, which calls for expanding the STEM talent pool. Ongoing NSF initiatives to broaden participation through programs such as NSF INCLUDES in EHR and the Build and Broaden program within SBE are examples to increase the diversity of the STEM educator and research workforce.

As indicated in the agency's budget request for fiscal year 2022, 95 percent of appropriated funds directly supported research and science, technology, engineering, and mathematics (STEM) education through grants and cooperative agreements in fiscal year 2020, with 80 percent of funding supporting research at colleges and universities. In addition, more than 118,000 K-12 students and 40,000 K-12 teachers benefitted from programs that directly engage them in STEM experiences within and outside the classroom.

#### *Education and Human Resources Directorate*

The EHR Directorate at NSF is responsible for providing the research foundation necessary to achieve excellence in U.S. STEM education. EHR 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 EHR Directorate commitment to invest in fundamental research related to STEM across all education levels and to promote evidence-based innovations in teaching practices, instructional tools, and programs is essential to advancing STEM education and preparing the next generation of STEM professionals. EHR 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 EHR Core Research (ECR) program, an important resource to the field that builds fundamental knowledge and capacity to understand STEM teaching and learning and develop the STEM educator and workforce pipeline. ECR grants have supported critical work in equity, inclusion, and ethics in postsecondary academic workplaces and the academic profession, as well as research to improve STEM teaching and learning for students with disabilities. We also applaud NSF in investing in midscale research infrastructure, serving as a potential resource for addressing key needs that include building data

infrastructure capacity, constructing networked learning laboratories, and developing innovative diagnostic assessment tools.

As the Nation continues to recover from the effects of the COVID–19 pandemic, research supported by EHR will be critical to fostering STEM learning in formal and informal settings. Through the RAPID program, EHR provided grants to education researchers to inform remote instruction, develop STEM curriculum that incorporated the COVID–19 pandemic to understand scientific principles, and provide insight into issues of equity in STEM education. Additional survey work and research supported through RAPID funding highlighted how the pandemic affected undergraduate and graduate students, including their engagement and interest in STEM and their satisfaction with online STEM coursework.

Increased investment in EHR is critical to support research to inform an educational system that will continue to incorporate technology inside and outside the STEM classroom and labs. In addition, the EHR Directorate’s focus on developing our Nation’s scientific workforce requires resources to ensure that early career scholars and graduate students who have experienced unanticipated disruptions to their scientific careers during the pandemic remain in the STEM talent pipeline. Some examples include material support to emerging scholars (both salary and “soft support”), mechanisms to connect and build communities among scholars, and focus on mentoring.

#### *Social, Behavioral and Economic Sciences Directorate*

In addition to the significant investments in education sciences provided by EHR, AERA values the important role the SBE Directorate in funding important education research and in social, family, and peer contexts connected to learning. The SBE Directorate also houses the National Center for Science and Engineering Statistics (NCSES).

The SBE Directorate supports research to better understand people and reveals basic aspects of human behavior in the context of education and learning. SBE funded research adds fundamental knowledge essential to promoting the Nation’s economy, security, and global leadership. Understanding social organizations and how social, economic, and cultural forces influence the lives of students is important to improving teaching and learning and advancing STEM education.

The budget for SBE is 4 percent of the budget for Research and Related Activities, yet it provides approximately 62 percent of the Federal funding for basic research in the social, behavioral, and economic sciences at academic institutions.

#### *National Center for Science and Engineering Statistics (NCSES)*

In addition, AERA has a strong interest in the National Center for Science and Engineering Statistics (NCSES) located in the SBE Directorate. As one of the Federal principal statistical agencies, NCSES provides invaluable statistical information about the science and engineering infrastructure and workforce in the U.S. and around the world. NCSES collects and analyzes data on the progress of STEM education and the research and development, providing valuable information on the trajectories of STEM graduates both in STEM and non-STEM careers.

Additional resources in funding and staffing in fiscal year 2022 for NCSES would support critical activities to develop new data techniques building on administrative data and to enhance data tools and visualizations to facilitate access to statistical resources. These methodological advances will be necessary for NCSES to implement the Foundations for Evidence-based Policymaking Act and to build the NSF data infrastructure to securely link its survey data with administrative data in other Federal agencies.

NCSES will also play a pivotal role in supporting the overall NSF priority to bring the “Missing Millions” from traditionally underrepresented populations into the STEM pipeline. Expanding NCSES surveys and incorporating information on inclusion—including data on the participations of LGBTQ+ populations, persons with diverse (dis)abilities, and other demographic attributes—can help NSF, other science agencies and institutions, and fields of science understand disparities in STEM and inform broadening participation initiatives.

#### CENSUS BUREAU

I also wish to emphasize the importance of adequate support for the Census Bureau, especially critical in the tabulation of data from the 2020 Decennial Census and in maintaining important survey collections. AERA recommends funding the Census Bureau at \$2 billion in fiscal year 2022.

We appreciated the inclusion of a robust investment in fiscal year 2021 to ensure that the Census Bureau had the needed resources to conduct the 2020 Decennial Census. The requested amount of \$2 billion for fiscal year 2022 will provide the

agency with needed resources to process and finalize the enumeration and related activities for the 2020 Census, which experienced delays due to the COVID-19 pandemic. In addition, this amount of funding will provide resources for planning for the 2030 Decennial Census and continue the administration of the Household Pulse Survey, which has provided valuable, real-time data to inform the COVID-19 response. The recommended funding support will also allow the Census Bureau to continue to conduct the American Community Survey and the Current Population Survey.

Thank you for the opportunity to submit written testimony in support of at least \$10 billion for the National Science Foundation and \$2 billion for the Census Bureau in fiscal year 2022 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.]

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#### PREPARED STATEMENT OF THE AMERICAN GEOPHYSICAL UNION

##### FISCAL YEAR 2022 BUDGET 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 2022 budget request for the National Aeronautics and Space Administration (NASA), the National Oceanic and Atmospheric Administration (NOAA), and the National Science Foundation (NSF). AGU, on behalf of its community of 130,000 Earth and space scientists, respectfully requests that the 117th Congress appropriate the following:

- \$9 billion for NASA’s Science Mission Directorate (SMD),
- \$150 million for NASA’s Office of STEM Engagement,
- at least \$6.9 billion for NOAA, and
- at least \$10 billion for NSF.

AGU’s appropriations requests for each respective agency take into consideration any previous budget cuts and is driven by the need for significant investment in Federal research and development to ensure that the U.S. remains at the forefront of research and innovation.<sup>1</sup>

##### NATIONAL AERONAUTICS & SPACE ADMINISTRATION

AGU requests that Congress appropriate \$9 billion for NASA’s Science Mission Directorate (a 23 percent increase over fiscal year 2021 levels) and \$150 million for NASA’s Office of STEM Engagement (an 18 percent increase over fiscal year 2021 levels). This request will allow NASA to remain on track to steadily advance existing and new missions, provide unique opportunities for the next generation of STEM professionals and ensure that the U.S. maintains its global leadership in the Earth and space sciences.

Additionally, we request that Congress appropriate equitable funding increases across the science mission divisions within NASA’s Science Mission Directorate.

##### *Earth Science and Planetary Science Divisions*

Over the last 5 years, billion-dollar disasters have cost the United States more than \$600 billion and this trend is projected to worsen.<sup>2</sup> It is critical that we increase our investments in NASA’s Earth Science Division to better understand how Earth’s weather and climate is changing on daily and long-term scales. Additionally, NASA Earth Science produces critical information and data that public and private sector decision-makers use to mitigate the resulting risks and understand the opportunities.

<sup>1</sup>The Perils of Complacency, American Academy of Arts and Sciences, September 2020, [https://www.amacad.org/sites/default/files/publication/downloads/Perils-of-Complacency\\_Report-Brief\\_4.pdf](https://www.amacad.org/sites/default/files/publication/downloads/Perils-of-Complacency_Report-Brief_4.pdf)

<sup>2</sup>NOAA National Centers for Environmental Information (NCEI) U.S. Billion-Dollar Weather and Climate Disasters (2021). <https://www.ncei.noaa.gov/billions/>, DOI: 10.25921/stkw-7w73

The missions and discoveries of the Planetary Science Division inspire future generations of scientists and STEM professionals to choose science as a career. Robust funding for Planetary Science will allow NASA to pursue human space exploration of the Moon and Mars without sacrificing other decadal priorities, such as a balanced portfolio of missions and other exploration targets in our solar system.

Earth and planetary sciences are complementary and integrally related to one another. From picking the perfect day to launch a satellite to ensuring that our understanding of other planets is accurate, our knowledge of Earth informs our understanding of other worlds in the solar system. In turn, our exploration of other worlds advances our knowledge of Earth's evolution and processes.

#### *Heliophysics Division*

Increased funding for Heliophysics will support the continuation of the Diversify, Realize, Integrate, Venture, Educate (DRIVE) initiative. DRIVE's focus includes enabling novel technologies such as advanced computational tools, creating DRIVE Science Centers across the country, and supporting the work of early career investigators. Increased Heliophysics funding will also advance innovation to address space weather, including observational and computational capabilities, as well as research-to-operations and operations-to-research efforts. A better understanding of space weather will benefit our space- and ground-based national security assets and safeguard human health against radiation during long-duration deep space exploration activities.

#### *Office of STEM Engagement*

As our country recovers from the COVID-19 pandemic, we must ensure that our educational institutions also survive. As such, it is critical that we invest in programs such as NASA's efforts to re-engage and support students interested in STEM. Increased funding for NASA STEM programs, including Space Grant, Minority University Research and Education Project (MUREP), and Established Program to Stimulate Competitive Research (EPSCoR), will directly benefit every State in the Nation by providing additional opportunities for STEM students of all ages.

#### NATIONAL OCEANIC & ATMOSPHERIC ADMINISTRATION

AGU requests that Congress appropriate at least \$6.9 billion for NOAA in fiscal year 2022 (29 percent increase over fiscal year 2021 levels). From weather forecasts to fisheries data, to groundbreaking research about the world around us, NOAA provides critical data, products and services that are essential to our Nation's economic stability and directly benefit the American public, planners, emergency managers, and other decision makers. However, NOAA has been severely underfunded in previous spending bills and proposals. Since fiscal year 2018, NOAA's funding has been cut by nearly seven percent.

From large corporations to small businesses, the decision-based forecasts provided by NOAA save vital time, money, and resources. Just last year, nearly half of the record 30 named tropical storms during the Atlantic hurricane season made land-fall of which seven produced at least \$1 billion each in damages.<sup>3</sup>

NOAA science also plays a critical role in informing the world about changes in the climate system, as well as the effectiveness of certain mitigation strategies. For example, agricultural production can be boosted by an estimated \$300 million annually with improved El Niño forecasts.<sup>4</sup> However, NOAA is struggling to meet the increasing demand for climate data.<sup>5</sup> Significantly investing in climate research and filling the consistent gaps in NOAA's workforce are both critical to help the agency meet this need. Without robust funding at NOAA, we risk losing the data needed to make informed and proactive decisions, and our National and economic security will be left in a dangerously vulnerable position.

#### NATIONAL SCIENCE FOUNDATION

AGU requests that Congress appropriate at least \$10 billion for NSF in fiscal year 2022 (an approximately 18 percent increase over fiscal year 2021 levels). Ambitious and robust funding for NSF is critical if the U.S. hopes to maintain its leadership

<sup>3</sup>NOAA'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>

<sup>4</sup>NOAA's Climate Program Office. <https://cpo.noaa.gov/Our-Work/Success-Stories>

<sup>5</sup>Remarks from NOAA officials during House Committee on Appropriations hearing (15 April 2021). <https://appropriations.house.gov/events/hearings/increasing-risks-of-climate-change-and-noaas-role-in-providing-climate-services>

in science and technology and reap the economic and national security benefits of that leadership.

As an example of the benefits of NSF investments, throughout the fight against the COVID-19 pandemic, we have reaped the benefits of decades of NSF investment in additive manufacturing and 3-D printing, which have enabled the scale up of PPE production, the understanding of the ecological transmission of zoonotic diseases, and supercomputing to better track the spread of the pandemic.

However, the pandemic also highlighted the need to increase future investments in NSF, especially for STEM programs and systems and convergent science to ensure greater understanding of and resilience to pressing societal issues, including climate change, which present extremely challenging and complex scientific questions.

In STEM, of particular need of support are K-12 education, including furthering our understanding of online teaching effectiveness, and programs for graduate students and early career students who can too easily fall out of the STEM pipeline at a time when our country needs future innovators. Increased funding for NSF is also needed to expand STEM opportunities and capacity evenly throughout our country, from urban and rural communities to Tribal colleges and universities and minority-serving institutions. To remain competitive, we must develop a more diverse and inclusive STEM workforce that will ask novel questions that will power the science and innovations that shape our future.

#### CONCLUSION

At a time when our Nation is recovering and has many pressing priorities that need to be addressed, the future of the U.S. will be strengthened by strong and sustained investments in the full scope of our research enterprise—particularly the science and education programs within NASA, NOAA, and NSF. 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, Program Manager, Science Policy & Government Relations and Michael Villafranca, Senior Specialist, Science Policy & Government Relations.]

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#### PREPARED STATEMENT OF THE AMERICAN INDIAN HIGHER EDUCATION CONSORTIUM

On behalf of the Nation's Tribal Colleges and Universities (TCUs), which are the American Indian Higher Education Consortium (AIHEC), we are pleased to present our fiscal year 2022 recommendations regarding the National Science Foundation's TCU Program (NSF-TCUP), Louis Stokes Alliance for Minority Participation (LSAMP), and the National Aeronautics and Space Administration's Minority University Research and Education Project (NASA-MUREP). We respectfully recommend the following funding levels:

National Science Foundation (NSF)

Education and Human Resources Directorate (EHR):

- Tribal Colleges and Universities Program (TCUP)*: TCUs urge the subcommittee to fund competitively awarded NSF-TCUP grants at a minimum of \$20,000,000 for fiscal year 2022.
- Louis Stokes Alliance for Minority Participation (LSAMP)*: TCUs urge the subcommittee to support the NSF-LSAMP program with an added emphasis for American Indian, Alaska Native, and TCU students.
- TCUs support President Biden's \$100 million request to advance racial equity in science and engineering.

National Aeronautics and Space Administration (NASA)

- NASA Headquarters, Office of Education—Minority University Research and Education Project (MUREP)*: TCUs urge the subcommittee to expand the NASA MUREP program with robust funding and establish a TCU-specific program within MUREP at \$5,000,000 for fiscal year 2022
- TCUs support President Biden's \$20 million request to expand initiatives to attract and retain underserved and underrepresented students in engineering and other STEM fields.

*Tribal Colleges and Universities: Raising and Training the Nation's Native STEM Workforce*

TCUs are an essential component of American Indian and Alaska Native STEM education, research, and workforce. Currently, 37 TCUs operate more than 75 cam-

puses and sites in 16 States. TCU geographic boundaries encompass 80 percent of American Indian reservations and Federal Indian trust lands. American Indian and Alaska Native (AI/AN) TCU students represent more than 230 federally recognized Tribes and hail from more than 30 States. Nearly 80 percent receive Federal financial aid and more than half are first generation students. In total, TCUs serve more than 160,000 AI/ANs and other rural residents each year through a wide variety of academic and community-based programs. TCUs are public institutions accredited by independent, regional accreditation agencies and, like all U.S. institutions of higher education, must regularly undergo stringent performance reviews to retain their accreditation status.

The Federal Government, despite its direct trust responsibility and binding treaty obligations, has never fully funded TCU institutional operations as authorized under Federal law. Yet despite funding challenges, TCUs are responding to the STEM workforce needs across the country. In fall 2020, 1,733 TCU students were enrolled in one of 191 STEM program at TCUs. TCUs have established programs in high-demand fields: 11 TCUs offer pre-engineering programs, two TCU offers bachelor's degrees in industrial and electrical engineering, five TCUs offer STEM teacher education programs, and 14 TCUs offer nursing programs. These efforts are preparing AI/AN nurses, engineers, and science and math teachers who contribute to a robust pipeline of STEM professionals in Indian Country. TCUs also train professionals in other high-demand STEM fields, including agriculture, information technology, and natural resource management.

TCUs know that to break the cycle of generational poverty and end the culture of dependency that grips much of Indian Country, TCUs must bring industry partners and STEM jobs to Indian Country. TCUs and Tribes must promote new Native-owned and operated STEM-based businesses, create public-private partnerships, and build a culture of self-sufficiency and innovation. NSF and NASA funding is essential in supporting this effort to promote STEM-enabled economic development in Indian Country and throughout rural America.

Each of the following Federal grant programs has invested in the development of STEM-centered instruction, research, and job creation across Indian country.

#### NATIONAL SCIENCE FOUNDATION (NSF)

*Education and Human Resources Directorate (EHR)—Tribal Colleges and Universities Program (TCUP):* TCUs urge the subcommittee to fund competitively awarded NSF-TCUP grants at a minimum of \$20,000,000. The NSF-TCUP, administered by the NSF Education and Human Resources Directorate, is a competitive grant program that enables TCUs and Alaska Native Serving/Native Hawaiian Serving Institutions (AN/NHs) to develop and expand critically needed STEM education and research programs relevant to their indigenous communities.

Since the program began in 2001, NSF-TCUP has become the primary Federal program for building STEM programmatic and research capacity at TCUs. For example, NSF-TCUP funding supported Navajo Technical University (Crownpoint, NM) in the development of its electrical and industrial engineering programs, which received accreditation from the Accreditation Board of Engineering and Technology (ABET) in 2018. This marks a significant milestone, with NTU leading the way as the first TCU to receive ABET accreditation.

There are many success stories at the TCUs. In 2014, Cankdeska Cikana Community College, Sitting Bull College, Nueta Hidatsa Sahnish College, and Turtle Mountain Community College established an engineering education partnership with North Dakota State University (NDSU) through funding from NSF TCUP's Pre-engineering Education Collaborative (PEEC). The TCUs and NDSU developed a formal curriculum and support system for students to obtain a bachelor's degree in engineering, beginning with pre-engineering coursework offered collaboratively by TCU and NDSU engineering faculty; then students transition to NDSU to complete their bachelor's degree. The first graduate of the program, Ryan Brown, was a pre-engineering student at CCCC who went on to earn his bachelor of science degree in civil engineering at NDSU in 2018. Brown returned to the Spirit Lake Reservation and currently serves as a project manager for the Spirit Lake Tribal Planning Department.

Growing up in rural Montana, Cody Natoni Sifford (Diné)<sup>1</sup> pursued a degree in environmental science at Salish Kootenai College (SKC) (Pablo, MT), participating in several internships with Federal agencies, and completing a master's degree in

<sup>1</sup>Cody Natoni Sifford, Winds of Change, American Indian Science and Engineering Society, April 2017. <https://woc.aises.org/content/cody-natoni-sifford-navajo-confederated-Tribes-salish-and-kootenai-geographic-information>

forest resources at the University of Washington Seattle. Sifford has since returned to Montana to serve as an adjunct professor at SKC and work as a geographic information systems analyst for the Confederated Tribes of Salish and Kootenai forest department.

These success stories notwithstanding, AI/AN students are disadvantaged from pursuing STEM-centered career from an early age. AI/AN youth have the highest high school drop-out rate of any ethnic or racial group in the country. Those who do pursue postsecondary education often require developmental classes before taking on a full load of college-level courses. Placement tests administered at TCUs to first-time entering students in academic year 2018–19 showed that 36 percent required remedial math. Our data indicates that while 51 percent will successfully complete the course, many will take more than 1 year to do so.

Through NSF–TCUP grants, TCUs and AN/NHs are actively working to address this problem by developing strong partnerships with their K–12 feeder schools to engage students in culturally appropriate STEM education and outreach programs. Salish Kootenai College, located on the Flathead Indian Reservation, created a 2-year STEM Academy to prepare junior and senior high school students for college. Participating high school students engage in collaborative work with STEM researchers, conduct culturally relevant research, and take courses to earn college credit.

TCUs use NSF–TCUP funding to provide students with valuable research experience in STEM fields. Through these opportunities, students conduct place-based research that serves their communities and can have national and international impacts. At Northwest Indian College (NWIC) (Bellingham, WA), students are conducting complex research related to food security focused on salmon, shellfish, and indigenous sea cucumbers. Through a partnership with Western Washington University, NWIC graduates continue to pursue their academic and career goals through WWU's master's degree programs. Aaniiih Nakoda College (Harlem, MT) faculty and students monitor streams for contaminants and are investigating West Nile virus vectors; and Sitting Bull College (SBC) (Fort Yates, ND) has established a water quality monitoring laboratory serving the Standing Rock Sioux and surrounding communities. SBC studies show that students participating in the college's research have retention rates that are double the rate of students who are not engaged in research.

Even with its advances and successes, funding for the NSF–TCUP program has been stagnant for years. Therefore, not all of the TCUs have had an opportunity to benefit from this very important program. We urge the subcommittee to expand the competitively awarded NSF–TCUP grants at a minimum of \$20,000,000.

*Louis Stokes Alliance for Minority Participation (LSAMP)*: TCUs urge the subcommittee to support the NSF LSAMP program with an added emphasis for American Indian, Alaska Native, and TCU students. In FY2019, \$46 million was appropriated for the LSAMP program to support historically underrepresented students in STEM fields. However, only one TCU was awarded direct funding under this program. The All Nations LSAMP (ANLSAMP) program at Salish Kootenai College (Pablo, MT) has had tremendous success in increasing AI/AN degree attainment in STEM programs. Many small, underfunded TCU STEM programs consider ANLSAMP as an important resource for expanding AI/AN student research opportunities, sharing best practices, and student support. ANLSAMP scholars receive financial support for conference travel, internship opportunities, and research stipends, which would otherwise not be possible. Through the combined efforts of the 23 TCUs and 11 mainstream institutions, more than 2,000 AI/ANs and under-resourced minority students have graduated with bachelor's degrees in STEM. Additionally, a recent survey revealed that more than 80 percent of ANLSAMP participants contacted had either graduated with a STEM major or bridged to an advanced degree program. Unfortunately, since the creation of the LSAMP program in 1991, NSF has neglected to prioritize AI/AN-serving programs, such as ANLSAMP, which are critically needed to support STEM degree attainment in Indian Country.

In 2018, after several years of no funding for a TCU-led grant proposal, \$1 million was awarded through an LSAMP grant and supplement to support TCU students over the next 5 years. However, it is alarming that less than one percent of the total \$46 million was awarded to TCUs in FY2019. (\$200,000 was provided in new funding, as a grant supplement, to TCUs in FY2019.) We ask that the subcommittee specifically urge NSF to strengthen support for AI/AN students through the LSAMP grant program.

## NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)

*Minority University Research and Education Project (MUREP):* TCUs urge the subcommittee to expand the NASA MUREP program with robust funding and support a TCU specific program within MUREP at \$5,000,000 for fiscal year 2022. Under its current design, MUREP provides a range of competitive awards to Historically Black Colleges and Universities, Tribal Colleges and Universities, and other Minority Serving Institutions to recruit and retain underrepresented students in STEM fields. Due to the competitive aspect of current MUREP programs and limited funding, TCUs only receive funding from two MUREP grants: MUREP Institutional Research Opportunity (MIRO) and MUREP for American Indian and Alaska Native STEM Engagement (MAIANSE).

*MUREP Institutional Research Opportunity (MIRO)*

In October 2019, under the MUREP MIRO program, Sitting Bull College received \$1 million to further develop curriculum for an environmental science master's degree centered on air quality research on the Standing Rock Reservation. SBC students and faculty work with NASA's Langley Research Center, NASA's Goddard Space Flight Center, and the University of North Dakota to develop a regional research facility to monitor air quality on the Standing Rock Reservation. In the same MUREP MIRO award cycle, Navajo Technical University was selected to perform critical research and produce parts through its advanced manufacturing program for the Space Launch System at NASA's Marshall Space Flight Center. NTU's contributions through advanced manufacturing research and innovative parts production are advancing space exploration for the entire Nation.

*MUREP for American Indian and Alaska Native STEM Engagement (MAIANSE)*

The MAIANSE program provides a unique opportunity for direct collaboration between TCUs and NASA to engage students in NASA STEM related activities. Despite its popularity and value, participation in the MAIANSE program has been limited to three TCU projects each grant cycles due to limited funding.

In order to support the past TCU investment, AIHEC supports President Biden's budget request to increase the Office of STEM engagement by \$20 million and requests that the subcommittee expand the NASA MUREP program through robust funding and support a Tribal College and University-specific program within MUREP at \$5,000,000 for fiscal year 2022.

## CONCLUSION

Tribal Colleges and Universities provide access to high-quality, culturally appropriate postsecondary education opportunities, including STEM-focused programs, for thousands of AI/AN students. The modest Federal investment in TCUs has paid great dividends in terms of employment, education, and economic development. We ask you to renew your commitment to help move our students and communities toward self-sufficiency by full considering our fiscal year 2022 appropriations requests. Thank you.

## PREPARED STATEMENT OF THE AMERICAN INSTITUTE OF BIOLOGICAL SCIENCES

## FISCAL YEAR 2022 FUNDING FOR THE NATIONAL SCIENCE FOUNDATION

The American Institute of Biological Sciences (AIBS) appreciates the opportunity to provide testimony in support of fiscal year 2022 appropriations for the National Science Foundation (NSF). We encourage Congress to provide NSF with at least \$10.2 billion in fiscal year 2022.

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.

Biological research is in our National interest. 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 informed by the biological sciences. The knowledge gained from NSF-funded research 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 trans-

lation of biological knowledge into formal and informal education programs foster the development of the scientifically and technically skilled workforce needed by employers. Data show that employers continue to seek workers with scientific and technical skills. Science and engineering employment in the United States has grown more rapidly than the workforce overall and now represents 5 percent (or about 7 million) of all U.S. jobs.

The cornerstone of NSF excellence is a competitive, merit-based review system that underpins the highest standards of excellence. Through its research programs, NSF invests in the development of new knowledge and tools that solve the most challenging problems facing society.

—*Combating emerging diseases*: NSF-funded research is playing crucial role in our response to the COVID-19 pandemic. Fundamental research supported by NSF led to the development of critical diagnostic tools and medical devices being used 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 SARS-CoV-2, 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 125 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 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 67 percent of extramural Federal support for non-medical, fundamental biological and environmental research at academic institutions.

The NSF is also an important supporter of biological research infrastructure, such as field stations, natural history museums, and living stock collections. These place-based research centers enable studies that take place over long periods of time and variable spatial scales.

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 wellbeing, 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. Both 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. 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. While most Federal agencies have a role to play in supporting the development of the Extended Specimen Network, the NSF’s leadership through the Advancing Digitization of Biodiversity Collections program has positioned NSF to play a central role in the development of the Extended Specimen Network.

The NSF supports recruitment and training of our next generation of scientists. Support for undergraduate and graduate students is critically important to our research enterprise. Students learn science by doing science, and NSF programs en-

gaze students in the research process. NSF awards reached 1,900 colleges, universities, and other public and private institutions across the country in fiscal year 2020. 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 fiscal year 2020, nearly 313,000 people, including researchers, postdoctoral fellows, trainees, teachers and students, were supported directly by 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 20 years. Countries in East and Southeast Asia, especially China, have been rapidly increasing their investments in science. In fact, according to the National Science Board and the American Academy of Arts and Sciences, China may have recently surpassed the U.S in research and development spending. To remain at the global forefront of innovation and to fully realize the benefits of NSF-supported research, the government must make new and sustained investments in NSF. Unpredictable swings in funding disrupt research programs, create uncertainty in the research community, and stall the development of the next great idea.

The President's budget request for fiscal year 2022 proposes a 20 percent boost to NSF. If enacted, this increase will allow for critical Federal investments in scientific and educational research, as well as support for the development of the scientific workforce. Such an increase will also allow NSF to expand support for important new initiatives, such as the "LEAding cultural change through Professional Societies (LEAPS) of Biology" program, which aims to facilitate cultural changes in the biological sciences to broaden participation and advance diversity, equity, and inclusion.

Providing the NSF with at least \$10.2 billion in fiscal year 2022 is necessary in undoing the recent stagnant funding that slowed American scientific discovery. The requested funding will grow and sustain the U.S. bioeconomy and enable NSF to accelerate work on important initiatives at the frontiers of science and engineering.

In addition to the appropriations process, Congress is currently considering reauthorization legislation relevant to the scientific community, including proposals to significantly expand the mission and budget of the NSF. Increasing investments in translational research will bolster U.S. global leadership and competitiveness in innovation. We ask Congress to also make robust investments in basic and foundational research.

We also urge Congress to pass additional funding for U.S. researchers and science institutions to accelerate recovery from the COVID-19 pandemic. The Research Investment to Spark the Economy (RISE) Act (HR. 869 and S. 289) will help natural history museums, botanical gardens, field stations, and other research institutions recover from the pandemic. These institutions lost revenue due to reduced, postponed, and canceled public programs, including formal and informal science education programs. Most of these institutions are non-profits and operate with budgets with limited capacity to absorb revenue losses resulting from reduced public visitation. Pandemic related closures and restrictions have also resulted in the loss of a field season for outdoor research, leading to research disruptions and a year's worth of critical data not being collected. Emergency relief funding proposed under the RISE Act, which includes \$3 billion for NSF, would support U.S. researchers, including graduate students and postdoctoral researchers, who have had research interrupted as a result of the pandemic.

We encourage Congress to continue supporting increased investments in our Nation's scientific capacity. Thank you for your thoughtful consideration of this request and for your prior efforts on behalf of science and the National Science Foundation.

[This statement was submitted by Jyotsna Pandey, Ph.D., Public Policy Director.]

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PREPARED STATEMENT OF THE AMERICAN MATHEMATICAL SOCIETY

NATIONAL SCIENCE FOUNDATION

Founded in 1888, the American Mathematical Society (AMS) is dedicated to advancing the interests of mathematical research and scholarship and connecting the diverse global mathematical community. We do this through our book and journal publications, meetings and conferences, database of research publications<sup>1</sup> that goes

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<sup>1</sup> <https://mathscinet.ams.org/mathscinet>

back to the early 1800s, professional services, advocacy, and awareness programs. The AMS has approximately 25,000 individual members worldwide and supports mathematical scientists at every career stage.

The AMS appreciates the opportunity to submit written testimony in support of fiscal year 2022 appropriations for the National Science Foundation (NSF).

*We encourage Congress to provide the NSF with at least \$10 billion in fiscal year 2022.*<sup>2</sup>

The NSF accounts for the majority of Federal support done by Ph.D. mathematicians at universities and colleges. In fiscal year 2018, 61 percent of support for academic research in mathematics came from the Federal Government,<sup>3</sup> and roughly half of that came from the NSF.<sup>4</sup>

Investments in research, including the departments and programs in the CJS bill, lead to innovations and new technologies that improve our health, grow our economy, and enhance our quality of life. The U.S. was once the uncontested leader in science and technology, but has seen our advantage erode as other nations have dramatically increased their investments in research. In particular, China has continued to dramatically increase its investments in science and technology, which have grown by 17.3 percent annually between 2010 and 2017.<sup>5</sup> During this same period, the U.S. investment has averaged a 4.3 percent increase annually.

The NSF is an efficient agency—almost 95 percent of its appropriated funds go out the door in grants and awards to support research projects, facilities and STEM education. NSF will continue to make strategic investments in basic research, the STEM workforce, and research infrastructure that will advance the Nation’s global competitiveness economically and scientifically. A significant increase in congressional appropriations would help address the effects of years of high-quality grant proposals that go unfunded due to lack of sufficient funding. Those unmet needs continue. A 2019 National Science Board report<sup>6</sup> stated that in fiscal year 2018, “approximately \$3.4 billion was requested for declined proposals that were rated Very Good or higher in the merit review process.” This accounts for about 5,440 declined proposals at the NSF. The U.S. is leaving potentially transformative scientific research unfunded, while other countries are making significant investments.

The entire country benefits from NSF funding; the NSF invests in every State supporting researchers and students.<sup>7</sup> Society has benefitted from the many products, procedures, and methods that have resulted from NSF supported research in mathematics—research performed over many years and typically not focused on specific applications. The applications of advances in theoretical science, including theory of mathematics, occur on a timescale that means the investment is often hard to justify in the short run. And yet if we look back to the success, as opposed to ahead to when we expect success, the investment in fundamental research has had huge payoffs. These benefits include innovations such as the Google Page Rank algorithm, enhancement of magnetic resonance imaging (MRI), and in cybersecurity. The plethora of applications that have resulted from basic research in the mathematical sciences is described in the National Academies report “The Mathematical Sciences in 2025” or in the executive summary “Fueling Innovation and Discovery: The Mathematical Sciences in the 21st Century”.<sup>8, 9</sup>

Finally, we are at a critical time for building and ensuring a stable STEM workforce of the future, a challenge exacerbated by the COVID–19 pandemic. Becoming a Ph.D. STEM researcher requires focus and dedication; the work is demanding. And the COVID–19 pandemic has derailed and even completely shattered many students’ dreams and plans. Vitally important is NSF support for graduate students, postdoctoral fellows, and other early career scientists, who are disproportionately affected by the COVID–19 pandemic and are most likely to have had their career goals deferred or derailed. We need to reach and support promising STEM students across all genders, races, ethnicities, and geographies. At this challenging time, we cannot risk losing a generation of scientists who leave the field and never return.

<sup>2</sup>This is the same amount supported by the Coalition for National Science Funding.

<sup>3</sup><https://ncses.nsf.gov/pubs/nsb20202/academic-r-d-in-the-united-states>

<sup>4</sup>The DOD contributes approximately 25 percent, and HHS 13 percent. Other agencies (including DOE, USDA, NASA) contribute the remaining funds.

<sup>5</sup>Research and Development: U.S. Trends and International Comparisons. Science and Engineering Indicators, National Science Board, January 2020.

<sup>6</sup><https://www.nsf.gov/nsb/publications/2020/nsb202013.pdf>

<sup>7</sup><https://nsf.gov/about/congress/factsheets.jsp>

<sup>8</sup><https://www.nap.edu/catalog/15269/the-mathematical-sciences-in-2025>

<sup>9</sup><https://www.nap.edu/catalog/13373/fueling-innovation-and-discovery-the-mathematical-sciences-in-the-21st>

Thank you for your consideration of this request, and for your prior efforts on behalf of the NSF.

[This statement was submitted by Ruth Charney, Ph.D., President, and Karen Saxe, Ph.D., Director of Government Relations.]

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PREPARED STATEMENT OF THE AMERICAN SOCIETY FOR ENGINEERING EDUCATION  
SUPPORT OF FISCAL YEAR 2022 NATIONAL SCIENCE FOUNDATION AND NATIONAL  
AERONAUTICS AND SPACE ADMINISTRATION FUNDING

*Summary:* This written testimony is submitted on behalf of the American Society for Engineering Education (ASEE) to the Senate subcommittee on Commerce, Justice, Science, and Related Agencies for the official record. ASEE appreciates the Committee's support for the National Science Foundation (NSF) and asks you to robustly fund the agency in fiscal year 2022, including the Research and Related Activities and the Education and Human Resources accounts. ASEE joins the Biden Administration in requesting support of at least \$10.2 billion for NSF in fiscal year 2022 to help alleviate impacts of historical underinvestment at NSF, continue to grow its core research and education activities, establish a new Technology, Innovation and Partnerships (TIP) directorate, and address critical technologies where the U.S. is facing major competition from China. At NASA, ASEE supports the Administration's proposed growth for the Space Technology Mission Directorate (STMD) to increase its investment in crosscutting NASA technology gaps which support engineers and scientists in developing technology to advance science and space missions in the National interest. ASEE also supports proposed growth to NASA's Office of Education to advance NASA's initiatives to broaden participation of underrepresented groups in science and engineering.

*Written Testimony:* The American Society for Engineering Education (ASEE) is dedicated to advancing engineering and engineering technology education and research, and is the only society representing the country's schools and colleges of engineering and engineering technology. Membership includes over 12,000 individuals hailing from all disciplines of engineering and engineering technology and includes educators, researchers, and students as well as industry and government representatives. As the pre-eminent authority on the education of engineering professionals, ASEE works to develop the future engineering and technology workforce, expand technological literacy, and convene academic and corporate stakeholders to advance innovation and sound policy.

NATIONAL SCIENCE FOUNDATION

Engineering shapes our Nation and powers our innovation ecosystem. *NSF basic research*, conducted in engineering schools and colleges around the country, *catalyzes new industries and revolutionary advances*. There is high demand for a workforce of well-trained, engineers in industry and government to leverage these discoveries and develop innovative new technologies to improve our future. The partnership between the Federal Government and universities is *essential to growth and innovation across our economy*, and is helping to solve challenges in health, energy, and national security. *NSF is a tremendously important piece of this innovation ecosystem, funding basic engineering and engineering education research at universities and supporting students to enable access to engineering education.*

ASEE is grateful for recent increases, yet concerned that these investments have not kept pace with international competitors or growing research needs. Due to budget limitations, NSF is currently unable to fund \$2 billion worth of very good and excellently rated proposals each year. With more funding, tremendous amounts of additional research and development could be undertaken, leading to novel and transformative discoveries. As the National Science Board predicted, in 2018 China surpassed U.S. investments in research and development. As some countries have been steeply accelerating research funding, increasing NSF's appropriation would help secure continued U.S. global innovation leadership.

NSF funding has additionally fallen far behind other research agencies, risking distortions in the overall STEM ecosystem. For example, over the last decade the Department of Energy (DOE) Office of Science has grown twice as much as NSF and is now almost the same size despite covering a much smaller range of topics. Other agencies depend on NSF-funded discoveries and workforce development for their missions. NSF-funded research catalyzes fundamental advances that are utilized for national security applications while engineers trained with NSF funding become key components of the National security workforce and industrial base.

ASEE is thankful for relief and research funding provided to NSF in the CARES Act and American Rescue Plan. NSF has a critical role to play in promoting economic recovery and research on many aspects of the pandemic. Continued support of NSF will be critical as the engineering community and the country move into the next phase of the COVID-19 pandemic. Engineers across the country have adapted quickly but challenges and disparities remain. NSF will be crucial to rebuilding the STEM pipeline, and building a better, more resilient STEM workforce.

*ASEE follows the President's 2022 Budget Request in requesting that the Committee fund NSF at \$10.2 billion in fiscal year 2022 to drive advances in research and education and ensure the U.S. retains global competitiveness and scientific leadership. While ASEE supports the President's proposal to create a new TIP directorate at NSF, it is essential that NSF continues to grow its core research and education activities.*

Investments in engineering education and research from NSF are essential for having a workforce trained and ready to contribute to industry, government, and academia. NSF is a major supporter of engineering research and workforce initiatives funding 43 percent of engineering and 83 percent of computer science academic fundamental research. NSF-funded advancements touch every corner of our lives and economy, from wireless systems to advanced manufacturing, and from new tools to combat brain diseases to technologies to ensure our cybersecurity. NSF supports engineering education at all levels, ensuring the next generation of the U.S. engineering workforce is appropriately prepared to contribute and innovate.

The NSF *Directorate for Engineering* (ENG) provides critical support for engineering education and research across the breadth of the discipline. These investments have dual outcomes of training future engineers that will discover tomorrow's innovations, all while furthering today's cutting-edge research. Engineering investments at NSF provide critical advancements in areas such as resilient infrastructure, advanced materials and manufacturing, and bioengineering, in addition to equipping students with the skills they need to be the next generation of technological leaders. Divisions such as Engineering Education and Centers (EEC) support university research and Engineering Research Centers. ENG grantees have robust partnerships with industry, expand the boundaries of our understanding of how students most effectively learn engineering, provide experiential opportunities fundamental to engineering education.

The NSF *Directorate for Computer and Information Science and Engineering* also plays a key role supporting engineering education and research, particularly within the Division of Information & Intelligent Systems, which supports efforts at the frontiers of information technology, data science, and artificial intelligence, among other areas. These investments are critical as we move into a world even more reliant on human-technology interactions. The Division of Computer and Network Systems has been building capacity within Minority Service Institutions to contribute to both the knowledge base and human resource base in computing and engineering.

ASEE strongly supports NSF *Education and Human Resources* (EHR) funding to foster inclusive and effective learning and learning environments. The STEM workforce, particularly engineers, technologists, and computer scientists, drives our innovation and economic development. We need to fully develop all of our Nation's human talent in order to tackle pressing problems. Access to STEM experiences and skills are a critical aspect of developing well-rounded citizens, technological literacy, and the future STEM workforce. ASEE supports EHR programs including *Improving Undergraduate STEM Education* (IUSE) and *Innovations in Graduate Education* (IGE). The first is critical for preparing professional engineers and enhancing engineering educational experiences to broaden participation and retention, and the latter works to revolutionize graduate studies to best prepare students for STEM careers. ASEE supports the growth proposed in the President's Budget Request for NSF programs that foster participation in science and engineering from individuals from underrepresented groups.

NSF plays a key role ensuring the development of new tools for teaching engineering design and analysis skills, which are under-taught in today's K-12 classrooms. As noted in the 2009 National Academies report *Engineering in K-12 Education*, engineering education has received little attention yet has the potential to improve student learning and achievement in other areas of STEM, increase awareness of engineering careers, and increase technological literacy. Engineering's focus on design and analysis enhances problem solving, teaches students new ways to approach challenges, and encourages students to connect science and math topics to real-world applications—all skills critical to the future technical workforce. ASEE supports programs to fill workforce needs including Advanced Technical Education (ATE) that prepares advanced technicians for America's high-skills workforce and

graduate fellowships to create a pipeline of students knowledgeable and excited about engineering.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

ASEE is supportive of the Administration's overall proposed increase of 6.3 percent to \$24.7 billion in funding for the *National Aeronautics and Space Administration* (NASA), especially in its *Space Technology Mission Directorate* (STMD), which would see a 29.5 percent increase to \$1.425 billion. Of importance to ASEE, STMD activities support the workforce development pipeline of future space engineers and technologists by engaging directly with the academic community through early career faculty programs, early-stage research grants, and university-led multidisciplinary research institutes. The disruptions to the STEM pipeline caused by the COVID-19 pandemic makes this work even more crucial. STMD's broad portfolio of activities helps to meet NASA's science objectives, establishes new commercial and academic partnerships, and stimulates the growth of the Nation's technology sector. STMD programs fill significant capability gaps for NASA and better position the agency to meet its long-term strategic goals in areas across all its directorates ranging from propulsion and power generation to materials science and high-performance computing. *ASEE applauds the Administration's support of STMD's vital role and urges the Committee to support STMD's ability to focus on a broad array of NASA technology challenges*, continue its engagement with the academic and private sectors, and keep long-term focus beyond specific near-term mission goals.

ASEE is also supportive of the Administration's proposed increase for NASA's *Office of STEM Engagement* and asks that the Committee support the proposed funding of \$147 million for this office in fiscal year 2022 and beyond. NASA STEM Engagement programs inspire students to pursue engineering, science, and technology careers, and this office plays a vital role coordinating STEM education programs throughout the agency, including those at NASA centers. ASEE supports the continuation of the National Space Grant College and Fellowship Program (Space Grant), which supports university consortia in all 50 States, funding fellowships for engineering and other STEM students, while also offering important resources for faculty professional development and strengthening curricula. ASEE is also supportive of initiatives at the NASA Office of STEM Engagement to broaden participation of underrepresented groups in STEM and to bring engineering design and analysis experiences to K-12 students.

*Conclusion:* NSF education and research investments have truly transformed our world through engineering breakthroughs such as the internet, fiber-optics, and medical imaging technology. These investments keep our communities safe, lower healthcare costs, and spur our economy. Today, engineering research is opening possibilities through advances in areas such as artificial intelligence, biosensors, and advanced materials. We ask that you robustly fund NSF at \$10.2 billion to support critical education and research programs that will be instrumental in the Nation's recovery from COVID-19. In addition, at NASA we urge you to fund proposed increases for NASA's Space Technology Mission Directorate and Office of STEM Engagement. Thank you for the opportunity to submit this testimony.

[This statement was submitted by Sheryl Sorby, President, and Norman Fortenberry, Sc.D., Executive Director.]

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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 2022 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 in Fiscal Year 2022.* 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 the Federal Government departments and agencies, by virtue of the integral role microorganisms play in human health and society. Microbial science is a cross-cutting endeavor, and our members' federally funded research is fundamental to advances in human health, agriculture, energy and the environment.

*ASM calls on Congress to provide at least \$10 billion for the National Science Foundation in Fiscal Year 2022.*

Investments by Congress in NSF-funded discoveries have strengthened the science and technology sectors of the U.S. economy, boosted workforce development and ensured America's global market competitiveness. For over 70 years, the NSF has invested in basic research and education at the frontiers of science and engineering, including high risk and transformative research not supported by other funding sources. NSF is the only Federal agency that supports innovative basic research across all fields of science and engineering, and its support of multidisciplinary research and education is critical to promoting the next generation of scientists, improving the future of the Nation's science and engineering enterprise, and maintaining our global competitive edge. NSF is divided into seven directorates that support science and engineering research and education: Biological Sciences, Computer and Information Science and Engineering, Engineering, Geosciences, Mathematical and Physical Sciences, Social, Behavioral and Economic Sciences, and Education and Human Resources.

Microbes are at the foundation of scientific discovery, and the NSF is a key supporter of microbial science research, including microbiome research, discovery of emerging pathogens, and global collaboration. ASM members around the world are working to improve lives through research on human and animal health, agriculture, energy, the environment, and biothreats. NSF-funded research advances our understanding of the 70 percent of emerging human pathogens that have non-human origins, which pose serious threats to human health and global health security, as we have recently seen with the emergence of COVID-19. Investments in NSF research over several decades facilitated the rapid sequencing and identification of the SARS-CoV-2 virus weeks after its discovery in late 2019, which enabled infectious disease experts to begin work early on to combat the spread of the virus.

The NSF has excelled in its congressionally mandated mission "to promote the progress of science; to advance the National health, prosperity, and welfare; and to secure the National defense." The NSF's dedication to progress is particularly notable in the area of microbiome research. The Understanding the Rules of Life: Microbiome Interactions and Mechanisms program is one example of this innovative work. The broader NSF Rules of Life Big Idea aims to enable discoveries that will improve our understanding of interactions within different ecosystems, and to identify causal, predictive relationships across different scales (spatial, temporal, levels of biological organization and complexity) that help define the "rules" for how life functions. It also seeks to develop research tools and infrastructure to further Rules of Life research, and to provide the capacity to approach more complex research questions.

The goal of the Microbiome Interactions and Mechanisms program research within the Rules of Life Big Idea is to understand interactions and mechanisms that govern the structure and function of microbiomes. By integrating the wide range of accumulated data and information on microbiome structure and function, new causal models of interactions and interdependencies across scales and systems can be generated. To continue to achieve its goals, it is critical that the fiscal year 2022 appropriations bill robustly fund NSF.

*ASM urges Congress to request an update from the Office of Science and Technology Policy on the implementation and continuation of the Interagency Strategic Plan for Microbiome Research.*

Microbiome science aims to advance understanding of microbial communities (microbiomes) for applications in areas such as health care, food production, and environmental restoration to benefit individuals, communities, and the environment. Understanding of the microbiome has evolved significantly since the concept of the human microbiome emerged roughly two decades ago. Today it is understood that microbial communities exist on, in, and around people, plants, animals, soil, oceans, and the atmosphere, making the microbiome relevant to all living things. The rapid pace of discovery has led to greater technology needs and data sharing infrastructure.

Launched in 2016, the National Microbiome Initiative pledged \$121 million in funding from Federal agencies and \$400 million in total cash and in-kind contributions from 100 companies, foundations and academic institutions. As part of this initiative, the Federal Microbiome Interagency Working Group developed the Interagency Strategic Plan for Microbiome Research, providing recommendations for improving coordination of microbiome research among Federal agencies and between agencies and non-Federal domestic and international microbiome research efforts. The 5-year Strategic Plan envisioned coordinated microbiome research activities across 21 government agencies, set out interagency objectives, structure and operating principles, and noted several research focus areas. *As the Strategic Plan's term ends in 2022, OSTP should 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.*

CONCLUSION

ASM is particularly grateful to Congress for its commitment to increased investments in the NSF in recent years. We urge Congress to revisit OSTP's past commitment to microbiome research and to increase funding for NSF in fiscal year 2022 to at least \$10 billion. We look forward to continued Federal investment in microbe-powered innovation.

[This statement was submitted by Allen Segal, Director of Public Policy and Advocacy.]

PREPARED STATEMENT OF THE AMERICAN SOCIETY FOR THE PREVENTION OF CRUELTY TO ANIMALS

On behalf of our over 2 million supporters, The American Society for the Prevention of Cruelty to Animals (ASPCA) appreciates this opportunity to submit testimony to the Senate Appropriations subcommittee on Commerce, Justice, Science, and Related Agencies. Founded in 1866, the ASPCA is the first humane organization established in the U.S. and serves as the Nation's leading voice for animal welfare. We respectfully request that the subcommittee consider the following concerns when making fiscal year 2022 appropriations.

POLICE ENCOUNTERS WITH PETS

Media reports about violent encounters between law enforcement officers and pets—most often family dogs—are commonplace across the country. The ASPCA believes that the vast majority of these incidents are avoidable. The U.S. Department of Justice (DOJ) can assist in reducing these incidents by collecting national data around them and including 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. On April 11, the New Orleans Police Department (PD) shot and killed an 18-week-old rescue puppy in his yard while responding to a 911 call. On March 23, the Tampa PD shot the dog of the woman who had called them for help. On February 26, an officer with the Lynchburg PD in Virginia shot and killed a dog while attempting to take a man into custody for a mental health evaluation. On November 16 of last year, an officer with the Faulkner County Sheriff's Department in Arkansas shot and killed a family dog after responding to the wrong residence. Shootings involving pets often account for a significant percentage of the total firearms discharges in a particular agency. Data from some municipalities suggest that 25–75 percent of all police firearm discharges are directed at dogs.<sup>1</sup> One DOJ official estimated that several thousand dogs annually are killed by law enforcement officers and described the phenomenon as “an epidemic.”<sup>2</sup>

Additionally, research reveals that these incidents take a disproportionate toll on communities of color. An analysis of officer-involved shootings in Los Angeles County revealed that between 28–46 percent of all firearms discharges were directed at dogs, and these shootings were geographically clustered in low-income communities of color.<sup>3</sup> This and other available data suggest that pit bull-type breeds are far more likely to be shot and killed than are other dog breeds. For example, from 2011 to 2014, police officers in Buffalo, New York killed 91 dogs—74 of which were identified as pit bull-type breeds.

*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

<sup>1</sup> Bathurst, Cynthia, Donald Cleary, Karen Delise, Ledy VanKavage, and Patricia Rushing. 2015. *The Problem of Dog-Related Incidents and Encounters*. Washington, DC: Office of Community Oriented Policing Services; <https://cops.usdoj.gov/RIC/Publications/cops-p206-pub.pdf>

<sup>2</sup> Griffin, David; “Can Police Stop Killing Dogs?” *Police Magazine*; Oct. 29, 2014; <https://www.policemag.com/341722/can-police-stop-killing-dogs>

<sup>3</sup> Stefano Bloch, Daniel E. Martinez. 2020. *Canicide by Cop: A geographical analysis of canine killings by police in Los Angeles*. *Geoforum*. 111. 142–154; <https://www.sciencedirect.com/science/article/abs/pii/S0016718520300440>

prevalence of these tragedies, or for officer-involved shootings more broadly. DOJ's Federal Bureau of Investigations operates a National Use of Force Data Collection, which allows law enforcement to voluntarily provide data on use-of-force incidents. The voluntary data, which currently reflects only 40 percent of total law enforcement officer population, does not, apparently, include incidents involving pets.<sup>4</sup> 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.<sup>5</sup> 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:*

Sources indicate that officer trainings are beneficial to de-escalate situations with dogs without resorting to lethal force.<sup>6</sup> Several States including California, Texas, Tennessee, Ohio, Nevada, and Illinois mandate training and created programs on proper responses to encounters with dogs. 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 and has adapted the contents to a video training series. Funding for the use of such trainings or creating incentives to do so could avoid these tragedies.

*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 FY22 Appropriations bill:*

It has been estimated that thousands of dogs are killed annually by law enforcement officers. Many States and municipalities do not require that police shootings directed at pets be reported. However, 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. Police shootings directed at pets escalate encounters with policed communities and erode trust in law enforcement. The Committee is concerned about the lack of data and reporting requirements for such encounters, and directs the U.S. Department of Justice to include incidents involving pets in any nationwide Federal database created to track law enforcement's use of force against people, or to provide Congress with a report within 180 days on how the Department can collect and maintain comprehensive data on law enforcement's use of force against people and pets, as well as any policy recommendations needed to implement that data collection. Further, the Committee encourages the U.S. Department of Justice to include training opportunities for police and dog encounters in the Community Oriented Policing Service's grants made available for de-escalation training.

[This statement was submitted by Nancy Perry, Senior Vice President, Government Relations.]

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PREPARED STATEMENT OF THE AMERICAN SOCIETY OF PLANT BIOLOGISTS

ADDRESSING THE NATIONAL SCIENCE FOUNDATION'S FISCAL YEAR 2022 BUDGET

*The American Society of Plant Biologists (ASPB) submits this testimony for the official record to support at least \$10.2 billion for the National Science Foundation (NSF) for fiscal year 2022. ASPB recognizes the difficult fiscal environment our Nation faces, but believes that sustained investments in scientific research represents a critical step toward economic recovery and continued global competitiveness for our Nation.*

ASPB would like to thank the subcommittee for its consideration of this testimony and for its strong support for the research missions of NSF.

<sup>4</sup>See "What is Collected?" <https://crime-data-explorer.app.cloud.gov/officers/national/united-states/uof>

<sup>5</sup>Bathurst, Cynthia, Donald Cleary, Karen Delise, Ledy VanKavage, and Patricia Rushing. 2015. *The Problem of Dog-Related Incidents and Encounters*. Washington, DC: Office of Community Oriented Policing Services; <https://cops.usdoj.gov/RIC/Publications/cops-p206-pub.pdf>

<sup>6</sup>Amendola, 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/>

ASPB, founded in 1924 as the American Society of Plant Physiologists, was established to promote the growth and development of plant biology, to encourage and publish research in plant biology, and to promote the interests and professional advancement of plant scientists in general. ASPB members educate, mentor, advise, and nurture future generations of plant biologists; they work to increase understanding of plant biology, as well as science in general, in K–16 schools and among the general public; they advocate in support of plant biology research; they work to convey the relevance and importance of plant biology; and they provide expertise in policy decisions world-wide. Overall, ASPB members, as representatives of the society, work to disseminate information and excitement about plant sciences, especially through ASPB’s advocacy, outreach activities, conferences, and publications.

FOOD, FUEL, ENVIRONMENT, AND HEALTH: PLANT BIOLOGY RESEARCH AND AMERICA’S  
FUTURE

Plants are vital to our very existence. They harvest sunlight, converting it to chemical energy for food and feed; they absorb carbon dioxide and produce oxygen; and they are the primary producers on which most life depends. Indeed, plant biology research is making many fundamental contributions in the areas of energy security and environmental stewardship; the continued and sustainable development of better foods, fabrics, and building materials; and in the understanding of biological principles that underpin improvements in the health and nutrition of all Americans.

Plant science has become that backbone of agricultural innovation, and a thriving agricultural sector has become a cornerstone for American economic success. Agriculture and agriculture related industries comprise 5.4 percent of the U.S. GDP, contributing nearly \$1 trillion and 21 million jobs to the economy.<sup>1</sup> In fact, despite persistent U.S. trade deficits, there has been a surplus in agricultural trade since 1960. This surplus is projected to continue, in spite of projected decreases in planted acres of major crops.<sup>2</sup> These projections rely on steady increases in yields, a breakthrough that is wholly dependent upon continued fundamental and applied agricultural research in crop science and plant biology. To maintain and increase U.S. agricultural productivity, critical investments in basic biological sciences are needed.

In particular, plant biology is at the interface of numerous scientific breakthroughs. For example, with high throughput experimental approaches facilitating extraordinary syntheses of information that are NSF-supported, plant biologists are using computer science applications to make tremendous strides in our understanding of complex biological systems, ranging from single cells to entire ecosystems. Understanding how plants function ultimately will result in better and more productive crops, new sources of fuel, and the development of better medicines to treat diseases like cancer.

Despite the significant positive impact plants have on our Nation’s economy and in addressing some of our most urgent challenges, including food and energy security, Federal investments in fundamental plant biology research are modest. Nevertheless, plant scientists have maximized and leveraged this funding to begin to understand the basic functions and mechanisms of plants, providing a foundation for vital advances in practical applications in agriculture, health, energy, and the environment.

ROBUST FUNDING FOR THE NATIONAL SCIENCE FOUNDATION

*ASPB encourages strong support for the Directorate of Biological Sciences (BIO) and proportional funding increases across all of the scientific disciplines NSF supports.* As scientific research becomes increasingly interdisciplinary with permeable boundaries, a diverse portfolio at NSF is needed to maintain transformational research and innovation. NSF funding for plant biology specifically enables the scientific community to address cross-cutting research questions that could ultimately solve grand challenges related to a sustainable food supply, energy security, and improved health and nutrition.

NSF BIO is a critical source of funding for scientific research, providing the majority of the Federal support for non-medical basic life sciences research at U.S. academic institutions and beyond. BIO supports research ranging from the molecular and cellular levels to the organismal, ecosystem, and even biosphere levels. These investments continue to have significant pay offs, both in terms of the knowledge directly generated and in deepening collaborations and fostering innovation among communities of scientists.

<sup>1</sup> <https://www.ers.usda.gov/data-products/ag-and-food-statistics-charting-the-essentials/ag-and-food-sectors-and-the-economy/>

<sup>2</sup> <https://www.ers.usda.gov/webdocs/publications/92600/occe-2019-1.pdf?v=3630.9>

The Biological Sciences Directorate'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.*

ASPB is also encouraged by the ongoing efforts of the *Reintegrating Biology* initiative. The Society hopes that these efforts will result in innovative, cross-disciplinary efforts that advance both plant science and biological research as a whole. Finally, ASPB is very pleased to see NSF increase its support for *biotechnology*, both within BIO and as proposed in the new *Technology, Innovation, and Partnerships Directorate*. Investments in biotechnology will transform agriculture, energy, and healthcare, and fundamental and applied plant science research have roles to play in each area.

Without significant and increased support for BIO and NSF as a whole, promising fundamental research discoveries will be delayed and vital collaborations around the edges of scientific disciplines will be postponed, thus limiting the ability of the U.S. to respond to the pressing scientific problems that exist today and the new challenges on the horizon. Addressing these scientific priorities would also help to improve the competitive position of the U.S. in a global marketplace.

#### CONTINUED SUPPORT FOR NSF EDUCATION AND WORKFORCE DEVELOPMENT PROGRAMS

As discussed above, many of the challenges brought by a changing world will need be addressed specifically by plant scientists. A significant—but sustainable—increase in crop productivity will be needed to match the demand for food expected from the rate of population growth. At the same time, climate change will present new trials for crops and other plant ecosystems. These challenges will require efforts to increase productivity beyond current practices, including improvement in crop water use efficiency and enhanced crop photosynthesis efficiency and performance, to name just a few approaches. More knowledge and innovation will be needed to replace chemicals from non-renewable sources (from fuels to biomedical applications) with plant-derived metabolites. These types of innovations will require contributions from basic and applied plant science fields and collaboration from other sciences and engineering.

To tackle these challenges, a strong and diverse community of plant scientists, with increased involvement from women and marginalized scientists, will be needed. However, the current training pipeline does not appear prepared to ensure the availability of this workforce. The number of Ph.D. degrees awarded in the U.S. in biomedical sciences in the last two decades has increased at an unsustainable rate, even triggering warnings from members of the National Academy of Sciences; however, this trend has not been paralleled by increases in plant-related Ph.D. degrees. In fact, plant science doctoral degrees, both basic and agronomy-related, have remained stagnant during this time period. Clearly, a strong investment in plant science research, both basic and applied, renewed efforts to transform public perception of plant biology and plant biologists, and a push to increase the number of students entering the pipeline leading to plant science degrees are necessary to change these trends. Developing the workforce that will contribute the solutions to future challenges is urgent.

The NSF is a major source of funding for the education and training of the American scientific workforce and for understanding how educational innovations can be most effectively implemented. NSF's education portfolio impacts students at all levels, including K–12, undergraduate, graduate, and postgraduate, as well as the general 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) 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. Discrete focused training and infrastructure support programs for Hispanic Serving Institutions, Historically Black Colleges and Universities, and Tribal Colleges and Universities remain vitally important, because they foster a scientific workforce that reflects the U.S. population.

ASPB urges support for education research that enhances our understanding of how educational innovations can be sustainably and most effectively implemented in a variety of settings. NSF Education and Human Resources 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 Education and Human Resources portfolio with a focus on understanding how previous investments in educational strategies can be made most effective.*

Grand research challenges will not be resolved in a year, an administration, or a generation, but will take continued 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](http://www.aspb.org).

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PREPARED STATEMENT OF THE ANIMAL WELFARE INSTITUTE

FISCAL YEAR 2022 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 Whale-Related Research and Development—\$20 million*

In 2020, North Atlantic right whales were designated as critically endangered by the International Union for Conservation of Nature (IUCN). Elevated mortalities of the species from entanglements in fishing gear and vessel strikes have been declared an Unusual Mortality Event (UME) by the National Oceanic and Atmospheric Administration (NOAA) since 2017. The annual documented rate of anthropogenic mortality and serious injury, due to both entanglement in gear and vessel strikes, has exceeded the population's potential biological removal level (PBR) since 1995.

In October 2020, scientists from the New England Aquarium released a new population estimate for North Atlantic right whales, indicating that the population numbered only 356 as of the end of 2019.<sup>1</sup> Of these 356 whales, researchers estimate 70 breeding females remain. Without intervention, the current combination of low birth rates and increased mortalities could leave the species functionally extinct within 20 years.<sup>2</sup>

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 from vessels of all sizes can also cause serious injuries, such as blunt force trauma, propeller cuts, and broken bones. Three North Atlantic right whale calves were killed or seriously injured by vessel strikes in U.S. waters in the last 13 months alone. In February 2021, an adult whale was confirmed dead due to injuries from entanglement. Two other entangled whales have been added to the *serious injuries list* this year.

Studies have shown that mortalities from known entanglements have continued to increase: from 21 percent (1970–2002) to 51 percent (2003–2018).<sup>3</sup> Entanglements caused as many as 85 percent of diagnosable deaths from 2010 to 2015. In February 2021, a study coauthored 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.<sup>4</sup> 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 final fiscal year 2021 appropriations package included \$5 million for North Atlantic right whales within the Marine Mammals, Sea Turtles, and Other Species line item. Within this funding, \$1 million was directed to the National Oceanic and

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<sup>1</sup>New England Aquarium (2020) Statement on North Atlantic right whale population estimate. October 29, 2020. Available at <https://www.neaq.org/about-us/news-media/press-kit/press-releases/statement-on-north-atlantic-right-whale-population-estimate/>

<sup>2</sup>Cecco, L. (2020). Humans pushing North Atlantic right whale to extinction faster than believed. *The Guardian*. October 30, 2020. Available at <https://www.theguardian.com/environment/2020/oct/30/north-atlantic-right-whale-extinction-faster-than-believed>

<sup>3</sup>Sharp, S, et.al (2019). Gross and histopathologic diagnoses from North Atlantic right whale *Eubalaena glacialis* mortalities between 2003 and 2018. *Diseases of Aquatic Organisms*, 135(1), 1–31. doi:10.3354/dao03376

<sup>4</sup>Pace, R. et al. (2021). Cryptic mortality of North Atlantic right whales. *Conservation Science and Practice*. 3. 10.1111/csp2.346.

Atmospheric Administration (NOAA) for the continuation of a pilot program developing and field-testing new fishing gear technologies designed to reduce entanglements.

We appreciate Congress' concern for this species and trust that it will recognize that a substantial increase in funding is necessary if we are to save North Atlantic right whales from extinction. Along with 50 other NGOs, AWI submitted a letter to House and Senate CJS Appropriations subcommittees that included a proposed spending plan. Within that plan, we believe funding should be appropriated to NOAA to develop and implement new rules aimed at reducing the mortality rate of North Atlantic right whales by vessel strikes, fishing-gear entanglements, and other threats. There must also be investment in reducing vessel-strike risk in high-traffic areas as well as a transition to whale-safe fishing gear. We believe the pilot program to refine and field test innovative fishing gear technologies, such as ropeless gear, should be expanded, including the development of geolocation technologies. 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.<sup>5</sup>

NOAA estimates Americans are willing to pay \$4.38 billion annually for the recovery of the endangered North Atlantic right whale. Further, in 2008, this species generated an estimated \$2.3 billion in sales in the whale watching industry and across the broader economy.<sup>6</sup> Research has found large whales are worth about \$2 million each over their lifetimes. This value is based on their contributions to carbon sequestration, which combats climate change, as well as their ability to enhance fisheries and provide ecotourism value. Overall, the estimated economic value of the planet's whale population is over \$1 trillion.<sup>7</sup>

If we are to save this species, it will require investment and cooperation among Congress, agencies, scientists, and industry. We hope the subcommittee on Commerce, Justice, Science and Related Agencies recognizes the urgency of this situation and invests in protections for North Atlantic right whales.

*Unusual Mortality Event Fund—\$4 million with at least \$750,000 dedicated to the current UME of Atlantic Florida manatees*

Marine mammals are important indicator species of ocean health. Monitoring the health of marine mammals, especially during Unusual Mortality Events (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 10 active UMEs around the country in every ocean (Alaska ice seals, West Coast gray whales, Northeast pinnipeds, Southwest Florida bottlenose dolphins, Atlantic minke whales, North Atlantic right whales, Atlantic humpback whales, Guadalupe fur seals, Atlantic Florida manatees, and Florida East Coast manatees). In the newest UME to be declared, the 2021 Atlantic Florida manatee, nearly 750 manatees have died this year alone. 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, 70 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 provided appropriations only in 2005; all other con-

<sup>5</sup> Knowlton et al. (2016).

<sup>6</sup> NOAA Fisheries (2020, February 24). Protected species economics research. Retrieved from <https://www.fisheries.noaa.gov/national/socioeconomics/protected-species-economics-research>

<sup>7</sup> Chami, R., Cosimano, T., Fullenkamp, C., & Oztosun, S. (2019). Nature's solution to climate change. International Monetary Fund: Official Website/Finance&Development, 56(4), 34–38. Retrieved from <https://www.imf.org/external/pubs/ft/fandd/2019/12/natures-solution-to-climate-change-chami.htm>

tributions to the Fund have been through voluntary assistance. Considering the growing number of UMEs, \$4 million should be allocated to the Unusual Mortality Event Contingency Fund to enable robust marine mammal stranding response efforts, with \$750,000 dedicated to the current Atlantic Florida manatee UME.

*John H. Prescott Marine Mammal Rescue Assistance Grant Program—\$4 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 20 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 within 23 States, robust funding is required for the Prescott Grant Program to enable it to continue its vital work.

*Enforcement and Seafood Import Monitoring Program (SIMP)—\$4 million*

The Seafood Import Monitoring Program (SIMP) was established in 2016 to require U.S. importers of certain fish and fish products to provide and report key data, with the aim of uncovering illegal, unreported, and unregulated (IUU) fishing and/or seafood fraud and preventing it from entering US commerce. The program initially oversaw imports of 11 species, including sharks and sea cucumbers, two marine species that are increasingly threatened by IUU fishing. In 2019, two additional species, shrimp, and abalone, entered SIMP, thereby doubling the volume of imported products covered by SIMP. The addition of shrimp has 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 bycatch of vaquitas, has been a major factor in the latter species' decline.

A 2021 report "*Seafood Obtained via Illegal, Unreported, and Unregulated Fishing: U.S. Imports and Economic Impact on U.S. Commercial Fisheries*,"<sup>5</sup> compiled by the U.S. International Trade Commission found that \$2.4 billion worth of seafood imports derived from IUU fishing was imported in 2019 (11 percent of total seafood imports). Over 13 percent of the U.S. imports caught at sea were estimated to be caught using IUU fishing practices. Top species included swimming crab, wild-caught warmwater shrimp, yellowfin tuna, and squid. The report noted that IUU-sourced seafood is a threat to the livelihood of U.S. fishermen. These practices also pose risks to marine ecosystems, public health, and human rights.

In January 2020, the U.S. Government allocated \$8 million to fight IUU fishing and bolster SIMP as part of the U.S.-Mexico-Canada trade agreement (USMCA) that was approved in January 2021. As part of the agreement, funding will go to NOAA to help it cooperate with the Mexican Government in fighting illegal fishing through 2023. Additional funding of \$4 million is necessary to ensure full enforcement of SIMP in fiscal year 2022.

*Marine Mammal Commission (MMC)—\$5.25 million*

The Marine Mammal Commission (MMC) is an independent Federal agency established by Congress in 1972 under the MMPA. Responsible for overseeing the proper implementation of the MMPA, the MMC 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, walrus, 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. We are grateful that Congress rejected last year's budget request defunding this agency and instead funded the MMC at \$3.769 million in fiscal year 2021. In order for the MMC to fully fulfill its obligations, we ask that \$5.25 million be appropriated for fiscal year 2022.

U.S. DEPARTMENT OF JUSTICE

*Environment and Natural Resources Division/Environmental Crimes Section—Additional \$2 million*

AWI asks the subcommittee to provide an *additional* \$2 million, over and above the amount that would otherwise be appropriated, to the Environmental Crimes Section of the Department of Justice's Environment and Natural Resources Division, to be designated for the Section's work on animal cruelty crime.

Congress has taken significant steps in the last decade to strengthen Federal laws to protect animals from cruel treatment. For those efforts to be meaningful, it is imperative that the Federal Government's enforcement efforts be robustly supported. The attorneys in the Environmental Crimes Section are tasked with ensuring that justice is served when the Federal statutes and enforcement regimes that provide for the humane treatment of captive, farmed, and companion animals across the country are violated. These laws include the Animal Welfare Act, the Horse Protection Act, the Humane Methods of Slaughter Act, the 28-Hour Law, the Animal Crush Video Statute, the Animal Fighting Venture Prohibition Act, and, since 2019, the Preventing Animal Cruelty and Torture Act.

This is a tremendous amount of responsibility, and it is a responsibility that both Congress and the American public expect to be executed vigorously. The resources available to bring criminal prosecution under these laws has not kept pace with the improvements made in the laws. Given the increased workload the Section has taken on in just the last couple of years, a \$2 million increase in its funding is warranted.

[This statement was submitted by Nancy Blaney, Director, Government Affairs.]

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PREPARED STATEMENT OF THE ANTI-DEFAMATION LEAGUE  
FUNDING TO COUNTER DOMESTIC VIOLENT EXTREMISM, HATE CRIMES, AND  
DISCRIMINATION IN VOTING

On behalf of the Anti-Defamation League (ADL), I write to request that you designate increased funding for the department of Justice's efforts to combat domestic violent extremism, prevent and prosecute hate crimes against Jews, Jewish institutions, and other targeted communities, and challenge discrimination in voting by vigorously enforcing the Voting Rights Act.

*Countering Violent Domestic Extremism*

On January 6, we watched as an insurrection fueled by violent conspiracy theories and white supremacy gripped the Nation and attacked our democracy. Unfortunately, this act of domestic terrorism was not a surprise; it is a threat ADL has been warning about for many years, and one we had warned law enforcement about once this specific threat became clear, even before the tragic events unfolded.

ADL recommends that Congress make investments that adapt to the threat from domestic extremists, which is severe and growing. The majority of violence committed against Americans by extremists is now homegrown, and we must reorient our counterterrorism capabilities accordingly. To address this threat, the Congressional Budget Office estimates that an additional 175 FBI field agents, 45 additional employees, 25 U.S. Attorney office personnel, and 18 additional DHS analysts are needed, as well as a budget to support reporting and coordination. These funds for personnel, training, and reporting will help catalyze a range of activities to better understand the domestic terror threat, to ensure resources are used proportionate to the threat posed, and to work across agencies to better prepare to keep communities safe. The Domestic Terrorism Prevention Act (H.R. 350/S. 963) would in part ensure resources are used based on the threat of a terrorist movement. While we work to support the passage of the DTPA, personnel for the offices and training opportunities for State and local partners can and should be funded separate and apart from the bill. ADL supports \$11 million in fiscal year 2022 and an estimated \$184 million over 5 years to increase resources and staffing to help counter domestic terrorism. ADL also requests that report language reflect the need for transparency and threat-proportionate appropriations.

In addition, ADL recommends increased investment in research that closes gaps in our ability to prevent domestic extremism that will otherwise endure as an increasingly dangerous and destabilizing force in American communities. Data should drive policy. ADL requests \$20 million above current levels to the Office of Justice Programs, dedicated specifically to research and data related to domestic violent extremism issues.

*Eliminating Extremism in Law Enforcement*

ADL urges the Committee to recognize and address the fact that some public safety officers are extremists, as evidenced by the participation of active law enforcement personnel in the attempted insurrection of January 6. Additionally, FBI assessments dating back more than 15 years, among other sources, have noted that such extremists seek out positions in law enforcement and work to recruit law enforcement personnel into their ranks in order to gain access to sensitive security-

related information as well as tactical knowledge and training. The consequences of this infiltration are potentially severe, ranging from deterioration of police-community relations to destruction, conflict, and death resulting from extremist officers' activities. ADL requests that the Committee encourage the Justice Department to provide the highest priority to Community Oriented Policing Services (COPS) program applicants and law enforcement agencies that request support for screening applicants and personnel for persistent racism and/or violent extremist ideologies or affiliations, and further encourage the Department to prioritize COPS grants to program applicants and law enforcement agencies that require their employees to complete training on extremism. ADL also asks that the Committee support improved security clearance policies, procedures, and trainings to ensure that individuals whose possible adherence to violent extremist ideologies raises questions about their judgment or trustworthiness do not have security clearances, including directing the Department to report no later than 90 days after enactment of this act on its progress in developing these improved policies, procedures, and trainings.

#### *Clearinghouse for Online Extremism*

With domestic violent terrorism posing a growing threat, we must seek creative ways to address the critical role that social media plays in fueling the rise of extremism. However, we must not empower law enforcement to engage so thoroughly in social media investigations that civil liberties would be at risk. ADL proposes the creation of an independent nonprofit organization, mirroring the founding of the National Center for Missing and Exploited Children, to investigate online threats proactively with careful parameters to ensure that the broad nature of these investigations does not provide surveillance powers to law enforcement, but is independent. ADL requests \$500,000 to the National Institute of Justice for a six-month study into the feasibility, costs, and operational options for an independent clearinghouse for online extremist content.

#### *Strengthening Hate Crimes Data Collection*

A more complete understanding of where, when, and against whom hate crimes occur is a necessary component of an effective and coordinated campaign to eradicate this scourge. In the nearly 30 years during which the FBI has compiled data pursuant to the Hate Crime Statistics Act, however, DOJ has yet to produce information that paints an accurate and comprehensive picture of hate crime. Multiple factors contribute to deficits in our knowledge about this phenomenon, including victimized communities' distrust and avoidance of law enforcement agencies; lack of training for officers in recognizing and investigating bias motivations; and frontline agencies' limited capacity to maintain and share records with DOJ combined with the lack of a reporting mandate. Congress can and must support stakeholders in overcoming these challenges by providing funding for data improvement programs that we expect will soon be authorized by the Jabara-Heyer NO HATE Act. ADL recommends that you provide total funding of at least \$15 million for grant programs to State, local, and Tribal law enforcement agencies to implement the National Incident-Based Reporting System, to create State-run hate crime reporting hotlines, and to conduct training and develop protocols for identifying, analyzing, investigating and reporting hate crimes. In addition, we urge you to adopt report language that urges DOJ to support hate crime statistics improvement through its other funding programs including the Edward Byrne Memorial Justice Assistance Grants program, as well as language that urges the FBI to increase its outreach to, and consider developing awards or other incentives for, State, local, and Tribal law enforcement agencies, to encourage them to provide substantive and accurate hate crime statistics.

#### *State and Local Police Training on Recognizing and Investigating Hate Crimes*

ADL is alarmed at increases in reports of hate crime. In spite of declining law enforcement agency participation, the FBI's Hate Crime Statistics Act reports have documented year-to-year growth in the number of recorded hate crimes in recent years, culminating in the most deadly year on record in 2019, in which at least 51 people lost their lives in bias-motivated attacks. Anecdotal data captured by community-based organizations and surveys that ask Americans about their subjective experiences indicate that hate crime is a far more widespread and devastating phenomenon than even the FBI's report demonstrates. Behind each victim is an entire community of people who share the characteristics for which the person was attacked, and who experience the fear and instability that these acts cause. The Federal Government's leadership is indispensable to the critical task of improving effectiveness at tracking, mitigating the harms caused by, and ultimately, preventing destructive bias-motivated aggression. ADL requests \$100 million for grants to State, local, and Tribal law enforcement agencies to conduct educational outreach and

training on hate crimes and to investigate and prosecute hate crimes, as authorized by section 4704 of the Matthew Shepard and James Byrd, Jr. Hate Crimes Prevention Act (Public Law 111–84).

*Community Relations Service*

The Community Relations Service saves lives and preserves community cohesion, and must be taken to scale to meet expanding demand resulting from COVID–19-related hate crimes targeting the Asian-American Pacific Islander community, scapegoating of Jews, Muslims, and members of immigrant communities for the actions of foreign nations and entities, and other increases in discrimination and hate. CRS’s efforts are symbolically important and practically effective. For example, after a gunman killed a worshipper and wounded three others at the Chabad of Poway, CA, on April 27, 2019—exactly 6 months after the shooting at the Tree of Life Synagogue in Pittsburgh—members of the surrounding community asked CRS to help re-establish community safety and rebuild residents’ confidence that they could safely attend religious services. Within days of the shooting, CRS brought the local U.S. Attorney’s Office together with leaders of local faith communities to assess tensions, identify concerns, and share best practices for addressing hate crimes and protecting religious institutions. CRS served as a liaison between community stakeholders and the State and Federal agencies involved in investigating the shooting and also worked with stakeholders to convene continuing conversations, including a Bias Incidents and Hate Crimes forum held by an interfaith coalition of San Diego-area religious communities and an August 2019 training that brought the U.S. Attorney’s Office back together with faith community leaders to build capacity to prevent and respond to hate crimes. ADL supports \$40 million for the Community Engagement Relations program to offer services in more communities in need.

*Voting Rights Act Enforcement by the Voting Section*

Before, during, and after the 2020 Presidential Election, disinformation about threats to election security and integrity spread widely, and in significant part due to some political figures’ repeated public critiques of normal procedures such as mail voting and of extraordinary measures undertaken to avoid COVID–19-related perils, including proactive mailing of mail ballot applications and expansion of early voting hours and periods. Election administrators, Federal and international experts at agencies like the Department of Homeland Security’s Cybersecurity and Infrastructure Security Agency, and independent audits of paper records of votes cast have all affirmed that election results were valid, and no significant or widespread fraud or irregularities occurred. Nonetheless, according to the Brennan Center for Justice, as of March 24, 2021, State lawmakers had introduced 361 bills that would restrict access to the ballot in 47 States’ current legislative sessions. These measures take direct aim at aspects of the voting process that disproportionately affect voters of color and preserving equal access to elections in 2021 and beyond will depend upon the strength and readiness of the most capable and expert voting rights prosecutor in the Nation, the Civil Rights Division’s Voting Section.

The Voting Section requires expanded capacity to respond to the States and localities that already have adopted discriminatory voting restrictions or are poised to follow suit. The Voting Section also will soon undertake monitoring, evaluation, and enforcement of anti-discrimination standards in the post-2020 Census redistricting cycle which will be the first to occur in the absence of the protective mechanisms of the Voting Rights Act’s fully-functional preclearance process. As a result, Section attorneys will not receive explanation and analysis of new district maps from jurisdictions with long histories of acting deliberately to limit marginalized voters’ opportunity to elect representatives of their choice, and will instead have to exponentially increase original review of as many as hundreds, or thousands, of new plans. As we consider the work before the Voting Section, finally, we are mindful of the need for more capacity to ensure the effective implementation of Section 203 of the Voting Rights Act after new coverage determinations are published in calendar year 2021. To manage these critical tasks, ADL requests an additional \$5 million for the Civil Rights Division for additional attorney positions to conduct Voting Rights Act enforcement activities.

[This statement was submitted by Max Sevilla, Vice President, Government Relations, Advocacy, and Community Engagement.]

PREPARED STATEMENT OF THE ASSOCIATION FOR PSYCHOLOGICAL SCIENCE (APS)  
 SUPPORTING INCREASED APPROPRIATIONS FOR THE NATIONAL SCIENCE FOUNDATION  
 (NSF)

HIGHLIGHTS OF APS RECOMMENDATIONS FOR FISCAL YEAR 2022

- APS supports the Administration’s recommended funding level of \$10.2 billion for NSF in fiscal year 2022.* In immediate terms, increased funding is necessary in fiscal year 2022 to help the research community recover from COVID–19 and its effects on research, education, and the professional development of the next generation of scientists. In the longer term, a bold approach to NSF funding advances NSF’s transformational Big Ideas initiatives; protects core programs that sustain science and engineering fields; builds and operates world-class research infrastructure, including the human capital that conducts and supports research; and trains a diverse, inclusive future science, technology, engineering, and mathematics (STEM) workforce so that the U.S. can remain globally competitive.
- NSF’s Directorate for Social, Behavioral, and Economic (SBE) Sciences conducts research that increases our fundamental understanding of human development, cognition, behavior, and more. One of the best ways to mitigate the crises created by the COVID–19 pandemic is through an understanding of human behavior. Supporting SBE is important to our ability to recover from the problems arising from COVID–19 as well as to prevent or mitigate economic, health, and security problems arising from other national and international problems. Scientific research supported by SBE also enables discovery in other critical areas that range from addressing the needs of an aging population, to strengthening racial equity and limiting bias, to preparing our military with the insights it needs to understand behavior in a changing world. Through its various core programs, as well as its contributions to cross-directorate NSF investments, SBE supports approximately 5,000 scientists, educators, and students in a typical year. Unfortunately, SBE has often been a popular target for budget cuts and messaging amendments. *APS urges the Committee to recognize the important contributions of NSF’s Social, Behavioral, and Economic Sciences Directorate with supportive report language and implied funding increases.*
- NSF’s Graduate Research Fellowship Program (GRFP) recognizes and supports outstanding graduate students in NSF-supported STEM disciplines who are pursuing research-based master’s and doctoral degrees at accredited U.S. institutions. The program encourages the best and brightest students—a diverse cohort—to pursue STEM as a career and recognizes those individuals who propose to conduct meritorious scientific research capable of broad impacts; it sets promising students on a trajectory for success in their scientific careers. Given the significant disruptions that COVID–19 has caused for the future careers of student scientists, NSF should be strengthening its support for students. *APS urges the Committee to provide the resources necessary to fund no less than 2,000 awards in fiscal year 2022 and urges the program to grow to 3,000 in future years.*

STATEMENT OF APS EXECUTIVE DIRECTOR

Madam Chairwoman and Members of the subcommittee, thank you for the opportunity to provide testimony as you consider funding priorities for Fiscal Year 2022. I am Robert Gropp, Executive Director of the Association for Psychological Science (APS). APS is a nonprofit scientific organization dedicated to the advancement of scientific psychology for the benefit of science and society. APS’s 30,000 members are scientists and educators at the Nation’s universities and colleges, conducting research supported by the National Science Foundation (NSF). The research funded by NSF’s Social, Behavioral, and Economic Sciences Directorate (SBE) provides a fundamental understanding of the human condition. As the world deals with the COVID–19 pandemic and its effects, essential tools at our disposal are behavioral in nature, bringing the science supported by SBE to the forefront. SBE-supported scientists develop and employ rigorous methods to discover principles of human behavior at levels ranging from cells to society and from neurons to neighborhoods. We urge the Committee to include supportive report language and implied funding increases for the SBE Directorate in the Fiscal Year 2022 CJS Appropriations bill and report.

Madam Chairwoman, APS joins the scientific community in supporting a fiscal year 2022 appropriation of \$10.2 billion for NSF. This funding level would advance innovation, discovery, and productivity; help us face current and future societal

challenges; and boost our economy given the ways science, engineering, and math support so many of our country's jobs.

#### RECOGNIZING THE LEADERSHIP OF THE SUBCOMMITTEE

Madam Chairwoman, as the leading voice for scientific psychology in all its forms, APS recognizes and appreciates your leadership and the leadership of this subcommittee in supporting Federal research. We applaud your commitment to maintaining our Nation's economic growth, national security, and overall global competitiveness through investment in science. We are grateful for the appropriations the agency received in fiscal year 2021, yet we respectfully recognize that more is required to address the effects of historical underinvestment in fundamental research in the United States. According to NSF, in fiscal year 2020, 42,727 applications were received, but only 12,172 were funded. Many of these unfunded applications were deemed meritorious by independent scientific reviewers. When deserving proposals go unfunded, scientific progress and the resulting benefits to society are delayed or lost.

The potential impact of these missed opportunities is even starker when considering the return on investment in scientific research and the significant investments that other nations are making in comparable research areas. According to the National Science Board's 2020 Science and Engineering Indicators, "Where once the U.S. was the uncontested leader in science and engineering, we are now playing a less dominant role." The United States was the largest R&D performer in 2017, followed by China. To remain at the forefront of scientific discovery and continue leading the world in science and engineering, we must invest strategically and robustly now. NSF increases the competitiveness and growth of our country, but also of each State as well. In fiscal year 2020, for example, New Hampshire research institutions were competitively awarded a total of \$42,904,000 in NSF grant funding, and Kansas research institutions were awarded a total of \$44,239,000.

#### FUNDING FOR THE NATIONAL SCIENCE FOUNDATION AND POLICY ISSUES

As previously noted, APS recommends an fiscal year 2022 funding level of \$10.2 billion for NSF, a funding level that makes clear that scientific research is a national priority.

APS does not recommend that Congress allocate funding at the directorate level. We do encourage Congress to provide sufficient funding to allow NSF to make additional and strategic new investments in SBE. As mentioned previously, this research is key to responding to COVID-19 and its effects, including the ways the pandemic has affected disproportionately those from disparity groups. Reports from NSF indicate that the SBE community is applying at record rates for funding to address behavioral elements of COVID-19, and that these applications are exceptionally meritorious and capable of broad and immediate impacts.

In addition to offering potential solutions to COVID-19's effects, SBE provides critical support to the behavioral science community broadly. Despite being the smallest directorate at NSF, SBE funds 55 percent of all university-based social and behavioral science research in the United States. In 2020, SBE awarded approximately \$1.9 million and \$983,000 in fiscal year 2020 research grants to the Chairwoman and Ranking Member's home States of New Hampshire and Kansas, respectively. We therefore urge the Committee include the following report language:

*Social, Behavioral, and Economic Sciences (SBE).*—The Committee supports SBE and recognizes the fundamental importance of the research it supports in advancing scientific understanding of critical challenges facing our Nation, including increased misinformation, polarization, and bias. SBE sciences also afford insights into advancing public health, defense and security, education and learning, and the interface of humans and technology. SBE funds over half of our Nation's university-based behavioral science research, yet it is among the smallest NSF research directorates. Because the Committee believes SBE research provides an evidence-based understanding of human behavior, it recommends an increase over the fiscal year 2021 levels for SBE activities commensurate with its potential for impact.

The National Science Foundation (NSF) Graduate Research Fellowship Program (GRFP) is the country's oldest fellowship program that directly supports graduate students in various science, technology, engineering and mathematics fields. These fellows are anticipated to become knowledge experts who can contribute significantly to research, teaching, and innovations in science and engineering; they are crucial to maintaining and advancing the Nation's technological infrastructure and national security as well as contributing to the economic well-being of society at

large. Importantly, they enable the most promising candidates from groups historically underrepresented in science to choose science as a career.

Over the last several years, both GRFP program solicitations and the Administration's budget requests state that NSF is planning to reduce the number of awards to 1,600 down from the previous award level of 2,000 awards. It is only when Congress intervenes with directive report language in the CJS Appropriations reports that the awards are brought up to the steady level of 2,000 per year.

Given that many students are suffering disruptions or delays to their education resulting from COVID-19, NSF should be doing more to support the careers of student scientists. A cut in the number of GRFP awards sends an unintended message to those at early career levels that NSF's support is declining. APS urges the following report language be included in the fiscal year 2022 report supporting these important training grants.

*Graduate Research Fellowship Program.*—The Committee notes that the Graduate Research Fellowship program (GRFP) has a long history of selecting recipients who achieve high levels of success in their future academic and professional careers and recognizes and supports outstanding graduate students in NSF supported sciences, engineering, and mathematics, including the field of behavioral science. In recognition of the outstanding contributions of this program to launch the careers of talented graduate students as they become life-long leaders who contribute to scientific innovations and teaching, the Committee has provided the resources necessary to fund more than 3,000 grants in fiscal year 2022 and urges the program continue to grow in future years.

There is significant support in Congress and the Administration to expand the National Science Foundation with increases in funding as well as a new Technology and Innovation Directorate. APS appreciates the enthusiasm and attention to science and technology, and we wholeheartedly support efforts to grow scientific advancement. We request that Congress ensure that its efforts further strengthen NSF's unique mission of supporting fundamental research in all fields. We also encourage Congress to continue to support NSF's initiatives that ensure the U.S. science and technology workforce reflects the U.S. population, increase the number of leaders in science from historically underrepresented backgrounds, and support funding for and outreach to deserving colleges and universities that are not typical recipients of NSF support.

#### SUMMARY AND CONCLUSION

APS shares your commitment to fostering innovation and economic competitiveness through investing in our Nation's research infrastructure. While we request \$10.2 billion for NSF, even more Federal funding for the agency could result in more research that can lead to new knowledge, new discoveries, and possibly products, services, and new industries. Additional SBE research will continue to help us understand patterns of stability and change at the individual, group, organizational, and societal levels that can be applied to promote the progress of science and to advance national health, prosperity, and welfare. Continued support for the Graduate Research Fellowship program at current levels, or even higher, provides training support for our future scientists and engineers.

We appreciate the opportunity to provide this testimony. and thank you for your leadership.

[This statement was submitted by Robert Gropp, Executive Director.]

#### PREPARED STATEMENT OF CAST

##### NATIONAL SCIENCE FOUNDATION

Chairwoman Shaheen, Ranking Member Moran and Members of the subcommittee, since 1984, CAST (originally the Center for Applied Special Technology) 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 set of principles and guidelines for inclusive curriculum design that is now included in the Every Student Succeeds Act (ESSA), the Higher Education Opportunity Act (HEA), the Strengthening Career and Technical Education for the 21st Century Act (Perkins V) and the National Education Technology Plan.

CAST is a non-profit organization that uses educational technology coupled with our expertise in the learning sciences to ensure all learners can and do reach their full potential. With grants provided by the National Science Foundation (NSF), U.S. Departments of Education (ED) and Labor (DOL) as well as the private sector, we

work to ensure the full power of UDL is utilized to harness technology and instructional practices to remove barriers to learning in digital as well as physical settings. UDL encourages the design of flexible learning environments that anticipate learner variability and provide alternative routes or paths to success; UDL acknowledges that variability across all learners is the *norm* rather than the exception. UDL provides both viable alternatives for *all* learners to access blended and online education and provides a responsive framework to support educators in their professional learning and application in any teaching environment. CAST's aim is to create a level playing field where all learners have equitable opportunities to succeed.

In fiscal year 2022, CAST requests: (1) National Science Foundation: receive a 20 percent overall increase. (2) National Science Foundation—Education and Human Resources: receive a 16 percent increase from \$1.1B to \$1.287B.

Since pioneering UDL more than 30 years ago, CAST has brought UDL into K–12 schools, into postsecondary settings and increasingly into career and technical education programs including STEM. Currently, through public-private partnerships, including funding provided by NSF, CAST is working to increase equity, diversity and inclusion of all students in STEM including English Learners, students with low literacy, and students with disabilities by: developing accessible STEM educational resources and making them more widely available to teachers and students; increasing engagement of [all] students, youth, adults in STEM education/STEM careers; and, ensuring STEM teachers have opportunities to be trained and receive a credential in the use of UDL.

Examples of successful initiatives led by CAST and funded and/or co-funded by NSF include:

*STEMfolio: The Career Exploration and Readiness Environment for Science, Technology, Engineering and Mathematics (CEE–STEM)* program is led by CAST with funding through NSF. CEE–STEM provides 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. For educators, rubrics are provided so that teachers can evaluate students' understanding of various careers and the quality of materials in the student portfolio. STEMfolio is explicitly designed to increase diversity and inclusion in STEM, by helping marginalized students see the relevance and achievability of STEM career paths. By partnering with YouthBuild USA in the design and piloting of the tool, CAST has made sure that STEMfolio supports 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.

*UDL for Learning Science Notebook (SNUDLE)*: With NSF and ED funding, the SNUDLE project is designed to support elementary school students with learning disabilities in active science learning. Study results have shown the tool's support for science learning and the science inquiry process have statistically significant effects on students with disabilities science performance and their motivation for science learning.

*Co-Organize Your Learning (CORGI)*: With NSF and ED funding, this project is designed to enhance student engagement and learning through a Google application (app) designed for students and teachers to use to collaboratively answer questions requiring higher order reasoning.

*Multi-Gen STEM Makerspaces Project* is a Makerspace initiative designed to increase 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 working in partnership with an affordable housing complex in Stamford, CT. With NSF funding, we are co-designing makerspace guidelines, workshops and a Multi-Gen Makers Playbook that can be hosted and sustained in affordable housing complexes across the country to provide an engaging, accessible route to embed STEM learning in families' lives, allowing caregivers, children, young adults, and neighbors to gather and share their existing knowledge and skills, collaborate authentically and build on it, using STEM to meet personally relevant goals, to pursue a STEM career pathway, or to nurture a hobby or interest.

*Advanced Technological Education: Making Community College Technician Education More Accessible for Everyone (AccessATE)*. Through support from NSF, the project goal is to support the ATE community and provide ATE grantees with the

tools and knowledge to increase the accessibility and usability of their resources and activities. CAST is providing 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: Community college programs (e.g., Corrections, Manchester Community College, CT); and Marginalized rural youth (increasing access to work-based learning through outdoor recreation).

*Advanced Regenerative Manufacturing Institute (ARMI)*. This public-private initiative to “secure U.S. global leadership in advanced manufacturing” brings CAST together with career and technical education schools, industry partners, and colleges to produce prototype career exploration modules that showcase the varied pathways into these new industries. The goal is to increase the number of students from under-represented populations and backgrounds pursuing careers in these nascent fields. Partners are: ARMI (industry and business), ATE community and career and technical education (CTE) via Federal Perkins funds.

As you can see, continuing to support NSF’s education portfolio is essential, especially as the agency seeks to leverage the UDL framework. Funding for this work is critical to mitigating the current impact 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*. Federal investments made by NSF to support teachers and other educators, as well as learners of all ages must plan for this diversity. To ensure equity, it is vital that all learners, including K–12 students, hard-to-engage youth, first-time career seekers, or adults desiring new opportunities, 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 educational innovations that incorporate effective implementation of UDL while prioritizing the need to include UDL as part of the infrastructure of STEM education, including faculty training and expanding community and individual awareness creates equity and makes sense.

CAST appreciates the opportunity to provide recommendations to the subcommittee regarding the fiscal year 2022 appropriations bill and urges you to expand investments in the NSF 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 Linda G. Gerstle, CEO.]

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PREPARED STATEMENT OF THE COASTAL STATES ORGANIZATION, NATIONAL ESTUARINE RESEARCH RESERVE, NATIONAL MARINE SANCTUARY FOUNDATION, IOOS ASSOCIATION, AND SEA GRANT ASSOCIATION

SUPPORT FOR FISCAL YEAR 2022 APPROPRIATIONS TO PROMOTE CLIMATE RESILIENCE AND ADAPTATION FOR THE NATION’S OCEANS, COASTS, AND GREAT LAKES

This joint statement is submitted on behalf of the non-profit organizations listed above who share a deep concern for the health of the Nation’s oceans, coasts, and Great Lakes. The members of our organizations work as partners to assist our coastal communities 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, however, at this interface between land and water, coastal dynamics are constantly in flux, bringing a unique set of challenges:

- COVID–19*. The global COVID–19 pandemic has highlighted and compounded economic and social challenges at many levels, particularly for disadvantaged communities.
- Climate Change*. Coastal residents are increasingly threatened by hurricanes, fires, flooding, typhoons and tsunamis, as well as chronic challenges, including coastal inundation (due to rising sea levels and land subsidence), erosion, and increasing storm intensity.
- Racial Equity*. Historically underserved and underrepresented communities, particularly Black, Indigenous and people of color, are disproportionately impacted by weather, climate, and disease impacts.
- Economic Recovery*. Loss of jobs and market-related impacts have been acutely felt in coastal communities.

*Coastal resilience is a complex and continuously evolving issue and effectively addressing it requires a collaborative framework of Federal, State, and local partners. NOAA's partner programs—Coastal Zone Management, Sea Grant, 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 a comprehensive and integrated set of services to address national priorities effectively at the local, State and regional level. Depending on geography and the specific challenge, each of these partners provides a critical tool in the toolbox needed to support communities in addressing coastal resilience and climate adaptation:*

- Innovative science is necessary to develop new coastal resource management, protection, and restoration techniques.
- Sustained observations and accurate data collection are necessary to inform innovated science.
- Modeling and visualization tools are necessary to translate data into meaningful information to inform coastal decision-making.
- Coastal zone management policies informed by data and science are necessary to ensure wise management of the coasts.
- Policies to enforce wise coastal management, resilience planning, implementation of coastal restoration and resilient infrastructure projects, and timely and robust coastal hazard response are necessary to translate data and science into effective coastal management
- Education and communication resources for best practices and risk communication are necessary to ensure that the public has reliable and actionable information regarding coastal hazards.
- Conservation, protection, and stewardship of coastal places is necessary to provide coastal protections from coastal hazards and to study sentinel-sites to inform coastal adaption and hazard mitigation efforts.

If any of these tools is missing, or Federal investments do not adequately support each of these tools, efforts to address coastal climate 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. Thriving and collaborative partnerships are essential to supporting the vision of safe and sustainable coasts. Each of the partners here play a critical role in advancing coastal resilience and adaptation and actively work collaboratively to advance these goals.

Over 126 million residents—40 percent of the population of the United States—live in coastal counties occupying only 10 percent of the U.S. landmass. 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. Weather- and climate-related hazards, and the resulting loss of life as well as environmental and economic impacts, have increased at an alarming rate. Since 1980, the Nation experienced 285 weather and climate disasters where overall damages reached or exceeded \$1 billion. The cost of these 285 events exceeds \$1.875 trillion. Just in the last 5 years (2016–2020), the Nation was subjected to 81 events that resulted in nearly 4,000 deaths and damages that exceed \$600 billion.

These weather and climate coastal hazards threaten critical coastal infrastructure, water and food supplies, and lives and livelihoods. These hazards can create both governance challenges and social instability and have a disproportionate impact on under resourced communities and communities of color. The increasing physical and economic damages, social justice implications, and community devastation is testing governments at all levels, and have shown that more is needed to ensure that our coastal communities are prepared for, have taken mitigation measures to reduce the impact of, and are able to respond to and recover from major episodic and chronic weather and climate threats. To ensure coastal communities are prepared to address increasing coastal hazards, a robust investment in a networked resilience initiative is necessary.

*Sea Level Rise in New Hampshire.*—New Hampshire Seacoast communities experience increasingly frequent and severe storm impacts. This can lead to devastating flooding, as seen in three back-to-back Nor'easters in 2018 that knocked out power to millions in New England, drove erosion that carved up the coast, and floated dumpsters down main streets in Hampton, NH. University of New Hampshire researchers with support from New Hampshire Sea Grant in partnership with staff at the New Hampshire Department of Environmental Service (NHDES)'s Coastal Program spearheaded the Coastal Landowner Technical Assistance Program (LTAP)—to guide residents through assessing and mitigating flooding and erosion risk on their properties. Since launching in 2019, LTAP has helped over 70 partici-

pants at 25 flood- and/or erosion-prone sites. LTAP provides consistent technical assistance to coastal landowners to help understand their potential coastal flood risks and restoration opportunities, clarify goals for managing their property, and identify conceptual options that may enhance the resilience of their properties, neighborhoods, and community's natural resources.

*South Carolina, Delaware, North Carolina, Florida, and Georgia—Using Data to Prepare for Hurricanes and Severe Storm Impacts.*—Downed power lines, flooding, damaged buildings—some hurricane impacts are easy to spot. Others, like changes in water salinity that impact local fisheries, are harder to assess. Not knowing where such changes occur, or how long they linger, is a perennial challenge for coastal decision makers. To meet this need, the National Estuarine Research Reserve System-Wide Monitoring Program (NERRS SWMP) and the Integrated Ocean Observing System (IOOS) along the East Coast partnered to track salinity changes that resulted from Hurricanes Joaquin in 2015 and Matthew in 2016. Both networks collect data that can be used to track storm signals: NERRS data typically comes from nearshore and upstream areas, and IOOS data is collected further offshore. By putting these datasets together, you can paint a picture of a hurricane and its impacts in near real-time as a storm moves along the coast and into the watershed. The team found that, depending on the location, the changes in salinity persisted for a week to more than a month after the storm had passed. Using visualizations and data mapping, they showed the magnitude and duration of these changes—powerful information for managers of fisheries that are sensitive to salinity. By forming an extended network of monitoring stations collecting data over large geographic areas, NERRS and IOOS have the potential to accelerate understanding of the science around a range of storm impacts and their drivers.

*Hawaiian Indigenous Seafoods, COVID, and Marine Conservation.*—Food, land, and people are closely interwoven in the mission of Hawai'i's He'eia National Estuarine Research Reserve. In 2020, the Reserve, Hawai'i Sea Grant Program, Paepae o He'eia and Kāko'o 'Ōiwi tied these threads together to help food service workers hit hard by the COVID-19 pandemic with a professional development experience based on Indigenous seafood. Revitalizing Indigenous food systems and associated food culture is a central component of coastal and marine conservation in the Hawaiian Islands. In this 7-week training, participants explored the history, ecology, cultural practices, cultivation, and harvesting techniques of Indigenous seafoods and learned how to prepare and preserve them. The food service industry was one of the hardest hit in Hawai'i during the pandemic, with a 58 percent loss of full-time employees between January and April 2020. In addition to professional development, training organizers worked to support employee retention, increase public understanding of local foods, and strengthen partnerships between Indigenous seafood practitioners and local restaurants. By providing a stipend to participants, the program also was a short-term source of income to workers facing unemployment or underemployment due to the pandemic. Participants have become informal educators, able to introduce and explain native foods and their preparation techniques to the public.

*Collaboration Enhances Hazard Resilience in Washington.*—The Washington Coastal Zone Management Program (CZM), Washington Sea Grant (WSG), and the Padilla Bay National Estuarine Research Reserve (NERR) are longstanding partners in addressing Federal hazard resilience objectives along the State's 3,000-mile marine coastline by applying scientific and technical innovations to coastal management policy and community assistance programs. The team worked with science partners and pilot communities to produce localized sea level rise projections that are relevant to existing planning and funding processes. The project relied on Washington Sea Grant expertise to rapidly improve the scientific information and tools to evaluate risk, CZM planning and design guidance to support local adaptation strategies and NERR leadership to develop a new climate resilience series in the State's Coastal Training Program. A redesigned website for the Washington Coastal Hazards Resilience Network provides improved access to related technical information and case histories. The net effect has been greater collective capacity in Washington to support local initiatives.

*Building Alaskan Community Resilience to Harmful Algal Blooms.*—The economic, environmental and health impact of harmful algal blooms (HABS) is increasing around the country as new species emerge and existing problems grow worse. For example, in Alaska the State saw its first paralytic shellfish poisoning fatality in more than a decade last year. The impacts of HABS on shellfish threaten public health and Alaska's economy, which includes an estimated \$12.8 billion in economic output related to the annual commercial and wild shellfish harvest each year. In response to this growing threat, the Alaska Ocean Observing System supported detection and early warning of harmful algal blooms through the deployment of sen-

sors, development of forecasts and data integration and management. The Kachemak Bay National Estuarine Research Reserve initiated an ongoing HABS community monitoring program that is helping citizens, businesses, and the State—which lacks a shellfish monitoring program—respond to the challenge. Working together—the Reserve joined the Alaska Sea Grant Program and the Alaska Ocean Observing System to form the statewide Alaska Harmful Algal Bloom Network. This collaboration is helping to understand and track HABS and their impacts on a harvest that yields 36 million pounds of wild food annually. These programs work with local shellfish growers, Tribes, and resource managers to support phytoplankton monitoring, shellfish sampling, workshops, risk communication training, public service announcements, and weekly monitoring reports.

*Oregon Shoreline Armoring.*—Oregon Sea Grant (OSG) and the Oregon Coastal Zone Program within the Oregon Department of Land Conservation and Development (DLCD) was tasked with addressing shoreline armoring (the practice of using physical structures to protect shorelines from coastal erosion) in Goal 18 of Oregon’s statewide land use planning goals on conserving and protecting Oregon’s beaches and dunes, and on reducing hazards to human life and property. A diverse focus group, including a program manager from the Oregon Department of Transportation, a director of a public utility, a county planner, a city manager, an engineering geologist, an economist and a land use attorney, was asked to address key topics related to shoreline armoring. Permits for armoring are limited to areas of development prior to 1977, when goal 18 was implemented. The topic is controversial, with OSG playing a neutral role. The group ultimately produced a consensus report that is used by DLCD in its management of the Oregon coast.

In conclusion, we urge the subcommittee to strongly support programs and initiatives in the fiscal year 2022 budget for NOAA) that collectively help strengthen our coastal communities’ resilience specifically:

\$107.9 million in fiscal year 2022 for the National Sea Grant College Program and \$15 million for Sea Grant Aquaculture..	\$40 million for National Oceans and Coastal Security Fund
\$36.8 million for the Integrated Ocean Observing Program ...	\$88.5 million for Coastal Management Grants and \$50.45 million for Coastal Zone Mgt and Services
\$32 million for National Estuarine Research Reserve System operations and \$10 million for procurement, acquisition & construction.	\$35 million for NOAA Education programs
\$72 million for National Marine Sanctuaries operations and \$8.5 million for procurement, acquisition & construction.	\$6 million for the Digital Coast Program

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 THE COLUMBIA RIVER INTER-TRIBAL FISH COMMISSION

The Columbia River Inter-Tribal Fish Commission (CRITFC) is pleased to share our views on the Department of Commerce’s fiscal Year 2022 budget and has identified the following funding needs:

- \$109.0 million for Salmon Management Activities of which:
  - \$26.5 million for Mitchell Act Programs to support on-going operation and maintenance of the program and produce the targeted fish mitigation numbers; and
  - \$43.5 million for the Pacific Salmon Treaty in annual operations for the implementation of the 2019–2028 Agreement.
- \$70 million for the Pacific Coastal Salmon Recovery Fund to support on-the-ground salmon restoration activities.
- \$4 million for Columbia River Pinniped Management to support implementation of the MMPA Section 120(f) permit issued by NOAA–F in 2019

\$80.8 million for Integrated Ocean Observing System (IOOS) in NOAA National Ocean Service budget

- \$69.5 million supports IOOS Regional Associations, including the NANOOS (Northwest Associations of Network Ocean Observing Systems) regional association, which serves Oregon and Washington.
- \$11.3 million supports IOOS National program in the Navigation, Observation and Positioning budget line.

*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 into treaties with the four Tribes.<sup>1</sup> The Tribes ceded tens of 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 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, lamprey, and sturgeon populations and rebuild the fisheries to levels that support Tribal ceremonial, subsistence, and commercial harvests. 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 funding support is needed to accomplish the management objectives embodied in the agreements.

#### *Salmon Management Activities*

*Columbia River (Mitchell Act) Hatchery Program:* We request the Mitchell Act be funded at \$26.5 million for fiscal Year 2022. The Mitchell Act enables Federal agencies to work with the Lower Columbia River treaty Tribes and the States of Oregon, Washington, and Idaho to establish and operate a series of hatcheries and passage facilities to improve declining fish runs in the Columbia River, ensure conservation of these critical natural resources, maintain economically viable Tribal, commercial, and sports fisheries and provide prey for Southern Resident killer whales. Today, the Mitchell Act funds 60 programs that produce approximately 40 million fish annually—nearly 30 percent of the total salmon and steelhead production in the Columbia Basin.

The request for an additional \$4.5 million in Mitchell act funds above the fiscal Year 2021 funding level (\$22 million) is to ensure that mitigation hatcheries maintain levels of production and meet new operating requirements consistent with Federal obligations. There is an obligation to treaty Tribes and other stakeholders for mitigation and in order to reach mitigation responsibilities, there must be full hatchery production.

*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 pro-

<sup>1</sup>Treaty 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.

grams conducted by these States to fulfill national commitments created by the Treaty continue to be substantially greater than the funding provided in the NMFS budget. Consequently, they have supplemented the Federal Treaty appropriations from other sources, including their general funds. Many of those funding sources are limited or no longer available and this has been exacerbated by the ongoing global pandemic.

The \$20 million increase in the fiscal Year 2020 budget and the \$5 million in the fiscal year 2021 budget were greatly appreciated, however it falls short of what the U.S. Section estimates is needed to fully implement the revised Annex Chapters to the Pacific Salmon Treaty.

*Pacific Coastal Salmon Recovery Program (PCSRF):* The PCSRF program was developed in 2000 by the State of Alaska, the Pacific Northwest States, and the treaty Tribes since the renewal of the Pacific Salmon Treaty in 1995 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 401 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 4,581 stream miles monitored; 413 miles of stream made accessible to salmon; 4,971 acres of riparian area treated; 11,341 acres conserved by acquisition or lease; and 2 million salmon fry/smolt released annually. PCSRF is vital to fulfill the region's goal of full salmon recovery and sustainability of the fishery and provide for meaningful exercise of the treaty-reserved rights of the lower Columbia River treaty Tribes.

The co-managers have developed an extensive matrix of performance standards to address accountability and performance standards, which includes the use of monitoring protocols to systematically track current and future projects basin-wide. The PCSRF projects implemented are based on the best science, adequately monitored, and address the limiting factors affecting salmon restoration. Projects undertaken by the Tribes are consistent with CRITFC's salmon restoration plan and the programmatic areas identified by Congress.

We recommend a funding level of \$70 million for the PCSRF fiscal Year 2022 allocation. Long-term economic benefits can be achieved by making PCSRF investments on-the-ground to rebuild sustainable, harvestable salmon populations into the future.

*Columbia River Section 120 (f) 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 ESA-listed salmon and steelhead populations passing through the lower Columbia River when sea lions are feeding 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 on California sea lions and not Steller sea lions. In response, Congress amended the Marine Mammal Protection Act (MMPA) in December 2018 to provide State and Tribal resource managers greater flexibility to manage sea lions. In August, 2020, the Yakama, Nez Perce, Umatilla, and Warm Springs along with Oregon, Washington, and Idaho, received a MMPA Section 120(f) permit from the National Marine Fisheries Service to actively manage pinniped populations in the lower Columbia River and its tributaries. The authority under this permit increases the scope and scale from earlier management efforts and expands lethal removal authority to also include Steller sea lions. This permit expands the area of potential removals and will increase removal activity from 3 months per year to 10 or more months per year. Previously, removing sea lions required a multistep process which included branding the animals and identifying repeat offenders. This new authority will streamline that process and, as a result, will increase the number of trappings and removals. In order to fully implement the Section 120(f) permit, the States and Tribes are requesting \$4 million in Federal funds. This will supplement current State and Tribal contributions.

*Regional and National Integrated Ocean Observing System (IOOS) in NOAA National Ocean Service budget:* CRITFC supports the Commerce Department's recommendation of \$69.5 million for IOOS Regional Associations, and \$11.3 million in the Navigation, Observations and Positioning line for IOOS national program efforts.

The Commerce Department's budget justification requests increased funding for the National IOOS office to create and foster natural and economic resilience, including the creation of a Marine Life Program in IOOS, and to improve data management and cyberinfrastructure (DMAC) to enhance Regional IOOS expertise for stakeholder engagement and co-development of IOOS decision support products and services.

IOOS is the Nation's premier coastal and Great Lakes observing program, providing information that helps protect lives, economies, and our environment. Fully funding IOOS consistent with the Commerce Department's budget request will maintain and improve critical program management and system development. Prior years' funding levels for IOOS have been insufficient to fully fund the identified regional needs for observation and modeling that are essential for understanding threats to Columbia River salmon in the estuary and ocean.

In 2020, CRITFC assumed responsibility for the Coastal Margin Observation and Prediction (CMOP) program, a modeling and observation system covering the Columbia River estuary and coastal ocean. CMOP is funded as a component of NANOOS (Northwest Ocean Observing System, the Regional Association serving Oregon and Washington. As a Regional Association, NANOOS works with local experts, scientists, managers, industry, and stakeholders within the community to understand needs, identify priorities, and determine cost-effective solutions. NANOOS is committed to addressing national priorities in a manner that is tailored to the unique needs of our region and that will make a difference to stakeholders and constituents.

*In summary*, the 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 provides healthy, harvestable salmon populations for all citizens to enjoy. We will be pleased to provide any additional information that this subcommittee may require.

Contact: Paul Ward, Director of Government Affairs, [warp@critfc.org](mailto:warp@critfc.org).

[This statement was submitted by Jeremy Takala, Chairman.]

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#### PREPARED STATEMENT OF THE CONSORTIUM FOR OCEAN LEADERSHIP

On behalf of the Consortium for Ocean Leadership (COL), which represents our Nation's leading ocean science, research, and technology organizations from academia, industry, and the larger nonprofit sector, I appreciate the opportunity to submit for the record our fiscal year 2022 funding priorities for the National Oceanic and Atmospheric Administration (NOAA), the National Science Foundation (NSF), and the National Aeronautics and Space Administration (NASA).

The last year brought unprecedented challenges to our Nation and our world, challenges whose impacts we will be feeling for years to come. As our Nation moves from relief to recovery to resilience, it is critically important the Federal Government continue to invest in sciences outside the medical realm, increasing support for our ocean science agencies and programs. As the world's leading maritime nation, the success of our National economy is deeply tied to that of the maritime, or "blue" economy, and a resilient national recovery must include a significant revitalization of the blue economy. The blue economy has weathered previous recessions better than the overall economy; by 2016, employment had increased by 14.5 percent compared to pre-recession levels (2007), dwarfing the 4.8 percent employment growth of the National economy. Projections also show the growth of the blue economy is likely to outpace that of the global economy. While a strong pillar of our economy, the blue economy is not exempt from the negative impacts of COVID, and it's clear that its revitalization will be critical to ensuring our post-COVID economic prosperity.

Investing in ocean science and technology, in addition to growing the blue economy, will allow us to understand our changing ocean and climate, enable science-based decision making on topics ranging from resource management to offshore wind, protect our coastal communities, enable resilience, and strengthen our National security. NOAA, NSF, and NASA each play important roles in understanding our Earth system—including the ocean, in educating our Nation's citizens to create a more environmental- and ocean-literate society; in growing a diverse and equitable

Federal workforce; and much more. Additionally, these agencies are already heavily invested in climate research, and it is necessary to support and grow these existing programs, as well as the opportunity to grow coordination and collaboration across related issue areas.

I appreciate and support the administration's widespread increases to ocean agencies and programs in the president's budget request. However, I was disappointed in the flat funding (\$3 million) proposed for the National Oceanographic Partnership Program (NOPP). Given the current energy surrounding the program, due in part to its reauthorization in fiscal year 2021, and the increasingly important role of cross-sectoral partnerships, a more robust investment would ensure the rapid and flexible creation of multisector partnerships to solve complex ocean problems and to advance the economic, environmental, and national security interests of the United States. Increased investment would also signal to non-Federal partners the government's acknowledgement of the importance of their role and the potential for partnerships to advance our ocean enterprise. To fully utilize NOPP and facilitate the success of projects promoting national goals related to ocean knowledge, I respectfully request the subcommittee provide at least \$20 million in NOPP funding—\$10 million to NOAA and \$10 million to NASA, and I also encourage strong support of the program through NSF. Of the \$10 million to NOAA, *at least* \$1 million should be directed to the Ocean Research Advisory Panel (ORAP), NOPP's statutory *Federal Advisory Committee Act* body, as NOAA is now statutorily required through the fiscal year 2021 reauthorization to provide administrative and technical support.

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

*I respectfully request at least \$7.2 billion for NOAA (3 percent more than the request).*

To make the best, proactive management decisions possible, it is necessary that we first understand our ocean. So much of our ocean remains unknown—more than 80 percent is unexplored, unmapped, or unobserved. We must grow our Nation's ability to both observe and to explore the ocean. I respectfully request *at least*:

- \$100 million for the Office of Ocean Exploration and Research (130 percent more than the request), the only Federal organization dedicated to ocean exploration. Due to the cooperative nature of the enterprise, I also request report language addressing the importance of collaboration and coordination among Federal and State agencies, academic institutions, industry, Indigenous communities, philanthropy and other oceanographic partners to maximize return on investment and advance shared data, science and public engagement, and innovative technology.
- \$69.5 million for the U.S Integrated Ocean Observing System (IOOS) regional system (equal to the request), which includes *at least* \$40.2 million for the National network of regional coastal observing systems; \$2.5 million to install high-frequency radar systems to close gaps in the surface current mapping system, \$3.5 million to support underwater gliders; \$2.5 million to streamline observations, coastal resiliency, and coastal climate observations; \$3.5 million to expand pilot projects for a National Harmful Algal Bloom Observing Network; and \$4.3 million for ocean technology and modeling innovation. Additionally, I request *at least* \$7.3 million for the Program Office. I also support language in the request around the establishment of a Marine Life Program and the \$15 million in external grant funding to expand marine life observations (which should include activities around eDNA and 'omics), support analysis, and forecast implications of climate change. Finally, I support authorizing language around maintaining and expanding the Ocean Noise Reference Station Network (in coordination with IOOS) and request \$1.5 million for this work.
- \$66.8 million for the Sustained Ocean Observations and Monitoring Program (SOOM) (equal to the request) to maintain observations to better understand and respond to changing ocean conditions. SOOM, whose funding has remained essentially flat since fiscal year 2005, funds an array of monitoring capabilities necessary to understand the long-term impacts of the changing climate; to enhance hurricane forecasting, tsunami warning systems, and storm surge monitoring; to improve weather forecasting; to assess and plan for environmental variability and change; and to sustainably manage marine ecosystems.
- \$10 million for Uncrewed Systems (150 percent more than the request) within the Office of Oceanic and Atmospheric Research to advance research and evaluation for operational readiness, including testing and evaluation in partnership with academia, industry, and other non-governmental organizations in support of the *CENOTE Act of 2018 (Public Law 115-394)*. I respectfully request

at least half the funding be for uncrewed maritime systems and that, to the extent practicable, funds be competitively awarded in open competition.

NOPP is not the only partnership program that brings great benefit to the ocean science community. Many programs at NOAA advance cooperation and coordination between Federal and non-Federal partners and provide extramural funding opportunities. I respectfully request *at least*:

- \$42 million for the National Centers for Coastal Ocean Science Competitive Research Program (NCCOS CRP) (equal to the request), which has supported coastal and Great Lakes States and U.S. territories with groundbreaking and innovative research over the last 30 years. The \$68.5 million has funded 113 projects around a variety of topics, including harmful algal blooms (HABs), hypoxia, coastal change, and regional ecosystems. However, the program has received many more proposals than it has funded, with more than \$441 million requested. Continuing to grow this account is necessary to support the increasing demand for these funds to address HABs and hypoxia challenges.

- \$115.7 million for the National Sea Grant College Program (Sea Grant) (equal to the request) and \$15 million for Sea Grant (Marine) Aquaculture (15 percent above the request). For decades, Sea Grant has supported coastal and Great Lakes communities, improving community and economic resiliency, ensuring healthy coastal ecosystems, and advancing environmental literacy and workforce education.

The importance of STEM education and extensions programs cannot be overstated. Expanding and growing our ocean-STEM pipeline to reach underserved and underrepresented communities is an imperative, as the ocean sciences severely lack diversity. This will also benefit the ocean-STEM pipeline and associated workforce, whose stability and diversity are at risk due to the COVID-19 pandemic and lingering inequities. I respectfully request *at least*:

- \$50 million for NOAA's Office of Education (22 percent more than the request), including a \$20 million increase for NOAA's Bay-Watershed Education and Training and Environmental Literacy Program grants (ELP). Sustained and adequate funding for these programs advances NOAA's mission, grows the STEM workforce, and strengthens our economy. As the longest-standing and most comprehensive national grants program with a focus on environmental literacy, ELP grants have and will continue to keep our coastal communities—and our Nation as a whole—safe, secure, and prosperous.

#### NATIONAL SCIENCE FOUNDATION

*I respectfully request at least \$10.2 billion for the agency (equal to the request).*

I thank the subcommittee for providing \$127 million in fiscal year 2019 to finish out the 3-year funding profile to complete construction of all three Regional Class Research Vessels (RCRVs). With more modern technology and abilities than previous generations, these long-awaited RCRVs will provide even more access to the marine realm, and I respectfully request the subcommittee maintain full operational and maintenance support for these critical research vessels, including funding needs related to COVID-19 delays and impacts. I appreciate the committee's efforts to bring the RCRVs online and believe now is the time to initiate conversations focused on ensuring continued access to Global Class Research Vessels in the future.

NSF's Directorate for Geosciences (GEO) supports basic research from the ocean to the poles to the atmosphere. GEO is only growing in relevance to NSF's mission, particularly as we gain a better understanding of the impacts of a changing climate on everything from the ocean and human health to its role as an essential element of our National security. This research will help our Nation meet the challenges of today, particularly around the changing climate, from understanding, adapting to, and mitigating the impacts of change to predicting environmental hazards and extreme events. I respectfully urge strong support for GEO to help us understand our global environment.

STEM education at NSF plays a vital role in securing our National, homeland, economic, energy, food, and water securities. Broadening the backgrounds of scientists to represent all people across our Nation, better reflecting our diversity of gender, race, class, and perspective, is critical for all STEM fields. A diverse, STEM-literate workforce strengthens our Nation's economy and is vital to maintaining the Nation's leadership in science and technology innovation. It is imperative to reinforce the importance of funding Federal programs that empower underrepresented groups to become the next generation of ocean-STEM leaders at every educational and technical level. The NSF INCLUDES (Inclusion across the Nation of Commu-

nities and Learners of Underrepresented Discoverers in Engineering and Science) program aims to increase access to and participation in STEM learning by demographic groups with historically low participation in these fields. Programs such as this—that support a more diversified academic core in the science and technology workforce—are key to ensuring the inclusion of underrepresented groups and in growing our blue economy, and I respectfully urge strong support for NSF INCLUDES.

U.S. investment in scientific ocean drilling over the past 55 years has been vital to the health and sustainability of our Nation and our planet. Scientific ocean drilling has been and will continue to be a foundational platform to make advances of acute societal relevance and resilience. For example, it has allowed us to grow our understanding of past climate change and sea level rise and is critical to our understanding of future climate risk and the assessment of possible adaptation and remediation scenarios. Additionally, it has been and will continue to provide the critical insights and state-of-the-art monitoring data that will enable more reliable forecasts and assessments related to understanding the tectonic processes that result in mega-earthquakes and tsunamis, which cause some of our planet's deadliest and most costly natural disasters, impacting highly vulnerable communities. Scientific ocean drilling also provides an opportunity to grow our STEM leadership and to diversify our workforce and represents one of this Nation's most successful, productive, and impactful investments advancing national STEM education and basic research. Maintaining U.S. leadership in scientific ocean drilling—through beginning to take actions necessary to build and support operations of a new drill ship to carry the International Ocean Discovery Program beyond the 2024 horizon that it is scheduled to end—is of the utmost importance.

#### NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Understanding our home planet is central to NASA's mandate, and space provides a unique perspective from which to understand Earth on a planetary scale. To grow our understanding of Earth—and to better prioritize understanding the changing climate—I respectfully request *at least* \$9 billion for the Science Mission Directorate (14 percent more than the request) and *at least* \$2.5 billion for NASA Earth Science (9 percent more than the request). This should include support for the agency's Earth-facing missions, specifically the Plankton, Aerosol, Cloud, ocean Ecosystem (PACE) mission and the Climate Absolute Radiance and Refractivity Observatory (CLARREO) Pathfinder instrument. Both were recommendations from the 2007 Earth Science decadal survey.

Education programs bringing students into the STEM pipeline are critically important and need to increase their outreach to attract and retain underserved and underrepresented students in STEM fields. I request *at least* \$147 million for the Office of STEM Engagement (equal to the request).

By maintaining and growing these funding levels across all three agencies, the committee would also be supporting our Nation's leadership on recently announced U.S.-led initiatives that are part of the UN Decade of Ocean Science for Sustainable Development.

[This statement was submitted by Dr. Alan P Leonardi, President and CEO.]

#### PREPARED STATEMENT OF THE CONSORTIUM OF SOCIAL SCIENCE ASSOCIATIONS

SUPPORT OF FISCAL YEAR 2022 FUNDING FOR THE NATIONAL SCIENCE FOUNDATION, CENSUS BUREAU, NATIONAL INSTITUTE OF JUSTICE, AND BUREAU OF JUSTICE STATISTICS

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 2022, COSSA urges the Committee to appropriate:

- \$10.2 billion for the National Science Foundation
- \$2 billion for the Census Bureau
- \$42 million for the National Institute of Justice
- \$50 million for the Bureau of Justice Statistics

First, allow me to thank the Committee for its long-standing, bipartisan support for scientific research. Strong, sustained funding for all U.S. science agencies is essential if we are to make progress toward improving the health and economic competitiveness of the Nation. The need for increased investment in science has become even more pronounced in light of the disruptions caused over the past year by the COVID-19 pandemic.

COSSA serves as a united voice for a broad, diverse network of organizations, institutions, communities, and stakeholders who care about a successful and vibrant social and behavioral science research enterprise. We represent the collective interests of all STEM disciplines engaged in the rigorous study of why and how humans behave as they do as individuals, groups and within institutions, organizations, and society.

Social and behavioral science research is supported across the Federal Government, including at the National Science Foundation and the Department of Justice. Further, Federal statistics produced by the Census Bureau and other Federal statistical agencies provide data needed to conduct social science research to inform policy decisions. Taken together, Federal social and behavioral science and statistical data help provide answers to complex, human-centered questions.

In short, knowledge derived from social and behavioral science research has made our population healthier, our democracy fairer, our Nation safer, and our economy stronger, and not just in times of crisis. Without these sciences, policymaking on major national and global issues would not be based on evidence, and billions of dollars would be wasted.

#### NATIONAL SCIENCE FOUNDATION

COSSA joins the broader scientific community in support of \$10.2 billion for the National Science Foundation (NSF) in fiscal year 2022. The U.S. scientific enterprise, including NSF, requires stability, predictability, and sustainable funding growth, as well as Federal policies that are patient and can tolerate a reasonable amount of risk in order to achieve the greatest payoff.

#### *Supporting All of STEM*

NSF is the only U.S. Federal agency tasked with supporting basic research across all fields of science. NSF supports about a quarter of all federally funded basic scientific research conducted at colleges and universities nationwide and serves as the largest single funder of university-based basic social and behavioral science research. Though NSF's Social, Behavioral, and Economic Sciences Directorate (SBE)—one of seven research directorates at NSF—represents less than five percent of the entire NSF research budget, it supports around two-thirds of total Federal funding for academic basic research in the social and behavioral sciences (excluding psychology). As the primary funding source for the majority of our disciplines, stagnant or reduced funding for SBE has an outsized impact on the social and behavioral science community. As increased investment is made in NSF, we are hopeful the social, behavioral and economic sciences will see commensurate investments.

Further, while by far the smallest of the research directorates, SBE's impact is huge. The National Academies of Sciences, Engineering and Medicine stated in its 2017 consensus report, *The Value of Social, Behavioral, and Economic Sciences to National Priorities*,<sup>1</sup> 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.”

#### *Keeping NSF Competitive*

Authorizing proposals for NSF have surfaced in the last year, particularly proposals to create new directorates at the agency focusing on technology transfer and convergence research. The bills would authorize significant funding increases to achieve their goals, which is greatly appreciated and needed. COSSA hopes that any effort to embolden NSF to continue exploring the frontiers of science will be met with a commitment to maintaining the agency’s defining characteristic, which is to be the incubator for basic scientific discovery across all areas of science. NSF’s investigator-initiated, discovery-driven identity is what makes it special and has kept the American science enterprise at the leading edge of innovation. We look forward to working with the authorizing committees to develop a roadmap for NSF that keeps it at the upper echelon of innovation and urge appropriators to stay mindful of NSF’s longstanding, unique role as part of the U.S. scientific enterprise.

#### CENSUS BUREAU, U.S. DEPARTMENT OF COMMERCE

COSSA requests that the Committee appropriate \$2 billion for the Census Bureau in fiscal year 2022. Social scientists across the country rely on the Census Bureau

<sup>1</sup> <https://www.nap.edu/catalog/24790/the-value-of-social-behavioral-and-economic-sciences-to-national-priorities>

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 fiscal year 2022 could help the Census Bureau recover from years of postponed enhancements, sustain and strengthen its mission, and pursue numerous necessary operational innovations. In March 2021, GAO kept the Census on its list of “High Risk” government operations, in part due to these factors.

These efforts are intended to provide the public and private sectors with more robust, granular and timely data for decision-making. COSSA supports efforts in Congress to provide the Bureau with greater authority for multi-year funding, beginning in fiscal year 2022, to strengthen the innovations necessary to consolidate and integrate legacy surveys and systems into a new, more nimble data collection and dissemination model.

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 disruptions to the 2020 Census caused by the pandemic and natural disasters will likely have an impact on the quality of census data at smaller geographic levels, particular in rural areas. The Census Bureau needs additional funds to expand the ACS sample size (which has not been expanded since 2011) to produce more timely, granular data for a significant number of geographies and sub-populations than currently achievable. This would provide communities more timely data to fill in any gaps in the 2020 results.

#### NATIONAL INSTITUTE OF JUSTICE, U.S. DEPARTMENT OF JUSTICE

COSSA requests that the Committee appropriate at least \$42 million for the National Institute of Justice (NIJ) within the U.S. Department of Justice’s (DOJ) Office of Justice Programs (OJP). NIJ serves as the research arm of the Department of Justice, filling an important role in helping the agency to understand and implement science-based strategies for crime prevention and control. It supports rigorous social science research that can be disseminated to criminal justice professionals to keep communities safe.

Despite our growing need for objective, science-backed solutions, over the past decade, NIJ’s purchasing power has dropped by 36 percent due to the combined effect of declining appropriations and inflation. Compounding this pressure are Congressionally-mandated directives for specific activities, nearly always without the inclusion of additional funding to the agency’s bottom line. Nearly 40 percent of NIJ’s fiscal year 2021 appropriation is directed to Congressionally requested research, not including a number of additional projects requested without allocated funding.

#### BUREAU OF JUSTICE STATISTICS, U.S. DEPARTMENT OF JUSTICE

COSSA urges the Committee to appropriate at least \$50 million for the Bureau of Justice Statistics (BJS) within OJP. 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.

Despite a growing demand from policymakers, researchers, and other stakeholders for high-quality criminal justice data across an expanding array of variables, BJS has also faced significant budgetary challenges over the past decade. The agency’s purchasing power has dropped by more than 37 percent since fiscal year 2011 due to the combined effect of declining appropriations and inflation. This decline in funding has a direct impact on BJS’s ability to release its data in a timely manner. Over the past several years, the release of numerous reports and datasets have been delayed—in some cases by several years. In addition, annually collected data has been combined into 2-year reports, further increasing the lag between collection and public release. Data users’ frustrations have been exacerbated by the fact that BJS’s overall dissemination practices are antiquated and out of step with current best practices for statistical agencies. The agency’s website has not had a significant update since at least 2011 and lags its peer statistical agencies in terms of usability, accessibility, and visualizations. BJS needs additional investment to ensure it has

the resources to produce and release data in a timely manner, as well as to enhance its capacity to disseminate the invaluable data to stakeholders who rely on it.

Thank you for the opportunity to offer this statement. Please do not hesitate to contact me should you require additional information.

[This statement was submitted by Wendy A. Naus, Executive Director.]

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PREPARED STATEMENT OF THE COURT APPOINTED SPECIAL ADVOCATES/GUARDIAN AD LITEM

Chairman Leahy, Chair Shaheen, Vice Chairman Shelby, Ranking Member Moran, and Members of the Commerce, Justice, Science, and Related Agencies subcommittee, thank you for the opportunity to submit remarks on the Department of Justice (DOJ) fiscal year 2022 budget including funding of the Court Appointed Special Advocates (CASA) Program through the Office of Justice Programs' State and Local Law Enforcement Assistance Account at the fiscal year 2022 President's budget request level of \$14 million.

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, 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 one or more primary caregivers.

Emerging issues such as the commercial sexual exploitation of children and our Nation's growing opioid epidemic—for which children account for an increasing number of victims—both necessitate a greater specialization within one-on-one advocacy, with a keen and deliberate focus on progressing toward the call within the Victims of Child Abuse Act to serve every child victim. As we enrich CASA/GAL advocacy to encompass evolving direct service needs, our National network will further strengthen its capacity to serve over 276,000 child victims of abuse and neglect.

Child victimization and maltreatment by primary caregivers is distressingly on the rise, and with it, so too rises the impact on the child and society. 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 hundreds of 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 nearly 950 local, State, and Tribal programs to promote improved child outcomes and effective stewardship of public investments in victim advocacy. Evidence-based practices, intensive technical assistance, direct program guidance and partnerships, and national program standards and quality assurance processes all lie at the foundation of effective CASA/GAL program service delivery in communities across the Nation.

Given the nature of the CASA/GAL advocates' intensive work with child victims of abuse and neglect, standards of rigorous screening, training, supervision, and service are implemented nationwide, with congressional support, to ensure consistent quality for victims who directly benefit from having their needs and rights championed in the courtroom and in the community. Comprehensive pre-service, in-service, and issue-focused training curricula—including training in disproportionality, cultural competency, and working with older youth—ensures a cutting edge approach to victim services centered on the child thriving well into the

future as a member of the community. Federal support is foundational to the solid and high-quality functioning of a national child advocacy network for victims of abuse and neglect.

As the needs of child victims of abuse and neglect grow and change, so must the specialization of one-on-one advocacy and services by CASA/GAL programs. Since the Victims of Child Abuse Act was passed, the landscape of victims' services for children has evolved significantly. Researchers and practitioners know more now than ever about trauma, and its associated impacts on child development, as well as the significant and multiple risk factors and issues faced by abused and neglected children such as mental health/post-traumatic stress disorder (PTSD), commercial sex trafficking, overmedication, and the growing effects of substance abuse and the opioid epidemic in particular. Further, we know that youth of color in particular face very significant challenges—in addition to victimization—on their path to a thriving adulthood. CASA/GAL advocates bring one-on-one attention and a dedicated focus to each of the issues that the child victim faces, but additional resources are needed to enhance and build their knowledge base as part of a continuous advocacy development process.

These complex issues warrant adaptive and responsive training, technical assistance, and resources, while continuing on a trajectory of maintaining quality care and services within current CASA/GAL caseloads and also simultaneously building the capacity to take on additional cases when appointed by the court. National CASA/GAL Association is committed to continuous improvement of training, technical assistance, and resource delivery to strengthen and support local CASA/GAL programs and State organizations to help advocates remain at the forefront of emerging child welfare issues.

Federal support at the requested level is instrumental to bridging advocacy training and best practice tools into multiple and new emerging issue areas including child sex trafficking, substance abuse and opioid-overuse, and the overmedication of child victims, for example. Advocates need to be well versed in warning signs for these issues, as well as the available services, resources, and coordination of community and court efforts in order to best address the child victim's case.

Fiscal year 2022 funding of \$14 million will be targeted to fortifying resources and training generally for CASA/GAL programs, and in key focus areas including commercial sexual exploitation, children impacted by substance abuse disorders, children of incarcerated parents and young people aging out of foster care, based upon existing best practices and models. In addition, this Federal funding will be used to target resources to serve over 276,000 child victims of abuse and neglect, and continue efforts toward the development of State CASA/GAL organizations in the States currently without this resource that enhances support of program service delivery in local communities. Additional projects include sustaining development of training on best practices in addressing the needs of children impacted by the opioid epidemic and other forms of substance abuse, child sex trafficking, unaccompanied children and addressing racial disproportionality in child welfare and the need for racially and culturally sensitive recruitment and matching of CASA/GAL advocates.

According to the most recent government data available, the number of child maltreatment cases has increased to over 700,000 per annum. This remains a significant population with equally significant and complex issues and risk factors. Without the benefit of a specially trained CASA/GAL advocate that is able to devote dedicated time and attention to the details of the case, the child victim faces a complex and cumbersome court process and foster care system that is overwhelmed, overburdened, and under-resourced. Our ability as a national network to serve every child victim of abuse and neglect is directly tied to strengthening and expanding a foundational and interwoven program of advocate training, technical assistance, standards, tools, and resources that are funded with DOJ support.

While children who are the victims of maltreatment have suffered deep layers of trauma, these experiences do not have to be their only life story. Juvenile detention and adult incarceration do not have to be the path to their future. Substance abuse, PTSD, homelessness, and joblessness do not have to be the basis of their experiences. We can change their trajectory, together, with congressional support.

Caring, dedicated, and extensively trained CASA/GAL advocates bring about positive changes in the lives of child victims. Full funding is needed to continue expanding the advocate pipeline, enhance the training, resources, and services provided to and through CASA/GAL programs, and strengthen outcomes for future members of our Nation's workforce.

We urge the subcommittee to support the President's fiscal year 2022 budget request for the Court Appointed Special Advocates Program to address the overwhelming need for dedicated advocacy on behalf of child victims of abuse and neglect. Thank you for your consideration.

[This statement was submitted by Tara L. Perry, Chief Executive Officer.]

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PREPARED STATEMENT OF CRS REMEMBERED  
NOS QUOQUE SERVIVIT

DEAR REPRESENTATIVE DE LAURO AND SENATOR SHAHEEN:

CRS Remembered, a private membership organization of retired and former employees of the Community Relations Service (CRS) of the U.S. Department of Justice, respectfully urges the subcommittee on Commerce, Justice, Science, and Related Agencies to provide CRS with a budget of not less than \$50-million for its community peace building efforts.

As you know CRS is the only Federal agency that is specifically dedicated to working with community groups and local government agencies to prevent, de-escalate, and resolve community-wide conflicts based on race, color, and national origin. It was established by Congress at a time in 1964 when our country was experiencing increasing levels of divisive racial tensions. In this regard at the signing of the historic 1964 Civil Right Act President Lyndon Johnson said, "come, let us reason together." Clearly, now is the time for Congress to step up again to support the ideals of a democratic society that comes together to work out its racial, ethnic and other social differences thru dialogue at a peace table instead of thru confrontation and violence at the street level.

As the U.S. again hits historic levels of polarization and division, America needs CRS (the nation's peacemaker) to effectively help civic non-governmental organizations and local government agencies resolve local conflicts arising out of differences based on race color, national origin and other underlying personal human attributes. Unfortunately, CRS is now down to just 16 peacemaking mediators for the entire number of States and territories under its jurisdiction. President Biden's fiscal year 2022 budget requests \$20-million for CRS, a funding level is simply not enough to make a dent in the enormous problem of endemic intracommunity divisiveness that plagues our Nation today.

In closing we again urge you to invest in America's domestic peacebuilding capacity by providing at least \$50-million to CRS to also include a funding a grants program to support domestic locally-based, non-profit peace making groups.

[This statement was submitted by Miguel J. Hernandez on behalf of CRS Remembered.]

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PREPARED STATEMENT OF CYNTHIA MOUSSEAU, JD  
ON BEHALF OF NEW ENGLAND INNOCENCE PROJECT AND THE NATIONAL INNOCENCE  
NETWORK  
INNOCENCE AND FORENSIC SCIENCE PROGRAMS AT THE DEPARTMENTS OF JUSTICE &  
COMMERCE

My name is Cynthia Mousseau and I serve as a Staff Attorney at the New England Innocence Project (NEIP). On behalf of NEIP and as a member of the Innocence Network, a coalition of approximately 60 local innocence organizations working to exonerate the innocent and prevent wrongful convictions nationwide, thank you for the subcommittee's critical funding increases and strong support for innocence and forensic science programs in fiscal year 2021. Thank you also for allowing me to submit written testimony for the record as you consider appropriations requests for fiscal year 2022. 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.*

*These innocence and forensic science programs increase the fairness and accuracy of the criminal legal system; address arbitrary racial disparities and inequities; provide the strongest possible forensic science tools to legal system stakeholders; and generate greater public safety for our Nation.*

Data from the National Registry of Exonerations show that the number of exonerations has significantly increased since Federal innocence programs—the Bloodsworth Post-Conviction DNA Testing and Wrongful Convictions Review programs—began receiving funding in 2008 and 2009, respectively. Between 2009 and 2016, *the total number of exonerations increased by 82 percent.* This dramatic increase is in part *a result of the decision to invest in these programs.*

2019 set the record for the highest number of years individuals lost to being wrongfully convicted—an average of 13.3 years per exoneree. More than 25,000 life years have been lost to wrongful incarceration. The National Registry of Exonerations currently lists more than 2,800 exonerations since 1989. Half of the people exonerated are Black, *and innocent Black people spend approximately 45 percent longer wrongfully imprisoned than innocent white people.* This racial disparity holds true across different types of convictions. Investing in innocence and forensic science programs helps *to increase the accuracy, equity, and integrity of the criminal legal system.*

The New England Innocence Project (NEIP), headquartered in Massachusetts, is the only innocence organization serving Vermont, Maine, Rhode Island, and New Hampshire. Federal grant funds help expand its reach into States that have insufficient resources to meet their needs. 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) organized a work group with the Middlesex District Attorney’s Office, the Massachusetts public defender agency’s innocence program, and the Massachusetts State Police Crime Lab to establish a pilot program to identify wrongful convictions caused by erroneous microscopic hair analysis; (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, including eyewitness misidentification, false confessions, flawed forensic science, and racial bias; and (3) provided technical assistance for the proper implementation of conviction integrity units.

Cases without DNA evidence are difficult and often take many years to complete. It is a long, arduous, and resource intensive process to prove an individual’s innocence after he/she has been wrongfully convicted. *An average case at NEIP requires years of work and thousands of dollars to adequately investigate and litigate.* During this very long time, the innocent person is languishing behind bars.

Freeing innocent individuals and preventing wrongful convictions through reform also *greatly benefits public safety.* Every time DNA identifies a wrongful conviction, it enables the possible identification of the person who actually committed the crime. *Such true perpetrators have been identified in more than half of the DNA exoneration cases.* Unfortunately, many of these individuals went on to commit additional crimes while an innocent person was convicted and incarcerated in their place.

*To date 375 individuals in the United States have been exonerated through DNA testing, including 21 who served time on death row.* However, the value of Federal innocence and forensic science programs is not to just these exonerated individuals. It is important to fund these critical programs because reforms and procedures that help to prevent wrongful convictions also enhance the accuracy of criminal convictions and result in a fairer and more accountable system for victims of crime.

#### WRONGFUL CONVICTION REVIEW PROGRAM

We know that wrongful convictions occur in cases where DNA evidence may be insufficient or unavailable to prove innocence. The National Registry of Exonerations currently lists more than 2,800 exonerations since 1989, the vast majority of which did not have the presence or benefit of testable DNA. The Wrongful Conviction Review Program provides critical support to ensure that experts are available to navigate the complex landscape of post-conviction litigation, as well as oversee the thousands of volunteer hours local innocence organizations leverage to help investigate these complex non-DNA cases and support the significant legal work they

require. *The Wrongful Conviction Review Program has contributed to approximately 37 exonerations over the past 4 years.*

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 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, approximately 10–15 percent of local innocence organizations received Wrongful Conviction Review funding. To continue and expand this important work, I urge you to provide *\$15 million for the Wrongful Conviction Review Program in fiscal year 2022. (Please note the Wrongful Conviction Review Program is part of the Capital Litigation Improvement Program.)*

*I also urge you to include in the fiscal year 2022 report for the Commerce, Justice, Science, and Related Agencies Appropriations bill the final fiscal year 2021 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 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. Grantees range from State and local prosecutor offices to law enforcement agencies and crime labs, which can collaborate with local innocence organizations when appropriate. For example, an Arizona grant allowed the State's Attorney General's Office to partner with Arizona Justice Project to create the Post-Conviction DNA Testing Project that canvassed incarcerated individuals, reviewed cases, located evidence, and filed joint requests with the court to release evidence for DNA testing. In addition to identifying the innocent, *Arizona Attorney General Terry Goddard noted that the "grant enable[d] [his] office to support local prosecutors and ensure that those who have committed violent crimes are identified and behind bars."*

The Bloodsworth program is a powerful investment for States seeking to free innocent individuals and identify the individuals who actually committed the crimes. The program has resulted in the exonerations of *at least 51 wrongfully convicted persons in 14 States. The person who actually committed the crime was identified in 13 of those cases.* In 2020, *an additional 5 people were exonerated through the program.* The success of this program both in generating individual exonerations while supporting broader system review when problems arise has made it popular—*DOJ has reported in recent years that it has received twice as many qualified applicants as it has funding to grant.*

For example, Virginian Thomas Haynesworth, who was wrongfully incarcerated for 27 years, was freed thanks to Bloodsworth-funded DNA testing that also revealed the person who actually committed the crime. The culpable person in that case went on to terrorize the community by attacking 12 women, with most of the attacks and rapes occurring while Mr. Haynesworth was wrongfully incarcerated. Given the importance of this program to both innocent individuals and public safety, I urge you to provide the *\$15 million to continue and expand the work of the Bloodsworth Post-Conviction DNA Testing Program in fiscal year 2022.*

## FORENSIC SCIENCE IMPROVEMENT

To continue the critical work to improve forensic science, and help prevent wrongful convictions, I urge you to provide \$25 million for NIST to support foundational forensic science research, including \$2 million to conduct technical merit evaluations.

*As the Federal entity that is both perfectly positioned and institutionally constituted to conduct foundational forensic science research, NIST's work will improve the validity and reliability of forensic evidence, a need cited by the National Academy of Sciences 2009 report, Strengthening Forensic Science in the United States: A Path Forward.* NIST's reputation for innovation will result in technological solutions to advance forensic science applications and achieve a tremendous cost savings by reducing court costs posed by litigating scientific evidence.

Additionally, some forensic science methods have not yet received an evaluation of their technical merit and NIST needs additional support to conduct these vital reviews. The forensic science activities and research at NIST will help to improve forensic disciplines and propel forensic science and the criminal legal system toward greater accuracy and reliability, and as a result, help prevent wrongful convictions and improve system equity.

## CONCLUSION

Thank you for your leadership in ensuring the accuracy, equity, and integrity of our Nation's criminal legal system. I urge you to support all of the aforementioned programs, including the Wrongful Conviction Review and Bloodsworth grant programs at DOJ's Bureau of Justice Assistance, as well as NIST forensic science research at the Department of Commerce. If you have questions or need additional information, please contact Jenny Collier, Federal Policy Advisor to the Innocence Project, at [jcollier@colliercollective.org](mailto:jcollier@colliercollective.org).

## PREPARED STATEMENT OF THE DAUGHTERS OF PENELOPE

## FISCAL YEAR 2022 FUNDING: VAWA, VOCA PROGRAMS &amp; CRIME VICTIMS FUND

Chairwoman Jeanne Shaheen, Ranking Member Jerry Moran, and distinguished Members of the Commerce, Justice, and Science Appropriations subcommittee, the Daughters of Penelope (DOP), an international service organization for women of Greek heritage and Philhellenes, which is dedicated in part to supporting victims of domestic violence, is requesting 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. Specifically, we request a Crime Victims Fund cap for fiscal year 2022 to be set at least at \$2.65 billion and without any transfers to programs not authorized under the VOCA statute. Further, we call for the Senate to pass S.611, VOCA Fix to Sustain the Crime Victims Fund Act of 2021. Moreover, we support the Biden administration's strong proposed investment request of \$1 billion for VAWA programs and for Congress to pass a strong bipartisan-backed reauthorization of VAWA.

## VOCA PROGRAMS &amp; 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. According to the Department of Justice, in fiscal year 2018, Victim Assistance programs funded 7,417 unique State and local victim service organizations through over 9,472 grant awards.<sup>1</sup> These agencies provided services to nearly millions of victims of crime, including victims of murder, assault and sexual assault, domestic violence, child abuse, stalking and elder abuse, and others.

The Crime Victims Fund is financed by fines, forfeitures, or other penalties paid by Federal crime offenders. *Therefore, the Crime Victims Fund is not funded by taxpayer dollars.* However, it is unfortunate Congress often carves out funds from the CVF to use as offsets for other government programs. Because CVF is comprised of non-taxpayer dollars, it should not be considered available for use for non-VOCA

<sup>1</sup> <https://www.justice.gov/jmd/page/file/1160581/download>, Page 59.

programs in the Federal budget. Moreover, according to a previous statement of the Congressional Victims' Rights Caucus, "not only does raiding the Crime Victims Fund violate the intent of the law, but it violates the [VOCA] statute itself..." Therefore, we recommend to the subcommittee that the Fund be used only for programs authorized under the VOCA statute. However, recent appropriations bills passed by Congress, and previous administrations' budget requests, have carved out funds from the Crime Victims Fund for non-VOCA authorized programs. As examples, the fiscal year 2021 appropriations year-end legislative package transferred \$435 million from the CVF to VAWA programs. We request the elimination of transfers that harm the Fund's long-term viability and ability to commit fully to crime victims. Another unfortunate development has been that over the course of the last decade, the Department of Justice has brought fewer Federal criminal cases and has instead entered into deferred prosecution and non-prosecution agreements. The monetary penalties from these agreements are deposited into the General Treasury rather than into the CVF, resulting in the loss of billions of dollars. This has resulted in catastrophic cuts to VOCA. Grants have decreased by 70 percent over the last 4 years. This is why we support swift passage of S.611, VOCA Fix to Sustain the Crime Victims Fund Act of 2021 and sincerely thank the U.S. House of Representatives for passing its companion bill, H.R.1652. Finally, we recommend setting the Crime Victims' Fund cap to at least \$2.65 billion. Congress established an appropriation cap on funds available for distribution intended to maintain the CVF as a stable source of support for future victim services. At the cap level, Congress will not only ensure the continuation of enhanced services to victims to meet their needs, but it also does not contribute or add to the National debt or deficit because these are non-taxpayer funds.

#### VAWA PROGRAMS

Domestic violence is a pervasive, life-threatening crime affecting millions of individuals across our Nation regardless of age, gender, socio-economic status, race or religion. The statistics are alarming. According to the National Network to End Domestic Violence (NNEDV):<sup>2</sup>

- More than 1 in 3 women have experienced rape, physical violence, and/or stalking by an intimate partner in their lifetime.
- Approximately 8 million women are raped, physically assaulted, and/or stalked by a current or former intimate partner each year.
- 1 in 5 women and 1 in 71 men have experienced rape in her or his lifetime.
- Nationwide, an average of 3 women are killed by a current or former intimate partner every day.

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 percent (or 43.6 million) of U.S. women during their lifetime.<sup>3</sup>
- One in 4 women and 1 in 10 men have experienced physical violence by an intimate partner during their lifetime.<sup>4</sup>
- In 2015, 1,270 women and men were murdered by an intimate partner (e.g. husband, wife, boyfriend, girlfriend).<sup>5</sup>

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.<sup>6</sup>
- Nationwide, an average of 3 women are killed by a current or former intimate partner every day.<sup>7</sup>
- Approximately 15.5 million children are exposed to domestic violence annually.<sup>8</sup>

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

<sup>2</sup> NNEDV Domestic Violence Fact Sheet, accessed [https://nnedv.org/wp-content/uploads/2019/07/Library\\_General\\_DV\\_SA\\_Factsheet.pdf](https://nnedv.org/wp-content/uploads/2019/07/Library_General_DV_SA_Factsheet.pdf)

<sup>3</sup> <https://www.cdc.gov/violenceprevention/pdf/2015data-brief508.pdf>

<sup>4</sup> <https://www.cdc.gov/violenceprevention/pdf/NISVS-infographic-2016.pdf>

<sup>5</sup> <https://www.cdc.gov/violenceprevention/pdf/NISVS-StateReportBook.pdf>

<sup>6</sup> [https://www.cdc.gov/violenceprevention/pdf/nisvs\\_report2010-a.pdf](https://www.cdc.gov/violenceprevention/pdf/nisvs_report2010-a.pdf)

<sup>7</sup> NNEDV Domestic Violence Fact Sheet, accessed <https://nnedv.org/mdocs-posts/domestic-violence-and-sexual-assault-factsheet/>

<sup>8</sup> Ibid.

safe, that offenders are held accountable, and that our communities are more secure. Thanks to VAWA, steady progress has been made there are many victims who still suffer in silence. A 2019 24-hour survey of domestic violence programs across the U.S. found that although 19,159 Hotline calls were answered (averaging more than 13 calls every minute). However, 11,336 requests for services (such as emergency shelter, transportation, or legal representation) went unmet because programs lacked the resources to provide them.<sup>9</sup> Sixty-eight percent of the unmet services were for Housing and Emergency Shelter. In total, 77,226 victims were served in 1 day. The unconscionable gap between need and resources only widens.

#### DAUGHTERS OF PENELOPE'S WORK TO SUPPORT DOMESTIC VIOLENCE SHELTERS

Why are VAWA and VOCA programs important to the Daughters of Penelope? In addition to our chapters supporting domestic violence shelters in their respective local communities, the Daughters of Penelope is a national sponsor and stakeholder of two domestic violence shelters—Penelope House in Mobile, Alabama, and Penelope's Place in Brockton, Massachusetts. In the past, the Daughters of Penelope has supported WIN Hellas, which is an NGO based in Athens, Greece that is active in the prevention of violence against women.

*Penelope House was the first shelter established in Alabama when it opened its doors in 1979.* Since then, Penelope House is recognized as a model shelter for others to emulate. VAWA and VOCA grant funding has been critical in helping Penelope House to meet its mission of providing safety, protection, and support to victims of domestic violence and their children through shelter, advocacy, and individual and community education. Penelope House has been awarded VAWA and VOCA grants from the following programs: Shelter Services, Court Advocate Program, and Transitional Living Program. Portions of these grants help to fund the case managers, case and court advocates, and children's counselors and program coordinators, among other employees who help to provide the life-saving support to domestic violence victims and their children.

#### STATISTICS—EFFECTIVENESS AND IMPORTANCE OF VAWA & VOCA GRANT FUNDING

—VOCA/VAWA grant funding comprised 30 percent of Penelope House's 2020 budget.

—VOCA is the largest source of Penelope House's funding.

Penelope House's Court Advocacy Program is funded by VOCA & VAWA. Its 2020 stats, which were greatly impacted by the coronavirus pandemic, for clients served were:

—Adult Clients: 5,997

—Children: 5,344

—Court Appointments with Clients: 4,078

—Clients Assisted to obtain protection from abuse or no contact orders: 1,000

VOCA supports the salaries and benefits for seven Court/Victim Advocates who provide services to victims of domestic violence throughout Mobile, Washington, Clarke and Choctaw Counties of Alabama as they navigate within the court system. (VOCA grant funding has become increasingly important to Penelope House because Penelope House's services has been expanded to include more counties in Alabama.)

VAWA supports a full-time Court Advocate Administrative Assistant and a portion of the salary for a Court/Victim Advocate for the Court Advocacy Program. The Court Advocate Administrative Assistant provides administrative support to Court/Victim Advocates and assistance to the Court Advocacy Supervisor. The assistant also collects and complies program data needed for the evaluation of the Court Advocacy Program. The Court Advocate Administrative Assistant is dually trained to serve as a Court/Victim Advocate when necessary, in case of illness or any other absence of court advocates. Thus, a victim will not have to be alone as he/she attempts to navigate within the court system.

Penelope House's Emergency Shelter Program is funded by VOCA. It's 2020 service stats—again adversely impacted due to the pandemic—were:

—Adults sheltered: 252

—Children sheltered: 273

—Total Client Service Hours: 10,536.5

—Total Nights of shelter provided: 4,881

—Crisis calls: 1,419

—Meals Served: 14,573

<sup>9</sup> 14th Annual National Domestic Violence Counts National Summary.

## RECOMMENDATION

The Daughters of Penelope (DOP) is requesting support for Victims of Crime Act (VOCA) and Violence Against Women Act (VAWA) programs, which are vital to DOP programs that serve its mission. *Specifically, we request a Crime Victims Fund cap for fiscal year 2022 to be set at least \$2.65 billion and without any transfers to programs not authorized under the VOCA statute. We also support the Biden administration's strong investment request of \$1 billion VAWA programs.* The Crime Victims Fund is not funded by taxpayer dollars. Therefore, the cap can be sustained or raised without adding to the National debt or deficit and transfers (or carve outs) must be eliminated in fiscal year 2022 and going forward.

Clearly, as the missions of domestic violence centers across the country, such as Penelope House, have expanded into jurisdictions due to the unfortunate increased need to provide victims' services, the viability of the CVF and VOCA and VAWA grants have become increasingly important to meet the victims' needs. Moreover, it is estimated the COVID-19 pandemic caused an estimated 8.1 percent increase in domestic violence incidents due to stay-at-home orders.<sup>10</sup> Thank you for the opportunity to present and submit our written testimony before the subcommittee.

[This statement was submitted by Elena Saviolakis, Executive Director.]

## PREPARED STATEMENT OF DEMAND PROGRESS

## TRANSPARENCY AND THE PUBLIC AVAILABILITY OF OPINIONS ISSUED BY THE JUSTICE DEPARTMENT'S OFFICE OF LEGAL COUNSEL

DEAR CHAIRMAN SHAHEEN, RANKING MEMBER MORAN, AND MEMBERS OF THE COMMITTEE:

Thank you for the opportunity to submit testimony on improving transparency and accountability for legal opinions rendered by the Office of Legal Counsel at the Department of Justice.

*Background*

The Office of Legal Counsel's (OLC) core function, according to an OLC memo-randa, is to provide "controlling advice to Executive Branch officials on questions of law that are centrally important to the functioning of the Federal Government."<sup>1</sup> This legal advice "may effectively be the final word on the controlling law," yet it is routinely withheld from both Congress and the public.<sup>2</sup> This withholding in effect creates secret law that controls agency actions but is shielded from both public debate and Congressional oversight.

Secrecy undermines accountability. Congress must understand how the Executive branch interprets the Constitution and implements laws enacted by Congress. Allowing OLC legal opinions to remain the sole province of the Executive branch thwarts Congress's lawmaking and oversight prerogatives. It removes consequences for agency decisions and short-circuits the public feedback process integral to our democracy.

Secrecy also poisons the operations of the Office of Legal Counsel. Public scrutiny would create an invisible but persistent pressure for the promulgation of responsible, high quality, objective legal opinions. By contrast, OLC legal opinion secrecy ensures the most salient incentive for OLC attorneys is to lean towards a legal opinion that a given administration desires—not the legal opinion that best reflects the law. There are high profile examples of this happening.<sup>3</sup> Building transparency into the process helps ensure that OLC legal analyses face scrutiny by Congress, scholars, and members of the public.

In December 2004, 19 former senior DOJ officials—including the now-nominee for Assistant Attorney General for OLC, Christopher Schroeder—endorsed a document calling for increased transparency, entitled *Principles to Guide the Office of Legal*

<sup>10</sup> <https://phys.org/news/2021-04-domestic-violence-pandemic.html>

<sup>1</sup> Department of Justice, Memorandum for Attorneys of the Office re: Best Practices for OLC Advice and Written Opinions, July 16, 2010, available at: <https://www.justice.gov/sites/default/files/olc/legacy/2010/08/26/olc-legal-advice-opinions.pdf>

<sup>2</sup> *Id.*

<sup>3</sup> See, for example, a Statement by Sen. Patrick Leahy at a February 26, 2010 hearing before the Senate Committee on the Judiciary entitled *The Office of Professional Responsibility Investigation into the Office of Legal Counsel Memoranda*, in which he said, "The fundamental question here is not whether these were shoddy legal memos. They were shoddy legal memos. Everybody knows that. . . . It failed to cite significant case law; it twisted the plain meaning of statutes. *The legal memoranda were designed to achieve an end.*" (emphasis added). See also

*Counsel*.<sup>4</sup> One principle was that “OLC should publicly disclose its written legal opinions in a timely manner, absent strong reasons for delay or nondisclosure.”<sup>5</sup> According to the *Principles* document, public disclosure of written legal opinions is important because:

*Such disclosure helps to ensure executive branch adherence to the rule of law and guard against excessive claims of executive authority. Transparency also promotes confidence in the lawfulness of governmental action. Making executive branch law available to the public also adds an important voice to the development of constitutional meaning-in the courts as well as among academics, other commentators, and the public more generally-and a particularly valuable perspective on legal issues regarding which the executive branch possesses relevant expertise.*<sup>6</sup>

A similar statement on the Office of Legal Counsel and the rule of law was released in October 2020, with significant contributions from a comparable array of legal experts.<sup>7</sup> It endorsed publication of and transparency for OLC opinions. Specifically, the statement endorsed: a strong presumption in favor of publishing final OLC opinions; disclosing OLC advice deemed classified, privileged, or sensitive to congressional committees when an agency relies upon that advice to justify a major policy decision or executive action; and releasing a public index of its memoranda. “OLC exercises a form of public trust, and because its views of the law’s meaning shape executive action and policy, Congress and the public both have compelling interests in understanding the legal basis of executive action.”

#### *Recommendations*

The good news is Congress can remedy this secret law problem. Our request is twofold. First, direct the Office of Legal Counsel to make its opinions publicly available upon promulgation, except in narrow circumstances. Second, direct the Office of Legal Counsel to release an index of all current OLC opinions and keep it up-to-date.

We note that OLC legal opinions are rendered both as “formal opinions” and “informal advice.” Both constitute legal advice that is binding within the Executive branch, follow a formal approval process, have precedential value within OLC, and are tracked in an OLC database. The major distinction is only the *format* in which the advice is rendered: a “formal opinion” is turned into a carefully formatted, written document and some are published online, whereas “informal advice” may be rendered as an email or in verbal form, which is then reduced to a memo for the record. Accordingly, we would apply the principle of transparency first articulated in the *Principles* document to disclosure of OLC legal opinions regardless of format.

The default rule must be that OLC legal opinions will be made publicly available contemporaneously with their issuance. While there will be exceptions to public disclosure, those exceptions should be narrow, constrained, and used only when absolutely necessary. Congress should still be informed.

Congress should also direct OLC to publicly release an index of all its opinions and to keep that list up to date. It should contain the full name of the opinion; the date it was finalized or revised; each author’s name (i.e., the person who signed it); each recipient’s name; identify whether the opinion has been withdrawn; and other salient information.

There is precedent for an index. The FOIA Improvement Act, enacted in 2016, established a 25-year limit for the Executive branch to assert deliberative process privilege as an exemption to a FOIA request.<sup>8</sup> A resulting lawsuit brought by the Knight First Amendment Center, *Francis v. DOJ*, resulted in an agreement where-

<sup>4</sup>“Principles to Guide the Office of Legal Counsel” (Dec. 21, 2004), available at: [https://scholarship.law.duke.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=2927&context=faculty\\_scholarship](https://scholarship.law.duke.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=2927&context=faculty_scholarship). In 2020, a related statement was released by the American Constitution Society, entitled “The Office of Legal Counsel and the Rule of Law,” and a comparable constellation of legal experts contributed to that document. It endorses a strong presumption in favor of publishing final OLC opinions, disclosing its classified, privileged, and sensitive material to Congress when an agency relies upon OLC advice to justify a major policy decision or executive action, and releasing a public index of its memos. <https://www.acslaw.org/wp-content/uploads/2020/10/OLC-ROL-Doc-103020.pdf>

<sup>5</sup>*Id.*

<sup>6</sup>*Id.* (emphasis added)

<sup>7</sup>“The Office of Legal Counsel and the Rule of Law,” American Constitution Society (October 2020), available at: <https://www.acslaw.org/wp-content/uploads/2020/10/OLC-ROL-Doc-103020.pdf>.

<sup>8</sup>Public Law 114–185 (114th Congress). <https://www.congress.gov/bill/114th-congress/senate-bill/337>

by the DOJ is producing indexes of OLC opinions more than 25 years old.<sup>9</sup> Similarly, the 2020 statement by legal experts endorsed indices.

We are aware of some limited disclosure provisions within the 2010 Office of Legal Counsel *Memorandum for Attorneys of the Office: Best Practices for OLC Legal Advice and Written Opinions*.<sup>10</sup> It fails, however, to include a presumption of disclosure and creates multiple veto points. The last dozen years have demonstrated that *this memorandum does not go far enough to protect the integrity of OLC legal opinions or confidence in the work of OLC attorneys*. Indeed, the 2020 statement by legal experts declares “*OLC itself has been in crisis for some time.*”

#### *Legislative Text*

The committee report accompanying the House CJS Appropriations Committee included language in fiscal year 2021 and fiscal year 2020 that, if written into bill text, would favorably resolve the issue.<sup>11</sup> We recommend that the Senate adopt that language:

To serve the public interest, and in keeping with transparency and the precedent of public reporting of judicial decisions, the Committee asks the Attorney General to direct OLC to publish on a publicly accessible website all legal opinions and related materials, except in those instances where the Attorney General determines that release would cause a specific identifiable harm to the National defense or foreign policy interests; information contained in the opinion relates to the appointment of a specific individual not confirmed to Federal office; or information contained in the opinion is specifically exempted from disclosure by statute (other than sections 552 and 552b of title 5, United States Code). For final OLC opinions for which the text is withheld in full or in substantial part, the Attorney General should provide Congress a written explanation detailing why the text was withheld.

In addition, the Attorney General should also direct OLC to publish on a publicly accessible website a complete index of all final OLC opinions in both human-readable and machine-readable formats, arranged chronologically, within 90 days of the enactment of this act, which shall be updated immediately every time an OLC opinion or a revision to an opinion becomes final. The index shall include, for each opinion: the full name of the opinion; the date it was finalized or revised; each author’s name; each recipient’s name; a unique identifier assigned to each final or revised opinion; and whether an opinion has been withdrawn.

The language was superseded in the joint explanatory statement for fiscal year 2021 and fiscal year 2020 that make the request more diffuse and, in light of recent experience, was unduly deferential to the Justice Department. As the underlying issue persists, we respectfully suggest it is time to take a more robust approach.

To ensure an informed public, to protect against secret law, and to allow Congress to exercise its oversight responsibilities, OLC legal opinions must be available to the public and Congress. Thank you again for the opportunity to submit this testimony.

[This statement was submitted by Ginger McCall, Legal Director.]

PREPARED STATEMENT OF ELI PARSON, GRADUATE OF THE SAN FRANCISCO FAMILY TREATMENT COURT, SAN FRANCISCO, CALIFORNIA

ON BEHALF OF THE 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 the 1.5 million graduates of treatment court programs and the 150,000

<sup>9</sup>The Knight First Amendment Institute at Columbia University is publishing the index on its website. <https://knightcolumbia.org/reading-room/olc-opinions>.

<sup>10</sup>See “Best Practices for OLC Legal Advice and Written Opinions,” Office of Legal Counsel (July 2010), available at <https://www.justice.gov/sites/default/files/olc/legacy/2010/08/26/olc-legal-advice-opinions.pdf>

<sup>11</sup>See Report, *Commerce, Justice, Science and Related Agencies Appropriations Bill, 2021*, H. Rpt. 116–455, p. 59, <https://www.congress.gov/116/crpt/hrpt455/CRPT-116hrpt455.pdf>, superseded by Joint Explanatory Statement, p. 61, <https://docs.house.gov/billsthisweek/20201221/BILLS-116RCP68-JES-DIVISION-B.pdf>; see Report, *Commerce, Justice, Science and Related Agencies Appropriations Bill, 2020*, H. Rpt. 116–101, pp. 45–46, <https://www.congress.gov/116/crpt/hrpt101/CRPT-116hrpt101.pdf>, superseded by Joint Explanatory Statement, p. 30, <https://appropriations.house.gov/sites/democrats.appropriations.house.gov/files/HR%201158%20-%20Division%20B%20-%20CJS%20SOM%20FY20.pdf>.

people the programs will connect to lifesaving addiction and mental health treatment this year alone. Given the overlapping crises of substance use and the COVID-19 pandemic, I am requesting that Congress provide funding of \$100 million for the Drug Court Discretionary Grant Program and \$30 million for the Veterans Treatment Court Grant Program at the Department of Justice for fiscal year 2022.

I am writing to you today as a treatment court graduate, father, and advocate for parents and children affected by substance use disorder. I am a 2008 graduate of the San Francisco Family Treatment Court—a program of the family civil court system that allowed me to remain a father while connecting me with the support, treatment services, and parental coaching I needed to overcome a lifelong substance use disorder. Without the support of the court, my now 13-year-old daughter would be growing up in the child welfare system without her father. Instead, she is a healthy, thriving teenager preparing for her first year of high school with me by her side. The treatment court drastically changed the trajectory of both our lives.

Since 2011, I have worked for the Homeless Prenatal Program, an organization that serves, among other child welfare programs, the San Francisco Family Treatment Court. In that role, I witness firsthand the transformation and triumph families experience as parents overcome substance use disorders and are reunited with their children. But I'm also seeing the grips of twin crises on families coming to me for help: the substance use epidemic and the ongoing effects of COVID-19, including isolation and economic devastation. Treatment courts, such as adult drug courts, veterans treatment courts, family treatment courts, and others offer a public health and public safety response to these crises as they seek to enhance and expand to serve more individuals in their communities.

With overwhelming empirical evidence showing their effectiveness, it is easy to see that treatment court programs across the country merit continued funding. The Government Accountability Office finds the drug court model reduces crime by up to 58 percent. Further, the Multi-Site Adult Drug Court Evaluation conducted by the Department of Justice confirmed drug treatment courts significantly reduce both drug use and crime, as well as finding cost savings averaging \$6,000 for every individual served. Additional benefits include improved employment, housing, financial stability, and reduced foster care placements. Veterans treatment courts, which expand on the drug court model to include veteran justice outreach specialists from the Department of Veterans Affairs, volunteer veteran mentors from the community, and a myriad of veteran-specific local, State, and Federal resources have proven equally effective. As our heroes in uniform continue to transition home, it is critical that we have interventions like veterans treatment court in place to ensure they have the treatment, structure, and support to transform the lives of those who will inevitably struggle.

Beyond the numbers, treatment court programs are making a difference in real families across the country, including mine. When my daughter was born in 2007, child welfare services prevented me from bringing her home from the hospital. At that time, I was in the midst of a decades-long battle with substance use. Childhood trauma led me to trying alcohol at age 12, using harder drugs by age 14, homelessness at age 16, and a lifelong struggle with depression and anxiety. Leaving the hospital empty-handed was the most painful moment of my life. It was then I knew I had to do what I could to earn the right to bring my daughter to the home she deserved. I knew I wanted to change—I just needed help.

I found that help in the San Francisco Family Treatment Court. Until I entered the program, my experience with the court system left me feeling silenced in my own battle to be healthy and regain custody of my daughter. In treatment court, I found hope for the first time, something I'd longed to feel for years. Suddenly, I became an active participant in a journey to finding my own health and safety so that I could guarantee the same for my daughter when we were reunited. The multidisciplinary team of the judge, child welfare officers, substance use treatment providers, and others were committed to ensuring I received the intensive outpatient treatment and other social services I needed to ensure my daughter could be reunited with a father free of substance use.

The services I received through this treatment court program allowed me to realize my life's greatest achievement: fatherhood. My daughter has never known the man sent away from the hospital that day in 2007, and it's because of the San Francisco Family Treatment Court.

I'm not alone in my success. Treatment courts have reunited thousands of families by connecting those with mental health and substance use disorders with treatment options best suited to them, including medication-assisted treatment when deemed appropriate by a medical provider. Together, the court team offers the tools to overcome addiction and past trauma to create meaningful, healthy relationships.

Continued support from the Drug Court Discretionary Grant Program at the Department of Justice ensures the nearly 4,000 treatment courts in the United States today provide critical services to reunite loving families. But we know there are many more who still need this opportunity. I strongly urge this committee to recommend funding of \$100 million to the Drug Court Discretionary Grant Program and \$30 million to the Veterans Treatment Court Grant Program in fiscal year 2022, so families like mine continue to receive lifesaving services.

PREPARED STATEMENT OF THE ENTOMOLOGICAL SOCIETY OF AMERICA

FISCAL YEAR 2022 APPROPRIATIONS FOR THE NATIONAL SCIENCE FOUNDATION

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 2022 appropriation of \$10 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 biomedical 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 NSF Research Traineeship, ensuring that the United States will remain globally competitive in the future.

NSF-sponsored research in entomology and other basic biological sciences, which is primarily supported through NSF BIO, provides the fundamental discoveries that advance knowledge and facilitate the development of new technologies and strategies for addressing societal challenges related to economic growth, national security, and human health. Because insects constitute two out of every three animal 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 meeting 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, including people. Insects are often ideal for biological models in laboratory experiments because they are generally small and inexpensive to obtain, they complete development rapidly, and they can be maintained without the special facilities required for vertebrate animals.

The common fruit fly, *Drosophila melanogaster*, for example, has been the subject of NSF-funded research that has profoundly transformed the understanding of human health and development in countless ways. Equally important, the ability to dramatically reduce the cost of sequencing genomes has played a critical role in advancing science in the last two decades. In 2018, entomologists were able to complete one of the first genome sequences by a single lab for under \$1,000 using the fruit fly.<sup>1</sup> This breakthrough not only expanded the accessibility of genome sequencing but also changed the way scientists understand the fruit fly itself as a model organism. Previously it was thought each fruit fly was essentially genetically identical. This study revealed there are significant differences in the sequences of many important genes, indicating that genome variation is much greater than previously believed. This will likely have tremendous medical value to patients, health care workers, and scientists.

One NSF BIO-supported project that illustrates the broad reach of basic entomological research is focused on insect genetics. With food demands rising across the world, there is a need for sustainable, alternative protein sources such as mass-reared insects. While there are various problems associated with commercial insect production, many of them can be addressed by studying and altering genomes to se-

<sup>1</sup> Solares, Edwin A et al. "Rapid Low-Cost Assembly of the *Drosophila melanogaster* Reference Genome Using Low-Coverage, Long-Read Sequencing." *G3* (Bethesda, Md.) vol. 8, 10 3143–3154. 19 Jul. 2018, doi:10.1534/g3.118.200162

lect desirable life history traits.<sup>2</sup> In August 2020, scientists from Indiana University—Purdue University Indianapolis and Beta Hatch Inc. published a draft genome assembly for the yellow mealworm (*Tenebrio molitor*), a promising alternative source of protein for animal feed, and perhaps even human consumption. The NSF-funded work used a new sequencing technology that combines aspects of two sequencing methods to create longer DNA sequences with lower error rates.<sup>3</sup> This high-quality draft genome is now available for researchers and industry as a valuable tool for optimizing mass rearing of mealworms.<sup>1</sup>

In another example of focused on genetics, NSF-funded researchers at Tufts University discovered that two genes are allowing the European corn borer moth to adapt to climate change by enabling synchronization between their life cycle and seasonal environmental changes. The invasive European corn borer moth is unique in its apparent ability to perfectly time its life cycle with the seasons so that populations do not die off from unexpectedly long or short winters. Genetic analysis of moths from across a range of climates (longer summers and shorter winters in the south, shorter summers and longer winters in the north) in the United States revealed genetic variations in two genes (known as clock genes) which were associated with development and generation time. The results of this study suggest potential mechanisms with which species will be able to adapt to changes in climate that expose them to variable season lengths.

NSF BIO also supports the development of technologies that directly impact economic sectors that are highly dependent on entomology. NSF recently awarded funding for a Small Business Innovation Research (SBIR) Phase I project aimed at ensuring healthier honey bee populations through data analysis and modeling.<sup>4</sup> The project seeks to build newer and more robust algorithms capable of autonomously analyzing data generated by networked sensors placed in beehives. The information derived from the resultant data sets could then be used to develop models capable of predicting the infiltration of pests and disease in hives before it actually occurs. Ultimately, the successful commercialization of this technology could revolutionize an entire agricultural sector that has suffered significantly because of honey bee colony collapse.

The NSF Graduate Research Fellowship Program (GRFP), selects and supports science and engineering graduate students demonstrating the exceptional potential to succeed in science, technology, engineering, and mathematics (STEM) careers. For example, multiple recent Fellows have advanced the frontiers of knowledge about the biology of social insects under changing environmental conditions. GRFP-sponsored research investigating extreme phenotypic plasticity, wherein environmental rather than genetic inputs lead to differences among individuals, illuminated how developmental pathways may have been altered during the evolution of sociality to create social insect castes, such as queens and workers.<sup>5</sup> Phenotypic plasticity is a key mechanism of biological adaptation, and this scientific understanding is vital to predicting whether insects and other life may adjust to environmental change. The insights and tools derived from such activities will better enable land managers and environmental regulators to protect ecosystems vulnerable to climatic shifts.

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. For example, the GRFP supported a project which used natural history collections to examine how the diversity of beneficial social insects have changed with urbanization intensity over the past century.<sup>6</sup> Researchers then developed novel machine learning models to forecast how land use change will affect biodiversity patterns in the future. Ongoing investment in the training of the next generation of scientific leaders is essential to promoting the American workforce in STEM and advancing basic scientific dis-

<sup>2</sup> <https://www.wageningenacademic.com/doi/epdf/10.3920/jiff2019.0057>

<sup>3</sup> [https://www.nsf.gov/discoveries/disc\\_summ.jsp?cntn\\_id=301188&org=BIO&from=news](https://www.nsf.gov/discoveries/disc_summ.jsp?cntn_id=301188&org=BIO&from=news)

<sup>4</sup> Symes, Ellie. SBIR Phase I: Data Analytics on Honeybee Hives Using IoT Sensor Data. Award Number: 1746862

<sup>5</sup> <https://journals.biologists.com/jeb/article/221/23/jeb153163/20481/Genetic-accommodation-and-the-role-of-ancestral>

<sup>6</sup> [https://www.nsf.gov/awardsearch/showAward?AWD\\_ID=1906242&HistoricalAwards=false](https://www.nsf.gov/awardsearch/showAward?AWD_ID=1906242&HistoricalAwards=false)

covery in NSF priority areas. NSF also supports workshops designed to provide hands-on training in collections curation and management, with a particular emphasis on students and early-career researchers.<sup>7</sup>

While collections-focused awards like those mentioned above 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. Given their continuing relevance and broad application to domestic homeland security, public health, agriculture, food security, and environmental sustainability, ESA firmly supports continued Federal investment in programs supporting collections such as NSF's Infrastructure Capacity for Biological Research.

Given NSF's critical role in supporting fundamental research and education across science and engineering disciplines, ESA supports an overall fiscal year 2022 NSF budget of \$10 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 approximately 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 Michelle S. Smith, BCE, President.]

PREPARED STATEMENT OF THE FEDERAL MANAGERS ASSOCIATION  
UNITED STATES MARSHALS SERVICE  
CHAPTER 373

June 3, 2021

The Honorable Patrick J. Leahy  
Chairman  
Committee on Appropriations  
437 Russell Senate Office Building  
Washington, D.C. 20510

The Honorable Richard C. Shelby  
Ranking Member  
Committee on Appropriations  
304 Russell Senate Office Building  
Washington, D.C. 20510

The Honorable Jeanne Shaheen  
Chairwoman  
Subcommittee on Commerce, Justice,  
Science, and Related Agencies  
Committee on Appropriations  
506 Hart Senate Office Building  
Washington, D.C. 20510

The Honorable Jerry Moran  
Ranking Member  
Subcommittee on Commerce, Justice,  
Science, and Related Agencies  
Committee on Appropriations  
521 Dirksen Senate Office Building  
Washington, D.C. 20510

FISCAL YEAR 2022 APPROPRIATIONS, U.S. MARSHALS SERVICE (USMS)

Dear Chairs Leahy and Shaheen and Ranking Members Shelby and Moran:

<sup>7</sup> Song, Hojun and Shockley, Floyd. Towards a Sustainable Management of Insect Collections in the U.S. through the Entomological Collections Management Workshop. Award Number: 1640919

The Federal Managers Association (FMA)<sup>1</sup> is the oldest and largest organization representing the interests of the 200,000 managers, supervisors, and executives serving in today's Federal Government. It aims to promote excellence in public service. Despite setbacks in consultation with USMS leadership in recent years,<sup>2</sup> FMA has maintained an active and influential chapter at the Agency for nearly two decades.

USMS FMA has long sounded the alarm about staffing levels at USMS.<sup>3</sup> The concerns in no way suggest that Congress has not appropriated an adequate number of full-time equivalencies (FTEs) to fulfill USMS duties.<sup>4</sup> Rather, they speak to how Agency leadership has disproportionately allocated its workforce into what has grown into top-heavy headquarter divisions and staff offices, versus its 94 district offices throughout the country where the majority of work assignments are carried out each day. An exhibit<sup>5</sup> in a recent news report<sup>6</sup> confirms that district offices continue to be neglected. As a result, we believe it is only a matter of time before the Agency is no longer able to safely and consistently carry out its primary mission of court security without risk of injury or worse to participants in the judicial process.

Agency executives routinely suggest an interest in one Marshals Service. Yet, we often hear from our constituents—and we agree—USMS has seemingly grown into two separate components operating under the same badge. Over the past decade the Agency has seen a significant increase in the splitting of its workforce between 94 district offices and 12 headquarter divisions and a variety of staff offices, the latter that report through Arlington, VA.

Rather compelling is—for what may be the first time—a written admission by the Agency's Chief of Staff in the aforementioned exhibit, presumably representing the Director and Deputy Director,<sup>7</sup> that staffing shortages in district offices are adversely impacting the ability to provide basic judicial security functions:

*“The USMS takes seriously its court security responsibilities and place the highest priority on maintaining the safety and security of those involved in the judicial process. It should be noted, however, the Marshals Service is currently at a critical staffing level of 69 percent across the agency. The District of South Dakota’s DUSM staffing level is even lower at only 65 percent. This severe staffing shortage contributes to the limited number of trials and hearings which can be supported simultaneously, as well as the staffing for any pre- or post-trial appearances requiring the provision of court security by DUSM personnel. Any widespread court orders or other restrictions which would impose additional limitations on the number of DUSMs available to provide court security and other vital responsibilities further degrades our Nationwide ability to support the judiciary and may negatively impact the ability of courts to conduct their business when such security is required.”<sup>8</sup>*

Last year, the Courts called upon Congress for “increased appropriations for USMS to hire an additional 1,000 Deputy U.S. Marshals (DUSMs) in accordance with the District Staffing Model” to provide for their security.<sup>9</sup> Many Agency managers, however, make the case that these 1,000 “district” operational employees have been reassigned over time to build larger headquarter divisions and staff offices at the expense of district offices, routinely creating staffing shortages across the country to uphold the Agency's *primary* mission. For example:

—Today, the Agency's Investigative Operations Division employs over 600 FTEs and contractors throughout the country, all reporting through Arlington, VA, as

<sup>1</sup> [www.fedmanagers.org](http://www.fedmanagers.org)

<sup>2</sup> <http://fedmanagers.org/fma/files/ccLibraryFiles/Filename/000000001510/FMA%20to%20Director%20Washington%20re%20%20Consultation%20Agreement.pdf>, September 21, 2020

<sup>3</sup> <https://www.govexec.com/management/2019/02/us-marshals-complain-system-unfairly-denies-them-promotion/154811/>, February 12, 2019 (note sub-heading “HQ Versus the Field”).

<sup>4</sup> <https://www.usmarshals.gov/duties/factsheets/index.html>, viewed June 3, 2021.

<sup>5</sup> [https://drive.google.com/file/d/1qFXJktXtE2eH2lba5dqlhFUnTb\\_1gJQH/view](https://drive.google.com/file/d/1qFXJktXtE2eH2lba5dqlhFUnTb_1gJQH/view), May 10, 2021.

<sup>6</sup> <https://dakotafreepress.com/2021/05/31/u-s-marshals-face-contempt-for-disrupting-court-after-refusing-judges-order-to-disclose-coronavirus-vaccination-status/>, May 31, 2021.

<sup>7</sup> Questions have been raised where the Agency's leadership is (i.e., why the Director and Deputy Director have delegated a response to an Article III Judge from the Chief of Staff with no decisional authority).

<sup>8</sup> *Id.*

<sup>9</sup> [https://www.uscourts.gov/sites/default/files/letter\\_to\\_congress\\_re\\_judicial\\_security\\_funding\\_request.pdf](https://www.uscourts.gov/sites/default/files/letter_to_congress_re_judicial_security_funding_request.pdf), September 4, 2020, and <https://www.uscourts.gov/news/2020/09/09/congress-urged-adopt-judicial-security-measures>, September 9, 2020.

opposed to the district chain of command (*i.e.*, United States Marshal and Chief Deputy U.S. Marshal) in cities where the two groups are mere miles apart from one another.

- During the previous Administration, the Agency dedicated nearly two dozen DUSMs to its Judicial Security Division (JSD) in support of protective operations for the Secretary of Education.<sup>10</sup> Its cost was widely criticized for years and many questions were raised on how and why it became a new USMS mission.<sup>11</sup> The detail ended on January 8, 2021. Yet, it does not appear the assigned DUSMs, most of whom were originally pulled from districts years earlier, were returned to the most critically understaffed offices. Instead, we are informed almost all were reassigned to other headquarter programs, to include within JSD to increase the size of the protection detail for the Deputy Attorney General.
- Three dozen DUSMs and administrative employees (and one contractor) are reportedly assigned to the Tactical Operations Division, Strategic National Stockpile Security Operations. While guarding the country's national stockpile is an important responsibility, it is not one that necessarily falls within a primary USMS mission.

The Agency uses a District Staffing Model to allocate positions to its 94 district offices. Despite repeated requests over many years to develop a similar model, one does not exist for USMS headquarters, thereby allowing its offices to grow exponentially. Consequently, we do not believe transparency exists with respect to how the Agency strategically applies a staffing model exclusive to districts, thereby positioning itself when levels drop, to argue for additional funding to protect judges. Rather, it gives the impression Congress can only solve a crisis in the making with more resources.

Before funding an additional 1,000 DUSMs, we urge the sub-committee to consider examining the true need of so many additional positions at taxpayer expense. After all, the Agency reports year after year it has been unable to fill a number of DUSM openings, consistently incapable of keeping up with attrition. A review of existing vacancies—even well before the pandemic—will likely validate this point.<sup>12</sup>

Across the country in other DOJ investigative components (*i.e.*, ATF, DEA, FBI, and OIG) operational staff assigned in cities outside their Washington, D.C. headquarters report through a local Special Agent-in-Charge. Not so at USMS where hundreds of DUSMs report through Arlington, VA, creating unnecessary and redundant layers of mid-level managers in the same cities to separately supervise those assigned to headquarter divisions and staff offices and those assigned to districts.

A co-author of this letter managed USMS, Northern District of Illinois, for more than 2 years from 2018–2020. His experience was those headquarter employees assigned in Chicago were not routinely available or required to support district operations, even on what were “beyond-capacity days” when staffing was so critically short the district had difficulty safely carrying out the Agency's judicial security and detention operation missions (*i.e.*, when called to assist, headquarter employees under separate chains of command often did not show up at the U.S. Courthouse—without consequence—to support judicial security operations). When confronted with the associated risk, the Agency's Director said he believes USMS is “different” than ATF, DEA, FBI, and OIG. We think not. Accordingly, we call upon Congress to consider urging the Government Accountability Office to conduct a study to examine any difference in organizational structures, the associated risk, and unnecessary cost with redundant mid-level managers between other investigative DOJ components and USMS where at the latter employees could instead be hired at lower grades to staff courtrooms and detention space in district offices.

The Agency's Chief Financial Officer acknowledges Congress appropriates funds and positions to USMS as a whole unit (*i.e.*, it does not mandate where to internally allocate said funds or positions).<sup>13</sup> ATF, DEA, FBI, and OIG seemingly and effectively manage their organizational structures through local Special Agents-in-Charge. We believe USMS could equally do so through its United States Marshals

<sup>10</sup> Archived organizational chart, Judicial Security Division, Protective Operations, Secretary of Education. [Exhibit A]

<sup>11</sup> Letter to Acting Attorney General Matthew G. Whitaker from Charles E. Grassley, Chairman, Senate Committee on the Judiciary, December 7, 2018, [Exhibit B] and <https://www.politico.com/news/2020/11/03/devos-security-detail-millions-years-433977>, November 3, 2020.

<sup>12</sup> We also suggest asking for the number of DUSM candidates recruited, cleared, and currently ready to attend basic training if 1,000 positions were funded.

<sup>13</sup> Email from Holley O'Brien, Chief Financial Officer, to Jason Wojdylo, November 13, 2018. [Exhibit C]

and Chief Deputy U.S. Marshals that lead its district offices. Alternatively, divisions unnecessarily and exponentially grow silos, commonly termed throughout the Agency as “empire-building,” disproportionately leaving too many districts critically short staffed. The current national average of 69 percent as reported by the Chief of Staff is astonishing, not ignoring an acknowledgement many districts operate at even lower staffing percentages.

We hope the new USMS Director will avoid being bamboozled by bureaucrats at USMS headquarters into believing congressional mandates require continued growth of headquarter divisions and staff offices. Instead, we renew our recommendation by urging him to shake-up the organizational structure by issuing an immediate moratorium on hiring all but critical vacancies exclusively in district offices and immediately reassign staff in cities around the country to local district chains of command, using the tested and successful model found at other DOJ components.

The Director-nominee awaits Senate confirmation. With his swift confirmation there is opportunity to get back to the basics by holding USMS accountable to its judicial security mission. Doing so could avoid the confrontation recently created in South Dakota between district managers—under of the auspice of “headquarters said so”—and the very judiciary the Agency is sworn to protect.<sup>14</sup> It raises questions whether additional research by USMS<sup>15</sup> may have advanced better communication with the Judiciary.

We urge Congress to expeditiously endorse five of the six judicial security measures approved by the Judicial Conference of the United States.<sup>16</sup> We ask that the staffing proposal, however, be carefully reviewed where immediate steps can instead be taken to reassign existing USMS operational employees from bloated headquarter divisions and staff offices back to critically understaffed districts.<sup>17</sup> Otherwise, beyond the more important issue of safety at our U.S. Courthouses and of the judicial process we question whether the greatest opportunity for excellence in public service can truly be achieved at USMS.

Sincerely,

Dave Barnes  
President

Jason R. Wojdylo  
Vice-President for Law Enforcement Operations

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PREPARED STATEMENT OF THE FEDERATION OF AMERICAN SOCIETIES FOR  
EXPERIMENTAL BIOLOGY

NSF FISCAL YEAR 2022 FUNDING

SUMMARY

Federal investments in fundamental research have led to remarkable progress in the biological and biomedical sciences. Basic research was the groundwork for the speed—months instead of years—in the development of COVID–19 vaccines, and pre-clinical research, such as animal studies, has been essential to every step of achieving medical progress.

Despite Congress’ bipartisan support for investing in science, Federal funding for research has not kept pace, posing a threat to our Nation’s competitiveness. We face a real threat of losing our edge in industries such as biotechnology if we do not prioritize increasing investments in science and building a diverse workforce.<sup>1</sup> The U.S. spends less on research and development (R&D) than many countries. If the U.S. is to be prepared to respond to future threats, our scientific leadership must progress. According to Science Is Us, there is the added benefit of jobs. STEM sup-

<sup>14</sup> *Id.*

<sup>15</sup> [https://www.washingtonpost.com/lifestyle/wellness/hipaa-vaccine-covid-privacy-violation/2021/05/22/f5f145ec-b9ad-11eb-a6b1-81296da0339b\\_story.html](https://www.washingtonpost.com/lifestyle/wellness/hipaa-vaccine-covid-privacy-violation/2021/05/22/f5f145ec-b9ad-11eb-a6b1-81296da0339b_story.html), May 22, 2021.

<sup>16</sup> [https://www.uscourts.gov/sites/default/files/letters\\_to\\_congressional\\_leadership\\_re\\_judicial\\_security\\_0.pdf](https://www.uscourts.gov/sites/default/files/letters_to_congressional_leadership_re_judicial_security_0.pdf), August 19, 2020.

<sup>17</sup> For the past 15 months hundreds of USMS employees and contractors assigned to headquarter divisions and staff offices have predominantly teleworked amid the pandemic. Conversely, their peers assigned to districts mostly reported to district offices to carry out the Agency’s critical missions.

<sup>1</sup> NSF Science Indicators 2018

ports 69 percent of U.S. gross domestic product, touches two out of three workers, and generates \$2.3 trillion in tax revenue.<sup>2</sup>

The Federal Government should commit to robust, predictable, and sustained funding increases for science agencies.

#### NATIONAL SCIENCE FOUNDATION

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.

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 geohealth.<sup>3</sup>

*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.<sup>4</sup>

*Train the next generation of scientists:* NSF plays a key role in supporting accessibility of scientific education, training scientists who will work across different scientific disciplines, and broadening participation in science and engineering among underrepresented and diverse groups.<sup>5</sup>

Despite its critical role in accelerating science and innovation, NSF's budget has not grown in real terms in nearly 20 years. Recent data demonstrates that NSF was able to fund only 22 percent of the high-quality research proposals that were submitted, rather than the National Science Board recommendation of 30 percent. In fiscal year 2019, approximately \$2.8 billion was requested for about 4,262 declined proposals that were rated Very Good or higher in the merit review process.<sup>6</sup>

Our recommendation (\$10 billion) is \$1.5 billion above fiscal year 2021 to support a five percent increase across the agency's core research and education programs, establish a new grant program for early-career fellowships as envisioned in congressional legislation, fund more high-quality research proposals, and increase NSF's average award size.<sup>7,8</sup> NSF could also accelerate key priorities, including Ten Big Ideas, Convergence Accelerators, Partnerships for Innovation, I-Corp, and Mid-Scale Research Infrastructure.<sup>9,10</sup>

*FASEB Fiscal Year 2022 Recommendation:* At least \$10 billion for NSF.

<sup>2</sup>STEM and the American Workforce. You've heard it before: STEM jobs—... | by Science is US | Medium

<sup>3</sup>NSF's 10 Big Ideas, National Science Foundation, Alexandria, VA

<sup>4</sup>NSF Collaborations with Federal Agencies and Others, National Science Foundation, Alexandria, VA

<sup>5</sup>Education and Human Resources Directorate, National Science Foundation, Alexandria, VA

<sup>6</sup>Report on the National Science Foundation's Merit Review Process, Fiscal Year 2019, National Science Foundation, Alexandria, VA

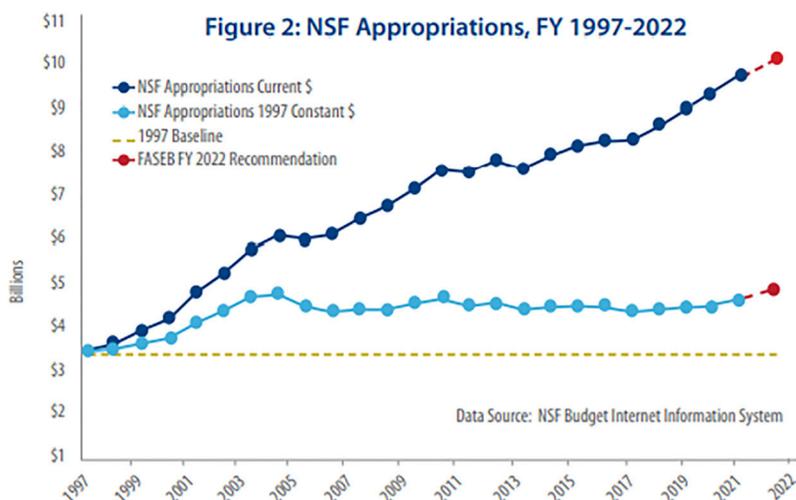
<sup>7</sup>American Innovation Act

<sup>8</sup>Supporting Early Career Researchers Act

<sup>9</sup>National Science Foundation Convergence Accelerators and NSF 10 Big Ideas Funding, Fiscal Year 2020 Budget Request to Congress, National Science Foundation, Alexandria, VA

<sup>10</sup>Partnership for Innovation

**FASEB FY 2022 Recommendation: at least \$10 billion for NSF**



[This statement was submitted by Ellen Kuo, Associate Director, Legislative Affairs.]

PREPARED STATEMENT OF THE FEDERATION OF ASSOCIATIONS IN BEHAVIORAL AND BRAIN SCIENCES

FISCAL YEAR 2022 APPROPRIATIONS FOR THE NATIONAL SCIENCE FOUNDATION

Chairwoman 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 2022. FABBS represents 27 scientific societies and over sixty university departments whose members and faculty share a commitment to advancing knowledge of the mind, brain, and behavior. As a leading member of the Coalition for National Science Funding, *FABBS joins the broader scientific community in urging Congress to fund NSF with at least \$10 billion in fiscal year 2022.*

FABBS is grateful for the strong bipartisan and bicameral support to re-invigorate Federal research and development at a time when our global competitors are looking to surpass American investments. The bipartisan United States Innovation and Competition Act recently passed by the Senate would authorize more than \$80 billion for the Foundation over 5 years. This same commitment to growing NSF is reflected by Members of the House Science, Space, and Technology Committee in the bipartisan NSF for the Future Act recently passed out of committee, which would authorize \$78 billion over 5 years. Furthermore, the President's budget request calls for over \$10 billion in fiscal year 2022, a 20 percent increase over fiscal year 2021 appropriations.

This demonstration of support recognizes that NSF-funded research pays long-term dividends in health, national security, and the innovation and technologies driving our economy. 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. Furthermore, Federal support for the NSF is vital to our research infrastructure. NSF supports one out of every four basic research projects at higher learning institutions across the United States.

Despite the critical importance of NSF, and the fact that the U.S. has lost standing in international competitiveness, the agency remains woefully underfunded. Due to budget constraints, NSF must decline thousands of qualified proposals, of which nearly \$3 Billion dollars' worth are rated very good or higher. NSF Director Panchanathan has indicated that proposals that do receive funding could produce better research outcomes and provide better value by increasing the size and duration of grants. In fact, he has said that NSF could double their budget on the current research and researchers that go unfunded, and "a quadrupling of the funding is just barely enough to be able to take us to all the ideas being unleashed so that we might be far ahead of the competition."

FABBS members are grateful that NSF received \$75 million in the CARES Act and \$600 million in the American Rescue Plan. These appropriations have already led to important insights related to the COVID-19 pandemic, while helping to alleviate the research interruptions caused by the public health crisis and fund timely research critical to helping our country slow the spread of COVID-19. NSF has made more than 1,000 awards to address questions related to the pandemic and its long-term consequences.

Behavioral, cognitive, and social scientists are producing tools for policymakers, educators, and the general public to cope with and recover from the unprecedented circumstances of the past year. They are developing strategies to get students back on track, delineating best practices for public health communication, and advancing knowledge to foster resilience in the face of collective trauma and sustained periods of stress. Robust investment in basic science in fiscal year 2022 is vital to accelerating the pandemic recovery and maintaining American leadership in research and development.

FABBS scientists have a particular interest in the Social, Behavioral and Economics (SBE) Sciences directorate, which provides an estimated 62 percent of the Federal funding for fundamental research in SBE sciences at academic institutions across the country.<sup>1</sup> Thus, our fields are heavily dependent on the NSF to inform discoveries from expanding our understanding of the mechanisms of memory underlying brain activity, to contributing to the design and assessing the social and ethical consequences of new technologies, to better understanding decision making and risk assessment with broad implications for health and public policy. SBE is home to the National Center for Science and Engineering Statistics (NCSES), a Federal statistical agency that provides statistical information about the United States' science and engineering (S&E) enterprise. NCSES collects, analyzes, and disseminates data on research and development (R&D), the S&E workforce, the condition and progress of science, STEM education, and U.S. competitiveness in science, engineering, and technology R&D.

In addition to receiving support from SBE, FABBS members appreciate critical funding from the Computer and Information Science and Engineering Directorate (CISE), which funds research on topics such as human-technology interaction and cyber-assisted learning; the Biological Sciences (BIO) Directorate, which funds research on topics such as sleep and circadian rhythms and sex differences in responses to stress; and the Education and Human Resources (EHR) Directorate, which funds research on increasing America's human capital through effective education in science, technology, engineering and mathematics.

We recognize that Congress must balance competing budget priorities while working to deliver a robust recovery from the pandemic. To that end, increasing Federal investment in fundamental scientific research across all sciences is critical to successfully managing the pandemic recovery and ensuring the future prosperity, security, and health of our Nation and its people. *We urge you to provide NSF with at least \$10 billion for fiscal year 2022.* 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 2022 and efforts to complete the budget in a timely manner.

Thank you for considering this request.

#### FABBS MEMBER SOCIETIES

Academy of Behavioral Medicine  
Research  
American Educational Research  
Association

American Psychological Association  
American Psychosomatic Society  
Association for Applied Psychophysiology  
and Biofeedback

<sup>1</sup> [https://www.nsf.gov/about/budget/fy2021/pdf/28\\_fy2021.pdf](https://www.nsf.gov/about/budget/fy2021/pdf/28_fy2021.pdf)

Association for Behavior Analysis International	Society for Mathematical Psychology
Behavior Genetics Association	Society for Psychophysiological Research
Cognitive Neuroscience Society	Society for the Psychological Study of Social Issues
Cognitive Science Society	Society for Research in Child Development
International Congress of Infant Studies	Society for Research in Psychopathology
International Society for Developmental Psychobiology	Society for the Scientific Study of Reading
Massachusetts Neuropsychological Society	Society for Text & Discourse
National Academy of Neuropsychology	Society of Experimental Social Psychology
The Psychonomic Society	Society of Multivariate Experimental Psychology
Society for Behavioral Neuroendocrinology	Vision Sciences Society
Society for Computation in Psychology	
Society for Judgement and Decision Making	

## FABBS AFFILIATES

APA Division 1: The Society for General Psychology	Purdue University
APA Division 3: Experimental Psychology	Rice University
APA Division 7: Developmental Psychology	Southern Methodist University
APA Division 28: Psychopharmacology and Substance Abuse	Stanford University
Arizona State University	Syracuse University
Binghamton University	Temple University
Boston University	Texas A&M University
California State University, Fullerton	Tulane University
Carnegie Mellon University	University of Arizona
Columbia University	University of California, Berkeley
Cornell University	University of California, Davis
Duke University	University of California, Irvine
East Tennessee State University	University of California, Los Angeles
Florida International University	University of California, Riverside
Florida State University	University of California, San Diego
George Mason University	University of Chicago
George Washington University	University of Colorado, Boulder
Georgetown University	University of Delaware
Georgia Institute of Technology	University of Houston
Harvard University	University of Illinois at Urbana- Champaign
Indiana University Bloomington	University of Iowa
Indiana University—Purdue University Indianapolis	University of Maryland, College Park
Johns Hopkins University	University of Massachusetts Amherst
Kent State University	University of Michigan
Lehigh University	University of Minnesota
Massachusetts Institute of Technology	University of Minnesota, Institute of Child Development
Michigan State University	University of North Carolina at Greensboro
New York University	University of Pennsylvania
North Carolina State University	University of Pittsburgh
Northeastern University	University of Texas at Austin
Northwestern University	University of Texas at Dallas
The Ohio State University, Center for Cognitive and Brain Sciences	University of Washington
Pennsylvania State University	Vanderbilt University
Princeton University	Virginia Tech
	Wake Forest University
	Washington University in St. Louis
	Yale University

[This statement was submitted by Juliane Baron, Executive Director.]

PREPARED STATEMENT OF THE FLORIDA AGRICULTURAL AND MECHANICAL  
UNIVERSITY

FISCAL YEAR 2022 PROGRAMMATIC ALLOCATIONS FOR EDUCATION PROGRAMS UNDER THE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) AND NATIONAL  
SCIENCE FOUNDATION (NSF)

Chair Leahy, Chair Shaheen, Vice Chairman Shelby, Ranking Member Moran, and Members of the Commerce, Justice, Science, and Related Agencies subcommittee, thank you for the opportunity to submit public testimony on the Fiscal Year 2022 Commerce, Justice, Science, and Related Agencies Appropriations bill. Specifically, FAMU supports the President's fiscal year 2022 budget request 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 Education and Human Resources education programs. These congressionally authorized Federal programs have a direct impact on FAMU, our students, our region and our Nation.

Florida A&M University, based in the State capitol of Tallahassee, Florida, was founded in 1887 with only 15 students and two instructors. Today, FAMU has grown to nearly 10,000 students and we are the highest ranked among public Historically Black Colleges and Universities (HBCU) according to the U.S. News and World Report National Public Universities. Our University offers 56 bachelor's degrees, 29 master's degrees, 12 doctoral degrees and three professional degrees. We are a leading land-grant research institution with an increased focus on science, technology, research, engineering, agriculture, and mathematics.

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 (EPP/  
MSI)

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 proposed increase for the program in the President's fiscal year 2022 budget. The goal of the EPP/MSI is to increase the number of students, particularly from underrepresented communities, who attend Minority Serving Institutions and graduate with degrees in science, technology, engineering and mathematics (STEM) relevant to NOAA's mission.

In August 2016 under the EPP/MSI program, NOAA awarded Cooperative Science Centers (CSCs) to four universities under 5-year cooperative agreements. This was the latest round of CSC awards since the program was first established in 2001. FAMU is the lead university for the Center for Coastal and Marine Ecosystems, one of the four CSCs. Our partners include Bethune Cookman University, California State University Monterey Bay, Jackson State University, Texas A&M University (Corpus Christi), and the University of Texas Rio Grande Valley. The annual appropriation supports FAMU, along with other lead Minority Serving Institutions, which partner with 24 additional U.S. colleges and universities as part of the CSC program. The faculty and students conduct research that further supports NOAA's mission.

In April 2021, FAMU hosted the first phase of the Tenth Biennial NOAA EPP/MSI Education and Science Forum. The focus of the Forum is expanding academic training in NOAA-mission STEM disciplines, through partnership activities as well as promoting career opportunities for STEM graduates in the public, private, and academic sectors.

Since 2001, NOAA EPP/MSI Cooperative Science Centers institutions have awarded post-secondary degrees to over 2,300 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. The President's fiscal year 2022 budget for NOAA's Office of Education proposes a \$3 million increase in funding for this critical program, which supports NOAA-related research, increases diversity of the STEM workforce and fosters American competitiveness in STEM fields. We urge the

subcommittee to support the President's budget proposal and provide increased funding for the NOAA EPP/MSI program.

#### NOAA NATIONAL SEA GRANT COLLEGE PROGRAM

FAMU also strongly supports the subcommittee allocating the President's fiscal year 2022 budget request of \$115.7 million for NOAA's National Sea Grant College Program, which works to create and maintain a healthy coastal environment and economy. The Sea Grant network consists of a Federal/university partnership between NOAA and 34 university-based programs in every coastal and Great Lakes State, Puerto Rico, and Guam. The network draws on the expertise of more than 3,000 scientists, engineers, public outreach experts, educators and students to help citizens better understand, conserve and utilize America's coastal resources.

The Florida Sea Grant program is a Statewide program headquartered at the University of Florida. The program supports research, education and extension to conserve coastal resources and enhance economic opportunities for the citizens of Florida. Since 1997, faculty and students at 13 participating institutions, including FAMU, have received Federal funding from the Florida Sea Grant. In 2019, the economic impact of the Florida Sea Grant program was \$17.1 million and resulted in 372 jobs created or sustained. The program also supported a variety of research and training relevant to Florida's coastal communities and related industries, including developing a model to project future flood risks to support Florida's coastal resiliency plans. The program augments the State's artificial reef efforts and helps to protect, enhance and restore coastal habitat. Nationally, the Sea Grant program had an economic impact of \$412.4 million in 2020, far exceeding the Federal investment in the program. The national program helped to create or sustain 10,404 jobs and 998 businesses. It also supported nearly 2,000 graduate and undergraduate students and fellows.

The President's fiscal year 2022 budget proposes to substantially increase funding for the National Sea Grant College Program under NOAA's Office of Oceanic and Atmospheric Research (OAR). Continued funding for this program, which has been in existence for more than 50 years, is critical to supporting Great Lakes and coastal communities, including those in Florida, through research, extension and education. FAMU, as a member of the Florida Sea Grant program, urges the subcommittee to support the President's budget proposal and fund the Sea Grant program at the requested level of \$115.7 million.

#### NATIONAL SCIENCE FOUNDATION (NSF) EDUCATION PROGRAMS

The NSF Directorate for Education and Human Resources (EHR) supports a wide variety of programs across all levels of education in science, technology, engineering and mathematics (STEM). In particular, FAMU supports funding for the broadening participation programs aimed at increasing the participation of underrepresented populations in STEM education and, ultimately, the STEM workforce. These programs include the Historically Black Colleges and Universities Undergraduate Program (HBCU-UP). FAMU urges the subcommittee to support the President's budget request of \$46.5 million for HBCU-UP.

FAMU has received significant research funding through NSF, including more than \$4 million from NSF in fiscal year 2020. These grants have funded a variety of scientific research projects as well as programs to promote underrepresented minorities in STEM careers. FAMU continues to pursue NSF funding for innovative projects and encourages the subcommittee to provide robust funding for NSF's education programs.

The President's fiscal year 2022 budget requests \$1.28 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 the President's proposed budget increases for these critical NOAA and NSF education programs. We thank you for your continued support of Federal postsecondary initiatives that not only directly benefit our University but the region and the Nation as well. Thank you for your consideration.

[This statement was submitted by President Larry Robinson, Ph.D.]

## PREPARED STATEMENT OF FUTURES WITHOUT VIOLENCE

June 22, 2022

The Honorable Jeanne Shaheen,  
*Chairwoman*  
 Subcommittee on Commerce, Justice,  
 Science, and Related Agencies  
 Committee on Appropriations  
 United States Senate  
 Washington, D.C. 20510

The Honorable Jerry Moran,  
*Ranking Member*  
 Subcommittee on Commerce, Justice,  
 Science, and Related Agencies  
 Committee on Appropriations  
 United States Senate  
 Washington, D.C. 20510

DEAR CHAIRWOMAN SHAHEEN AND RANKING MEMBER MORAN:

For more than 35 years, Futures Without Violence (FUTURES) has been providing groundbreaking programs, policies, and campaigns that empower individuals and organizations working to end violence against women and children around the world. Striving to reach new audiences and transform social norms, we train professionals such as doctors, nurses, judges, and athletic coaches on improving responses to violence and abuse. We also work with advocates, policymakers, and others to build sustainable community leadership and educate people everywhere about the importance of respect and healthy relationships.

—To create a future without violence, we support \$2 million for VAWA’s the National Resource Center on Workplace Responses (*Workplaces Respond*) in fiscal year 2022. This authorized program is currently funded at \$1 million.

Futures Without Violence is a member of the National Campaign for Funding to End Domestic and Sexual Violence, an alliance of over 30 national organizations that support full funding for gender-based violence programs. *Workplaces Respond* is also supported by this coalition. On behalf of FUTURES, please allow us to provide some background on the Workplace Resource Center and the need for an increase to \$2 million for this national program that supports economic security and safety for gender-based violence survivors.

Authorized by the Violence Against Women Act (VAWA) and funded through the U.S. Department of Justice’s Office on Violence Against Women (OVW), the National Resource Center on Workplace Responses is the only national program focused on fostering survivors’ economic security by promoting their safety and well-being on the job, and helping employers address how gender-based violence affects the workplace overall.

Economic security is a critical protective factor for survivors, so they have the resources necessary to seek safety, independence, and long-term stability for themselves and their children. The pandemic’s disproportionate impact on women—especially women of color—has further eroded survivors’ ability to achieve economic self-sufficiency. Women in the U.S. lost 5.5 million jobs in the first 10 months of the pandemic, nearly 1 million more job losses than men;

—60 percent of survivors reported job loss due to impacts of abuse; and  
 —Survivors are 5–6 times more likely to drop out of job training programs due to the impacts of abuse and lingering effects of trauma.

While we are entering the recovery stage of COVID, the fundamental need to support survivors, particularly women of color, remains, and the Workplace Resource Center has the effective results to meet this need. Since it was created, the Resource Center has conducted approximately 200 trainings and assisted nearly 20,000 people and countless workplaces. *Workplaces Respond* has helped ensure victim and workplace safety and productivity through:

—online-based resources;  
 —specialized education, training, and technical assistance for private and public workplaces, and other workplace stakeholders;  
 —awareness raising and outreach; and  
 —policies and practices to prevent and respond to violence impacting workers and the workplace.

In the past few years, since the start of the #MeToo movement and being inundated with requests, the Workplace Resource Center invested in creating a new online resource hub that provides guidance for employers, sample training curricula,

and tools and strategies for impacted employees. This was completed as funding remained level at \$1 million.

For fiscal year 2022, we are requesting an increase in funding this year to \$2 million through this VAWA program to carry out expanded and timely areas of work:

- Trauma-Responsiveness*: In response to the devastating impact the COVID-19 pandemic has had on women’s employment, the Workplace Resource Center seeks to engage employers through collaboration and capacity building to help reconnect survivors to employment. Building on strategies and tools our staff developed for trafficking victim service providers and local workforce development programs through a grant from DOJ’s Office for Victims of Crime, we propose a new, but complementary initiative to ensure that survivors of domestic violence, dating violence, sexual violence, and stalking are better able to access job and skill-building programs, secure employment, and work within safe and trauma-responsive workplaces. This collaborative model was developed through 11 local victim service and employer collaborations across 10 cities and States.
- Industry-specific Pilots*: In the past, the Workplace Resource Center has worked with local and regional-level hospitals, farm workers, and restaurants to support industry-specific best practices. We have started similar work with the fast food industry this past year, and an increase in funding could support a more robust demand for technical assistance and training to develop replicable practices.
- Scale and Spread Strategy*: In order to replicate the model of employer engagement and foster local collaborations between victim services providers and employers, the Workplace Resource Center is in the process of instituting a Workplaces Respond Institute, which will bring representatives from 14 different localities to be trained on how to create a localized prevention and education model for employers, engage workplaces in better responding to violence impacting workers and the workplace, and support survivors in achieving economic stability.
- Federal employees*: The public sector, which represents over 15 percent of the U.S. workforce, has always been under the Workplace Resource Center’s umbrella. Recently, there is increasing interest from Federal agencies and OPM to re-engage in this work using the existing Presidential Memorandum—Establishing Policies for Addressing Domestic Violence in the Federal Workforce; increased appropriations would support this work.

For additional information, please contact Linda Seabrook, General Counsel and Director of Workplace Safety & Equity, lseabrook@futureswithoutviolence.org., Kiersten Stewart, Director of Public Policy and Advocacy, at kstewart@futureswithoutviolence.org, or Sally Schaeffer, consultant, at sally@uncorkedadvocates.com.

[This statement was submitted by Esta Soler, President.]

PREPARED STATEMENT OF THE GEOLOGICAL SOCIETY OF AMERICA  
NATIONAL SCIENCE FOUNDATION AND NATIONAL AERONAUTICS AND SPACE  
ADMINISTRATION

The Geological Society of America (GSA) supports strong and growing investments in geoscience research and education at the National Science Foundation (NSF) and National Aeronautics and Space Administration (NASA). We encourage Congress to appropriate \$10 billion for NSF in fiscal year 2022 and increases to NASA’s Science Mission Directorate and its Earth Science and Planetary Science Divisions. Investment in NSF and NASA is necessary to secure America’s future economic leadership, both through the discoveries made and the talent developed through their programs. For the United States to remain a global leader, the Nation must provide greater investment in its people, particularly women and individuals from other groups traditionally underrepresented in STEM fields. Earth and space science at these two agencies play a vital role in American prosperity and security by playing an integral role in understanding and documenting mineral and energy resources that underpin economic growth; researching and monitoring potential natural hazards that threaten U.S. and international security; and determining and assessing water quality and availability.

*The Geological Society of America (GSA) is a scientific society with members from academia, government, and industry in more than 100 countries. Through its meetings, publications, and programs, GSA enhances the professional growth of its members and promotes the geosciences in the service of humankind. GSA encourages co-*

*operative 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 fiscal year 2021 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 \$10 billion in fiscal year 2022.

Sustained increases beyond inflation are necessary to regain America's science and technology leadership and to enable the discoveries that lead to future innovations and industries. Data from the *Merit Review Process Fiscal Year 2019 Digest* show that NSF receives many more high-quality proposals than it can fund. In fiscal year 2019, NSF was only able to fund 27 percent of the proposals received. The report noted, "Approximately \$2.8 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." The report States that National Science Board members "believe that the long-term health of the research community and promised benefits to the Nation demand a funding rate closer to the historical average of 30 percent or more." Increases in funding will allow NSF to continue to support its core basic research in addition to growing investments in its *Ten Big Ideas* and other transformational research. These big ideas are designed to position the U.S. on the cutting edge of global science and engineering leadership and will build upon and complement the basic research occurring in the directorates.

Geoscience research is a critical component of the overall science and technology enterprise and a key contributor to groundbreaking research across disciplines at NSF. NSF's Directorate for Geosciences is the largest Federal supporter of basic geoscience research at universities. Increased investments in NSF's geoscience portfolio are necessary to address such issues as natural hazards, energy and minerals, water resources, education, and needed research funding due to the coronavirus pandemic.

- 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 and atmospheric 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. 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, highlights how NSF contributes to understanding these research questions.
- Understanding the oceans is key to a sustainable future. The National Research Council report *Sea Change: 2015–2025 Decadal Survey of Ocean Sciences* highlights areas of research that are need to make informed decisions, including: How can risk be better characterized and the ability to forecast geohazards like megaequakes, tsunamis, undersea landslides, and volcanic eruptions be improved? What are the rates, mechanisms, impacts, and geographic variability of sea level change? How different will marine food webs be at mid-century? In the next 100 years? Additional support for NSF would allow researchers to find answers to these essential questions.
- Natural hazards are a major cause of fatalities and economic losses. NOAA found in 2020 alone, there were 13 severe storms, seven tropical cyclones, one drought, and one wildfire that resulted in a cost of \$95 billion and 262 deaths. An improved scientific understanding of hazards will reduce future losses by informing effective planning and mitigation. We urge Congress to support NSF investments in fundamental Earth science research and facilities that underpin

innovations in natural hazards monitoring and warning systems. For example, the Coastlines and People (CoPe) initiative aims to understand the impacts of coastal environmental variability and natural hazards on populated coastal regions.

#### NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

GSA requests increases to NASA's Science Mission Directorate (SMD) and its Earth Science and Planetary Science Divisions. Increased funding will be critical to implement the recommendations of the recent National Academy of Sciences' *Earth Science and Applications from Space (ESAS) Decadal Survey* report. The report notes,

"Earth science and applications are a key part of the Nation's information infrastructure, warranting a U.S. program of Earth observations from space that is robust, resilient, and appropriately balanced."

The data and observations from Earth observing missions and research are a tremendously important resource for natural resource exploration and land use planning, as well as assessing water resources, natural disaster impacts, and global agriculture production. GSA supports interagency efforts to ensure the future viability of Landsat satellites as well as funding to increase the capabilities and uses of multi-spacecraft constellations of small scientific satellites.

We appreciate congressional support in fiscal year 2021 for Earth Science Missions, and request that Congress continue their funding in fiscal year 2022. These missions will advance science frontiers and provide critical data for society. For example, NASA's Plankton, Aerosol, Cloud, ocean Ecosystem (PACE) mission will help monitor the duration and impact of harmful algae blooms and The Climate Absolute Radiance and Refractivity Observatory (CLARREO) Pathfinder will enable industry and military decision-makers to more accurately assess natural hazards, such as flooding.

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. Planetary research is directly linked to Earth science research and cuts in either program will hinder the other. To support missions to better understand the workings of the entire solar system, planetary scientists engage in both terrestrial field studies and Earth observation to examine geologic features and processes that are common on other planets, such as impact structures, volcanic constructs, tectonic structures, and glacial and fluvial deposits and landforms. In addition, geochemical planetary research studies include investigations of extraterrestrial materials now on Earth, including lunar samples, meteorites, cosmic dust particles, and, most recently, particles returned from comets and asteroids. We appreciate past congressional support for this area and urge you to continue to increase this important area to support priority areas identified in the *Planetary Science Decadal Survey*.

#### SUPPORT NEEDED TO EDUCATE FUTURE INNOVATORS

Earth scientists will be essential to meeting the environmental and resource challenges of the twenty-first century, but a shortage is expected in the future workforce. The *Status of the Geoscience Workforce Report 2018* found an expected deficit of approximately 118,000 geoscientists by 2026. It also highlighted the diversity of careers supported by geoscience research. For example, the report found that the majority of master's degree graduates found jobs in the oil and gas industry and government, while environmental services, such as environmental consulting and remediation of water and soil, hired the highest percentage of geoscience bachelor's degree graduates. Other industries hiring geoscientists include manufacturing, trade, construction, information technology services, mining, and agriculture. Increased NSF and NASA investments in Earth science education are necessary to meet these workforce needs and develop an informed, science-literate population.

For the United States to remain a global leader, the Nation must provide greater investment in its people, including women and individuals from other groups traditionally underrepresented in STEM fields. NSF's Education and Human Resources Directorate researches and improves the way we teach science and provides research and fellowship opportunities for students to encourage them to continue in the sciences. Similarly, NASA's educational programs, led by NASA's Office of STEM Engagement and directorates, have inspired and led many into science careers. GSA fully supports these efforts, as well as additional programs to make the geoscience workforce more diverse, such as NSF INCLUDES—Inclusion across the Nation of Communities of Learners of Underrepresented Discoverers in Engineering and Science.

Please contact GSA Director for Geoscience Policy Kasey White to learn more about the Geological Society of America—including GSA Position Statements on water resources, planetary research, energy and mineral resources, natural hazards, climate change, and public investment in Earth science research.

[This statement was submitted by Kasey White, Director for Geoscience Policy.]

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PREPARED STATEMENT OF THE HUMAN FACTORS AND ERGONOMICS SOCIETY  
FISCAL YEAR 2022 FUNDING FOR THE NATIONAL SCIENCE FOUNDATION

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 \$10 billion for the National Science Foundation (NSF) in the fiscal year 2022 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.<sup>1</sup>
- Improve understanding of the relationship between science and engineering, technology, and society, in order to advance the adoption and use of technology.<sup>2</sup>
- Gain a better understanding of how humans and computers interact to ensure the development of new devices or environments that empower the user.<sup>3</sup>
- Inform decision making in engineering design, control, and optimization to improve individual engineering components and entire systems.<sup>4</sup>

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

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<sup>1</sup>Decision, Risk & Management Sciences (DRMS) Program ([http://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=5423](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5423))

<sup>2</sup>Science and Technology Studies (STS) Program ([https://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=505697](https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505697))

<sup>3</sup>Human Centered Computing (HCC) Program ([https://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=504958](https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504958))

<sup>4</sup>Operation and Design Cluster ([http://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=13473](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13473))

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 program<sup>5</sup> and the AI Research Institutes,<sup>6</sup> 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 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 fiscal year 2022 NSF budget of at least \$10 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 Peter Hancock, DSc, PhD, President, and Steven C. Kemp, CAE, Executive Director.]

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#### PREPARED STATEMENT OF THE JAMESTOWN S’KLALLAM TRIBE

##### 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 2022 for the Department of Commerce and the Department of Justice budgets. Our budget request endorses the requests and recommendations of our international, regional, and national partners, the Pacific Salmon Commission, the Northwest Indian Fisheries Commission, Affiliated Tribes of Northwest Indians, and the National Congress of American Indians.

<sup>5</sup>NSF Program on Fairness in Artificial Intelligence in Collaboration with Amazon (FAI) ([https://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=505651](https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505651))

<sup>6</sup>Artificial Intelligence Research Institutes ([https://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=505686](https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505686))

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 Indians and 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 fiscal year 2022 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 percent) Tribal Set-Aside for Tribes
4. Victims of Crime Act Funding—Provide a five percent (5 percent) 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 provide 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 resilient 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 responsibilities and 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 Resources 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)*

Since 1985, the Pacific Salmon Treaty, between Canada and the United States, has provided the framework for international collaboration and cooperation to conserve and manage Pacific Salmon. The Pacific Salmon Commission (PSC), Parties to the Treaty, works 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. In 2019, the Parties implemented a new 10-year agreement for these fisheries through 2028 and it is essential for the U.S. to uphold its commitment each year.

##### 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 percent of AI/AN will be victims of intimate partner violence, stalking and/or sexual violence in their lifetime. Over 90 percent 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 fiscal year 2021 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 percent Tribal Set-Aside for all (OJP) Programs and Allow for Greater Flexibility*

Jamestown is advocating for a 10 percent 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 percent) 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 percent 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 have 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 W. Ron Allen, Tribal Chairman/CEO.]

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PREPARED STATEMENT OF THE JOINT OCEAN COMMISSION INITIATIVE TO THE U.S. SENATE COMMITTEE ON APPROPRIATIONS, SUBCOMMITTEE ON COMMERCE, JUSTICE, SCIENCE, AND RELATED AGENCIES

NOAA, NSF, AND NASA FOR FISCAL YEAR 2022

Chairman Shaheen, Ranking Member Moran, and other distinguished Members of the subcommittee on Commerce, Justice, Science, and Related Agencies, we thank you for the opportunity to submit written testimony regarding the Fiscal Year 2022 CJS appropriations bill.

The agencies under your charge must respond to the domestic and global crisis in our oceans. We urge you to ensure that all have sufficient resources to take necessary action. You have an opportunity to reassert global leadership that will steer the planet, including the stewardship of our oceans, back to a just, sustainable, and more secure future. We greatly appreciate your continued investment in our oceans commensurate with the immense value they provide our maritime Nation.

We are highly supportive of the Administration proposal for nearly \$7 billion for NOAA, as well as significantly increased support for the National Science Founda-

tion and NASA's Earth Science Division. These represent significant steps to restoring U.S. technical capabilities and science as preeminent in the world. In certain critical accounts we ask you to consider modest additions above the president's request to address potentially catastrophic ocean conditions such as acidification and ensure that ocean observations are adequate to respond to accelerating 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 protecting base funding and core programs at NOAA, NSF, and NASA is an 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 resources provide fundamental goods and services, including food, minerals, transportation, medicines, tourism, and recreational opportunities. They also provide livelihoods for millions of Americans, including historically underserved populations and those who are being most impacted by climate change. These coastal communities and economies have already been hit hard by the COVID-19 pandemic and need significant support to increase their resilience against future disasters.

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 mitigate the climate crisis, for example, by taking action to advance offshore renewable energy and reduce maritime emissions. 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. The U.S. needs to lead when it comes to supporting climate research, education, and adaptation, as well as in centering justice and equity principles. Robust support for key accounts at NOAA, NSF, and NASA is essential to reestablish U.S. leadership.

The U.S. blue economy is paramount to ensuring an environmentally and economically sustainable future for our country. Contributing \$373 billion annually to the Nation's GDP and supporting 2.3 million jobs, the blue economy creates significant economic impact. As sea levels rise and marine species leave their historic grounds, we risk losing these integral drivers of our coastal economy. The oceans are vital to green economic recovery from COVID-19 as well as protection of marginalized coastal communities who are disproportionately affected by climate change.

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. Based on the need for significant, sustained investment to invigorate public-private partnerships, address the significant ocean-climate nexus, and energize national, regional, State, and local initiatives, we strongly support increasing NOAA's overall budget to at least \$6.9 billion as requested in the President's budget. We also urge the Committee to consider strategic investments above this level in critical accounts such as ocean acidification, managing fish stocks, and empowering oceans and coasts to mitigate climate impacts. Likewise, we support increasing NSF's overall budget to a minimum of \$10.2 billion, and NASA Earth Science's budget to a minimum of \$2.3 billion. We believe the recommendations in this testimony represent a modest investment relative to the threats and opportunities facing oceans and coastal communities, as the benefits they confer significantly outweigh the costs.

#### RESEARCH, EXPLORATION, AND OBSERVATION

A critical component of America's economic, military, and diplomatic power lies in its ocean research, education, exploration, and observation enterprises. Especially given the pace of observed changes in climate and ocean chemistry, we strongly urge the subcommittee to protect vital ocean science and research capabilities. To make the best, proactive management decisions possible, it is necessary that we first explore, map, observe, and understand our ocean.

Observation and monitoring programs are integral to NOAA's ability to accurately forecast weather, for NOAA's protection and management of America's ocean resources, and for the U.S. military's navigation and extreme weather preparedness. We ask that your committee continue to support enhanced capabilities for observation and monitoring by allocating \$762 million to NOAA's Office of Oceanic and Atmospheric Research (OAR) and \$66.7 million to NOAA's Sustained Ocean Observations and Monitoring Program. We also suggest the committee allocate \$60 million

for the Ocean Exploration program to maintain the pace, scope, and efficiency of exploration.

It is also critical to fund climate research at OAR at no less than \$293.7 million to promote high-priority climate science that advances our understanding of Earth's climate system. The oceans are vital to mitigating against and adapting to climate change; through this research we can understand and implement ocean-based risk management and adaptation opportunities.

In addition, we recommend allocating \$10.2 billion for the NSF. 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. Finally, we recommend funding NASA's Earth Science Division at \$2.3 billion, consistent with the President's request, 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. For example, Sea Grant programs support fisheries and aquaculture business development and help Americans plan for and respond to extreme weather events. Sea Grant programs engage the ocean workforce of the future and further equity through increasing access to ocean programs for underserved communities. Given Sea Grant's critical importance, we urge this committee to allocate \$115.6 million to Sea Grant in fiscal year 2022, including \$15 million for Sea Grant Marine Aquaculture.

NOAA's environmental education and ocean stewardship programs increase essential access to STEM education and cultivate environmental stewardship. We request that the committee provide \$16.5 million for Bay-Watershed Education and Training (B-WET) programs and \$8.8 million for 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 allocating \$113 million for the National Ocean and Coastal Security Fund (NOCSF) in fiscal year 2022. We further recommend that at least \$4.5 million be allocated for regional data portals used to support critical ocean partnerships that encourage collaboration and data sharing on the regional scale. In addition, we recommend a total allocation of \$108.5 million to Coastal Management Grants and a minimum allocation of \$42.5 million for the National Estuarine Research Reserve System in fiscal year 2022. These programs support vital Federal/State partnerships to help protect our coasts and preserve millions of acres of coastal habitat, buffering against rising seas and storm events.

NOAA's National Ocean Service (NOS) is also critical for sustained resilience and security. We strongly recommend that NOS receive an allocation of \$884 million. NOS funding supports programs that ensure safe and efficient transportation and commerce; preparedness and risk reduction; and stewardship, recreation, and tourism. These programs protect our communities and safeguard our economic livelihoods. For example, NOAA's Office for Coastal Management delivers technical assistance communities need to address storm preparedness, erosion, development, habitat loss, sea level rise, and threats to water quality. These programs further equity by protecting the historically undeserved communities who are the most affected by these coastal changes. Moreover, the National Centers for Coastal Ocean Science provides coastal managers with scientific information to protect public health, preserve valued habitats, and foster sustainable community interaction with coastal ecosystems. The value of public health has never been clearer than in the last year; we must increase our protection of community health through these programs. NOS also supports the Integrated Ocean Observing System (IOOS), which collects and distributes data that is used at the National, regional, State, and local levels. We recommend IOOS be supported at a recommended \$69.5 million to meet the safety, economic and stewardship needs of the Nation.

The NOS also administers the Office of National Marine Sanctuaries and key restoration projects that dramatically enhance the resilience of coastal communities and ocean environments. National Marine Sanctuaries require \$84.5 million to protect and steward special marine spaces, especially in the face of climate change, and

develop the next generation of ocean stewards. These investments pay serious economic dividends: Sanctuaries generate approximately \$8 billion annually for local economies and NOAA's restoration projects create an average of 17 jobs for every \$1 million invested. Moreover, for each million invested in strengthening coastal communities against storm surge, these programs can mitigate six million dollars in losses while also protecting the livelihoods and wellbeing of coastal Americans. We ask the subcommittee to support the NOCSF and the NOS to bolster the Nation's economic and environmental resilience and security.

#### OCEAN ACIDIFICATION

Ocean acidification is evident along every shoreline and is majorly 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 allocate a minimum of \$57.2 million for NOAA's Integrated Ocean Acidification program to support critical research, monitoring, education, and outreach. It will help develop a better understanding of the causes, impacts, and scale of ocean acidification and identify interventions to help protect fisheries and aquaculture.

#### 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, which NOAA is increasingly investing in.

However, America's seafood industry is currently being challenged by changing ocean conditions, shifts in historic stock distributions, increasingly complex data requirements, and market disruption from the COVID-19 pandemic. NOAA Fisheries requires elevated funding to address these challenges and ensure fisheries can recover from the pandemic's impacts and aquaculture can advance sustainably. Better science and real-time data inform management decisions and provide regional management councils with tools to assess the status of fish stocks. To protect America's fisheries and the jobs that rely on them, we support allocating \$1.1 billion to the National Marine Fisheries Service to fully implement the Magnuson-Stevens Fishery Conservation and Management Act. In addition, we urge you to provide \$206 million for fisheries data collections, with \$6.8 million for surveys and stock assessments. 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. These initiatives will not only increase sustainability but also create quality jobs for coastal Americans.

#### CONCLUDING REMARKS

The Joint Initiative greatly appreciates your commitment to addressing the challenges of our maritime nation, and to the ocean-climate nexus, so critical to the future of our blue planet. We appreciate your consideration of our fiscal year 2022 request. We will continue to track progress on key ocean and coastal programs and accounts in fiscal year 2022 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 CO-CHAIRS AND LEADERSHIP COUNCIL MEMBERS

The Honorable Christine Todd Whitman | The Honorable Norman Mineta  
 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  
 Randy Repass | Larry Robinson | Andrew Rosenberg | Paul Sandifer

## PREPARED STATEMENT OF THE MONTEREY BAY AQUARIUM, MONTEREY, CALIFORNIA

The Monterey Bay Aquarium is pleased to submit this statement in support of President Biden's \$6.9 billion dollar budget for the National Oceanic and Atmospheric Administration (NOAA) within the Fiscal Year 2022 Commerce-Justice-Science Appropriations Act. The following testimony outlines several specific requests within NOAA for priority research, education and grant programs that are needed in California, the West Coast and nationwide, particularly as the Nation looks to recover from the devastation of the COVID-19 global pandemic.

In a typical year, the Monterey Bay Aquarium welcomes over two million visitors, provides more than 91,000 students and 5,000 teachers with award-winning education programs at no cost, and provides valuable data, tools and approaches for conservation and science at local to global scales.

The COVID-19 global pandemic dramatically impacted our institution, which has suffered the loss of approximately \$70 million in revenue and 40 percent of our staff over the 14 months during which we were fully closed to the public. Despite earning zero gate revenue, we continued to spend over \$1 million every month on animal care and life-supporting core operations—including for endangered, threatened, and protected species care and stranding response and rehabilitation. In addition, we provided enhanced and free digital and livestreamed educational content for schools and the wider public. The Aquarium has taken extraordinary measures to ensure the health and safety of our animals, staff and the public during this challenging time, and we are hopeful that emergency grant funds appropriated in the past two COVID-19 bills will provide some economic relief. We are grateful to Congress and to the Committee for its role in COVID-19 relief and recovery.

Monterey County has only recently achieved the public health metrics that allow us to reopen. We reopened May 15 to the public at 25 percent capacity and are gradually increasing our guest capacity so that we may more fully return to our mission-to *inspire conservation of the ocean*.

NOAA, the Nation's lead science agency for oceanic and atmospheric matters, provides important tools and services that are critical to support economic recovery during these challenging times. NOAA's research, environmental observations and predictions, marine conservation and management, as well as its education programs and services shape the way we live today and guide decision-making about the health of the coupled ocean and climate systems.

The Aquarium strongly supports the President's budget request of \$6.9 billion dollars for fiscal year 2022 and encourages the Committee to continue its balanced and strategic funding strategy for NOAA. These investments are needed to support American businesses and citizens as we recover from the COVID-19 crisis and build capacity for future resilience in the face of climate change. We urge you to support the following requests for fisheries, research, and education in fiscal year 2022 that are particularly important for California and West Coast communities.

*Pacific Bluefin Tuna.*—Pacific bluefin tuna are a highly migratory species that are critical to California's economy and a key top predator in the ocean. Among the world's largest fish, these tunas are highly prized on the international seafood market. In 2014, researchers discovered that the population was depleted to 3.3 percent of its historic size. No other commercially harvested tuna in the world is so depleted. Annual fluctuations in availability of Pacific bluefin tuna impacts the ecosystem and stakeholders, including California's \$2.8 billion marine sportfishing industry and research institutions that have invested millions of dollars in recent decades to develop conservation strategies for this critical species.

In the last few decades, Pacific bluefin tuna have been heavily impacted from fishing by nations in the Western Pacific Ocean, limiting the availability of fish that can migrate to the coast of California and Mexico. Pacific bluefin tuna are managed by two Regional Fisheries Management Organizations (RFMOs) that have allowed the population to decline to historically low levels. In 2017, the United States se-

cured a historic international agreement to recover the population to sustainable levels by 2034—a major achievement. However, this hard-won recovery plan is at risk as other countries continue to propose policies that would slow population recovery and disadvantage U.S. stakeholders. A more precautionary approach is needed in the international negotiations to recover the species, including more stringent harvest control rules that ensure measurable interim progress in rebuilding to hold other countries accountable.

In recent years, the RFMOs adopted Management Strategy Evaluation (MSE) as a tool to optimize science-based decisions, provide transparency and ensure stakeholder engagement in international fisheries management. In the fiscal year 2019 and fiscal year 2020 CJS appropriations reports, Congress urged NOAA to support Management Strategy Evaluation (MSE) for Pacific bluefin tuna but there has been little progress.

It is critical for Congress to provide clear direction to NOAA given the precarious status of Pacific bluefin tuna and risks related to the upcoming international negotiations. Current international science and management processes do not follow standards set for U.S. stocks within our exclusive economic zone, particularly on sustainability, transparency and independent science. That must change. Congress must urge NOAA leadership to ensure NOAA Fisheries takes a strong position on the need for scientific integrity, independent science and management accountability in international fisheries. NOAA Fisheries must provide MSE capacity or similar science-based decision processes that can ensure accountability by all countries as well as meaningful stakeholder engagement. Importantly, NOAA Fisheries must adopt a strong negotiating position that includes more precautionary harvest control rules that will ensure measurable interim progress to recover the population. These steps are needed to enable robust science, transparency and accountability at the RFMOs that are strongly influenced by the interests of stakeholders in Japan and other countries.

#### Corresponding Report Language Request:

**PACIFIC BLUEFIN TUNA.**—The Committee is very concerned with the status of the iconic Pacific bluefin tuna, the world’s most depleted species of commercially-caught tuna. The Committee directs NOAA leadership to work with the Office of Science and Technology Policy and other experts in the Administration, to ensure NOAA Fisheries takes a strong position on the need for scientific integrity, independent science and management accountability for internationally managed species. The Committee directs NOAA Fisheries to adopt a precautionary negotiating position with strict harvest control rules that ensure measurable interim progress in rebuilding Pacific bluefin tuna and holds all countries accountable to recover the population to sustainable levels no later than 2034. The Committee also requests that NOAA Fisheries provide capacity for Management Strategy Evaluation or similar processes to optimize science-based decisions, provide transparency and ensure an equitable balance of responsibility and benefits as the stock recovers. Further, the Committee directs NOAA Fisheries to provide resources to support engagement of the Pacific Fishery Management Council and U.S. stakeholders in the formulation of strong U.S. positions throughout the international negotiations.

**Pacific Ocean Pelagic & Highly Migratory Fisheries Research.**—Pelagic and highly migratory species (HMS) in the Pacific Ocean support thousands of jobs and generate hundreds of millions in revenue related to commercial and recreational fishing, as well as related seafood industries. These species include valuable tunas (albacore, skipjack, bigeye, bluefin), swordfish, marlin, and pelagic sharks that drive significant economic activity along the West Coast, Hawaii and the U.S. territories. However, Federal funding opportunities for non-Federal scientists in pelagic and HMS research programs in the Pacific have declined considerably since the *Pacific Fisheries Research Program* (PFRP) ended in 2013. This has resulted in significantly fewer public-private research collaborations with NOAA and a lack of independent science to address priority management questions that directly impact U.S. stakeholders and the health of the Pacific Ocean ecosystem. Atlantic pelagic and HMS fisheries research has dedicated Federal programs for individual species, notably the *Atlantic Bluefin Tuna Research Program*, as well as a new *HMS Research Program through Sea Grant*. We urge the subcommittee to provide additional funding and report language to request that NOAA Fisheries establish a comparable multi-year research grant program for the Pacific regions. This new HMS research program will focus on priority projects to address key science gaps and management challenges through collaboration between NOAA, academia, independent scientists and other relevant institutions.

## Corresponding Report Language Request:

**PACIFIC HIGHLY MIGRATORY SPECIES RESEARCH.**—The Committee notes the ecological and economic importance of Pacific highly migratory species such as tunas, swordfish, marlin, and pelagic sharks. The Committee is concerned by the lack of parity between Atlantic and Pacific regions for independent research on highly migratory species that limits science-based management and impacts U.S. stakeholders. The Committee provides an additional \$2.6 million dollars per year and directs NOAA Fisheries to establish a multi-year highly migratory species research grant program for the Pacific regions to address critical science gaps and management challenges in collaboration with academia, independent scientists and other relevant institutions.

**Ocean Science and Technology.**—The Aquarium collaborates with the Monterey Bay Aquarium Research Institute (MBARI) on science and conservation issues of mutual interest. The success of our efforts to harness cutting edge research to address challenging ocean-related issues is dependent on a vibrant ocean science and technology enterprise. To continue to generate science-based solutions to restore our ocean, and support a robust U.S. role in global efforts, we urge the subcommittee to bolster funding for essential new science and technology. Through NOAA and the other relevant agencies, including NSF and NASA, we recommend the subcommittee provide support for research and technology development and ocean science. Specifically, we request funding to ensure we meet the goals set forth by the 2020 NOAA Research Council's science and technology focus area strategies and the *National Strategy for Mapping, Exploring, and Characterizing the U.S. EEZ*, particularly the need to use cutting edge technologies, such as *robotics* and *environmental DNA*, to map and characterize biodiversity, habitats like seamounts and deep corals, and sea floor hazards.

**Bycatch Reduction.**—We recommend that the subcommittee include an increase of \$2 million over fiscal year 2021 funding for bycatch reduction competitive grants to non-Federal researchers for the development and implementation of practical bycatch solutions that support sustainable U.S. fisheries. The program has not received an increase in funding over the past 3 years. We request that the subcommittee increase funding for NOAA's bycatch reporting and reduction programs to accelerate technology improvements and help U.S. fishermen achieve greater environmental sustainability while protecting living marine resources, particularly endangered, protected and threatened species.

**NOAA Education.**—The Aquarium is committed to ensuring diversity among our staff and within the professional spheres of our field. NOAA's José E. Serrano Educational Partnership Program (EPP) with Minority Serving Institutions (MSI) provides STEM education and future workforce training, benefiting both the agency and other organizations by creating a pool of diverse candidates for the future workforce. Its over 20-year history has shown its effectiveness, but at this moment in time, the need is greater than ever. We are proud to work with the EPP centers and urge the subcommittee to provide additional funds for the EPP-MSI program to support expansion of the EPP network, particularly to build professional opportunities on the West Coast and build technical capacity within the next generation to address emerging challenges.

**John H. Prescott Marine Mammal Rescue Assistance Grant Program.**—We urge the subcommittee to increase funding by providing \$4 million over fiscal year 2021 levels for this important stranding and rescue program.

Thank you for your consideration of these requests.

[This statement was submitted by Ms. Margaret Spring, Chief Conservation & Science Officer.]

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PREPARED STATEMENT OF THE NATIONAL AMERICAN INDIAN COURT JUDGES  
ASSOCIATION

DEPARTMENT OF JUSTICE

On behalf of the National American Indian Court Judges Association (NAICJA), this testimony addresses important programs in the Department of Justice (DOJ). First, NAICJA joins the American Bar Association (see attached letter) in requesting substantially increased funding for Tribal courts in response to the \$1.2 billion annual shortfall for Tribal courts as identified in the Bureau of Indian Affairs (BIA) 2020 report to Congress, *Report to the Congress on Spending, Staffing, and Estimated Funding Costs for Public Safety and Justice Programs in Indian Country, 2018*.

Secondly, NAICJA joins the National Congress of American Indians (NCAI) in requesting:

Program	NCAI Fiscal Year 2022 Request
DOJ: Tribal Grants: Eliminate competitive grant funding process and utilize Justice Department appropriations as base funding so that Tribal nations determine their own priorities.	Use DOJ appropriations as base funding.
DOJ: Tribal Set-Aside from Office of Justice Programs (OJP) ..	Create a 10 percent Tribal set-aside for all discretionary OJP programs.
DOJ: Tribal Set-Aside from Crime Victims Fund .....	Create a 5 percent set-aside for Tribal governments.
DOJ: Tribal Youth Program under the Juvenile Accountability Block Grants program.	\$25,000,000
DOJ: Tribal Civil and Criminal Legal Assistance (TCCLA) Grant.	\$3,000,000
DOJ: Community Oriented Policing Services (COPS) Tribal Law Enforcement.	\$52,000,000
DOJ: OVW Tribal programs under the Violence Against Women Act (VAWA).	Fully fund all VAWA-authorized programs including the Sexual Assault Clearinghouse and \$5,000,000 for Tribal implementation of VAWA special domestic violence criminal jurisdiction.

NAICJA is a non-profit organization devoted to the support of American Indian and Alaska Native justice systems through education, information sharing, and advocacy. Its membership is primarily judges, justices, and peacemakers serving in Tribal justice systems. As a national representative organization, NAICJA's mission is to strengthen and enhance Tribal justice systems, including juvenile justice systems.

The Federal Government's trust responsibility to Tribal nations is at the heart of NAICJA's recommendation to follow NCAI's fiscal year 2022 Indian country budget request. Like all other governments, Tribal nations are responsible for the protection and care of their citizens, residents, and visitors on Tribal lands. Through treaties and other agreements, Tribal lands were ceded in exchange for the promise of protected self-governance and adequate resources from the United States. Those promises are the foundation of the government-to-government relationship that exists today.

Part of the Federal trust responsibility to Indian Tribes includes basic governmental services in Indian Country, funding for which is appropriated in the discretionary portion of the Federal budget. Tribal governments protect and preserve their unique cultures, identities, and natural environments for future generations. As governments, Tribes must deliver a wide range of critical services, such as education, workforce development, youth programs, and first-responder and public safety services, to their citizens. The Federal budget for Tribal governmental services reflects the extent to which the United States honors its promises to Indian people—and to date, those promises have not been truly honored.

Tribal justice systems historically have been under-funded and continue to be under-funded in most Tribal communities. In 1991, the United States Civil Rights Commission found that “the failure of the United States Government to provide proper funding for the operation of Tribal judicial systems . . . has continued for more than 20 years.”<sup>1</sup> In 2014, the Attorney General's Advisory Committee on American Indian and Alaska Native Children Exposed to Violence noted that Department of Justice (DOJ) funding for Tribal justice systems has been consistently decreasing in recent years.<sup>2</sup> The Indian Law and Order Commission (ILOC) noted

<sup>1</sup>United States Commission on Civil Rights, *The Indian Civil Rights Act: A Report of the United States Commission on Civil Rights* 71 (June 1991).

<sup>2</sup>Attorney General's Advisory Committee on American Indian and Alaska Native Children Exposed to Violence, U.S. Dep't of Justice, *Report of the Advisory Committee on American Indian and Alaska Native Children Exposed to Violence: Ending Violence So Children Can Thrive* 53 (November 2014).

that in addition to funding shortfalls, DOJ's short-term, competitive funding approach is deficient because it reflects Federal priorities rather than Tribal ones, favors hired grant-writers, requires Tribes to compete against each other, and offers only 3-year programs that often leave Tribes with staff turnover and short-term programs.<sup>3</sup>

Further, the Civil Rights Commission continued reporting on this topic with *A Quiet Crisis: Federal Funding and Unmet Needs in Indian Country* in 2003 and *Broken Promises: Continuing Federal Funding Shortfall for Native Americans* in 2018. *Broken Promises* found that "Federal funding for Native American programs across the government remains grossly inadequate to meet the most basic needs the Federal Government is obligated to provide . . . Since 2003, funding for Native American programs has mostly remained flat, and in the few cases where there have been increases, they have barely kept up with inflation or have actually resulted in decreased spending power."<sup>4</sup>

Finally, in 2020, the BIA submitted a report to Congress, *Report to the Congress on Spending, Staffing, and Estimated Funding Costs for Public Safety and Justice Programs in Indian Country, 2018*. The total annual estimated need for Tribal public safety and justice programs included \$1.3 billion for Tribal law enforcement and \$1.2 billion for Tribal courts. According to the same report, BIA funding only meets 14.7 percent of estimated need. Leaving Tribes to fight for short-term funds via competitive grant processes, many administered by the DOJ.

DOJ funding across programs affecting Indian country should be dramatically increased and the distribution mechanism modified. As nations, Tribes should not have to compete for short-term grants that reflect Federal priorities. Rather, funds should be allocated as flexible base funding.

*Create a 10 percent Tribal allocation across all Office of Justice Programs (OJP) programs.*—A 10 percent OJP Tribal set-aside would simplify the Federal funding process by which Tribal nations receive resources to establish Tribal courts; assist in developing detention facilities; provide legal assistance; develop and maintain juvenile delinquency prevention programs; and provide substance abuse prevention programs. Further, the Tribal set-aside provides Tribes the flexibility to develop a comprehensive strategy on public safety and justice needs. It also would create new opportunities for coordinating BIA and DOJ funding to reduce inefficiencies and unnecessary administrative costs.

*Include Tribal governments in disbursements from the Crime Victims Fund.*—The Crime Victims Fund (CVF) is the Federal Government's primary funding source for providing services to victims of crime. Unlike State and territorial governments, which receive an annual formula distribution from the CVF, Indian Tribes were only able to access CVF funds via pass-through grants at the discretion of the States or by competing for very limited resources administered by the DOJ. This system left a significant unmet need in most Tribal communities—communities where crime victimization rates far exceed the National average.

For the past 4 years, Congress has directed a portion of the overall disbursements from the CVF to Tribal nations. The 5 percent Tribal set-aside included in the fiscal year 2021 appropriations bill will direct \$100.75 million to support and improve crime victim services on Tribal lands. This funding greatly impacts crime victims' services infrastructure on Tribal lands, and it is imperative that it be appropriated on an annual basis to sustain the programs and services that will be developed. NAICJA urges the committee to keep disbursements from the CVF at the increased level and to direct an amount equal to 5 percent of overall CVF disbursements to Tribal governments on a non-competitive basis.

*If Congress declines to adopt the flexible 10 percent set-aside across OJP programs, restore fiscal year 2010 levels of \$25 million in funding for the Tribal Youth Program (TYP) under the Juvenile Accountability Block Grants Program.*—Native youth living in Indian country face numerous overlapping barriers to safety, wellness, academic achievement, and positive youth development. Barriers occur at the individual, family, community, and regional levels, resulting in disproportionate involvement with juvenile justice, child welfare, and other youth-serving systems. Today's Native youth continue to face the effects of collective intergenerational and historical traumas.

TYP is the first OJJDP program dedicated to prevention, intervention, and juvenile justice system improvement in Native communities. The need for the program can be demonstrated by the application rates within the last 5 years. For the major-

<sup>3</sup>Indian Law and Order Commission, *A Roadmap for Making Native America Safer: Report to the President & Congress of the United States* 83 (2013).

<sup>4</sup>United States Commission on Civil Rights, *Broken Promises: Continuing Federal Funding Shortfall for Native Americans*, 4 (December 2018).

ity of those years, the DOJ Coordinated Tribal Assistance Solicitations, Purpose Area 9 (TYP) received some of the highest number of grant applicants and categorically received the least amount of funding. Further exacerbating the issue, TYP is currently funded at some of its lowest levels since its establishment in the 1990s. This is despite an increase in funding in fiscal year 2021, the first increase in 3 years. Due to this decreased funding, hundreds of Tribes across the United States are left grappling with how to ensure that their most cherished resource is provided equal opportunity as other youth in this country to heal, thrive, and realize their life potential. Funding for the TYP should, at minimum, be restored to its fiscal year 2010 level of \$25 million.

*Fund the Tribal Civil and Criminal Legal Assistance, Training and Technical Assistance (TCCLA) grant program at a level of \$3 million.*—The Indian Tribal Justice Technical and Legal Assistance Act of 2000 (Public Law 106–559) authorized DOJ to award grants to non-profit entities, such as the 25 Indian Legal Services programs connected with the Legal Services Corporation (LSC), to provide civil and criminal legal assistance to both Tribal governments and their justice systems and to individual indigent Tribal citizens. Services impacted by this funding include domestic violence, pro se assistance, re-entry and expungements, child welfare, free legal clinics and toll-free hotlines, and much more.

*Increase funding of Tribal law enforcement programs under DOJ's Community Oriented Policing Services (COPS) Grants to \$52 million.*—Since its inception, the COPS Office has awarded more than 2,000 grants totaling over \$400 million to Tribes to hire more than 1,700 new or redeployed law enforcement officers. It has helped Tribes obtain necessary law enforcement training, equipment, vehicles, and technology. The COPS Office has also become one of the primary resources available to Tribal law enforcement agencies attempting to develop and maintain policing infrastructure and upgrade outdated equipment. Yet, there is still substantial unmet need within Tribal justice systems for more COPS funding.

*Fully fund the programs authorized in the Violence Against Women Act (VAWA), including the funds authorized for the Sexual Assault Clearinghouse and Tribal implementation of VAWA special domestic violence criminal jurisdiction.*—It is estimated over 85 percent of American Indian and Alaska Native women will experience violent victimization in their lifetimes.<sup>5</sup> OVW provides funding to Tribal governments to address violence against women in their communities. OVW's largest source of funding for Tribal governments is the Grants to Tribal Governments Program, which is funded via statutory allocations from other OVW programs. Fully-funding these OVW programs results in full funding for the Grants to Tribal Governments Program and for the implementation of Special Domestic Violence Criminal Jurisdiction.

#### CONCLUSION

Thank you for your consideration of this testimony. For more information, please contact A. Nikki Borhardt Campbell at [nikki@naicja.org](mailto:nikki@naicja.org).

[This statement was submitted by A. Nikki Borhardt Campbell, Executive Director.]

<sup>5</sup>U.S. Department of Justice, *Violence Against American Indian and Alaska Native Women and Men: 2010 Findings from the National Intimate Partner and Sexual Violence Survey 2* (2016).

PREPARED STATEMENT OF THE NATIONAL ASSOCIATION OF ASSISTANT UNITED STATES  
ATTORNEYS

June 23, 2021

Chair Jeanne Shaheen  
Senate Subcommittee on CJS  
Senate Appropriations Committee  
Washington, DC 2051

Ranking Member Jerry Moran  
Senate Subcommittee on CJS  
Senate Appropriations Committee  
Washington, DC 2051

RE: National Association of U.S. Attorneys Written Testimony on fiscal year 2022  
Appropriations for the Department of Justice

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 you concerning the issue of pay equity and disparity at DOJ and offer comments for the record to the subcommittee on Commerce, Justice, Science and Related Agencies Appropriations relating to fiscal year 2022 appropriations for the Department of Justice.

For over 30 years, AUSAs have asked their employer—the Department of Justice—for one thing: be paid the same as other lawyers within DOJ who have the same experience, years out of law school, and years of service. 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. AUSAs are some of the Nation's most selfless and dedicated public servants, many of whom forego much higher-paying jobs in the private sector in order to serve the public interest. 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 same offices—is indefensible. NAAUSA calls upon Congress to investigate and help rectify this inequity.

The 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, which has historically resulted in less pay under the pay scale for nearly all other DOJ attorneys and employees who are paid under the General Schedule (GS) or are members of the Senior Executive Service (SES). This split pay system has allowed significant pay disparities to develop between attorneys who have the same experience and in turn drives chronic, costly, and disruptive retention problems in U.S. Attorney Offices across the country. More than that, though, it is just unfair.

In the Partnership for Public Service's Best Places to Work in the Federal Government, while U.S. Attorney's Office reported above median and upper quartile scores in nearly every category since 2007, pay satisfaction has seen lower quartile scores in 11 of the last 12 survey years. In 2019, U.S. Attorneys' Offices ranked 350 of 415 in agency subcomponents regarding attitudes toward pay.<sup>1</sup>

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, after taxpayers have invested in their training.

NAAUSA calls on the Congress to end this cycle by investing in our Nation's career Federal prosecutors and ensuring pay equity between AUSAs and DOJ attorneys. Fairly compensating Federal prosecutors so that they are paid the same as their trial attorney colleagues and all other DOJ component attorneys who work for the FBI, DEA, ATF, BOP and others, all of whom do the same or similar work on behalf of our citizens would strengthen the rule of law, support national security, and it is the right thing to do.

Congress has consistently allocated additional funds toward U.S. Attorney Offices to cover the salary and expenses of Assistant U.S. Attorneys (AUSAs). However, this money has overwhelmingly been spent on hiring and onboarding additional AUSAs rather than toward appropriately compensating the current cadre of AUSAs. As a result, there is a significant and damaging pay inequity between AUSAs and other Department of Justice attorneys.

NAAUSA encourages Congress to:

<sup>1</sup> <https://bestplacetowork.org/rankings/detail/DJ09>

1. Engage the Department and EOUSA regarding pay disparity. The Department should be able to produce evidence and data supporting its positions and should answer why AUSA pay inequity is fair.
2. Request the Government Accountability Office (GAO) to study pay equity at the Department of Justice, including between the AD and GS pay systems.
3. Authorize additional appropriations for EOUSA specifically to close the attorney pay gap.

As our Nation faces more evolved forms of Federal criminal activity, such as domestic terrorism, cybercrime and drug smuggling networks, it is imperative we have a knowledgeable, experienced class of litigators able to prosecute these criminals working in U.S. Attorney Offices as AUSAs. The current system invests in hiring and training new AUSAs, but fails to incentivize these individuals to remain as Federal prosecutors. This leaves the government, after having invested time and training into new employees, without some of the most skilled litigators 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 for duties equivalent to many other DOJ attorneys.

NAAUSA has engaged the Attorney General's Advisory Committee (AGAC) on this topic over the years. While 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, more is needed to assure pay equity for DOJ attorneys, including the Department sharing all of the data and evidence upon which it is comparing attorney compensation under the GS and AD systems. The Department has recently 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.

Workforce churn, staff attrition with loss of expertise, and decreased morale have real costs for taxpayers in terms of lost productivity, and potentially undermine the capacity of U.S. Attorney Offices to accomplish their missions. It is for these reasons we bring this issue to the attention of Congress. Even amidst the COVID-19 pandemic, Assistant U.S. Attorneys are considered essential employees and are contributing to upholding and enforcing the rule of law in our country. 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 Jason Briefel (jbriefel@shawbransford.com) regarding this matter.

Respectfully,

LAWRENCE J. LEISER  
*President*

THE IMPACT OF PAY INEQUITIES ON THE ADMINISTRATION OF JUSTICE

The Administratively Determined (AD) pay plan, which Assistant U.S. Attorneys (AUSAs) are subject to, creates a significant pay disparity between AUSAs and all other DOJ attorneys. Aside from clear equity issues, the disparity negatively impacts recruitment and retention of the more than 6,000 criminal prosecutors and civil attorneys most directly tasked with administering justice across our Nation's 94 Federal judicial districts. The current pay system over relies on the goodwill on AUSAs who are willing to take a pay cut to serve their country. This is unsustainable and places our U.S. Attorney Offices at a disadvantage in the recruitment and retention of qualified personnel. Without top talent our criminal justice system cannot adequately serve and protect the American people.

—The DOJ attorney pay policy authorizes higher salaries for attorneys in main Department of Justice (DOJ) components than AUSAs. The discrepancy reaches over \$40,000, as noted in the chart below which compares GS attorney base pay and AD AUSA base pay in 2021.<sup>2</sup>

Years of Experience	GS Grade	AD Grade	GS Min Pay	AD Min Pay	Percent Difference
0–2 years .....	GS 11–13 .....	AD–21 .....	\$55,756	\$55,756	N/A
3–4 years .....	GS 14–15 .....	AD–23 .....	\$93,907	\$59,906	\$34,001 (44 percent)
5 years .....	GS 15 .....	AD–25 .....	\$110,460	\$64,367	\$46,093 (52 percent)
6 years .....	GS 15 .....	AD–26 .....	\$110,460	\$69,159	\$41,301 (46 percent)
7 years .....	GS 15 .....	AD–27 .....	\$110,460	\$74,309	\$36,151 (39 percent)

—AUSAs have for over 30 years identified pay parity issues as a detriment to their workplace wellbeing. For example, in the Partnership for Public Service’s Best Places to Work in the Federal Government Survey, while U.S. Attorney’s Office reported above median and upper quartile scores in nearly every category since 2007, the pay satisfaction category has reported lower quartile scores in 11 of the last 12 survey years. In 2019, U.S. Attorneys’ Offices ranked 350 of 415 in agency subcomponents regarding attitudes toward pay.<sup>3</sup>

—Based on advocacy efforts by NAAUSA, the DOJ made minor adjustments in the AD pay scale in 2016. While these adjustments did not come close to bridging the gap between pay scales, they did result in a slight increase in survey scores. The immediate positive impacts on FEVS scores by AUSAs demonstrates the importance of this issue and willingness to work toward pay parity.

—In testimonials anonymously collected by NAAUSA, AUSAs consistently report taking pay cuts to serve as AUSAs due to a genuine desire to serve the public as our Nation’s premier criminal prosecutors or civil attorneys. However, as the pay disparity worsens with advancement, many are forced to leave their positions in favor of positions at Main Justice or within the private sector. The pay disparity forces dedicated AUSAs out of their position or, worse, turns our U.S. Attorneys’ Offices into taxpayer-funded training centers for private defense attorneys.

NAAUSA advocates for the Department to adjust the AUSA salary framework assure that AUSAs are paid the same as Department of Justice trial attorneys through movement of AUSAs onto the General Schedule.

PREPARED STATEMENT OF THE NATIONAL FIRE PROTECTION ASSOCIATION

May 14, 2021

The Honorable Patrick Leahy  
Chairman  
Committee on Appropriations  
United States Senate  
Washington, D.C. 20510

The Honorable Richard Shelby  
Vice Chairman  
Committee on Appropriations  
United States Senate  
Washington, D.C. 20510

DEAR CHAIRMAN LEAHY AND VICE CHAIRMAN SHELBY:

The National Fire Protection Association (NFPA) is a self-funded, global non-profit organization founded in 1896 dedicated to ending losses from fire, electrical, and related life safety hazards. With the unabating wildfire crisis in the U.S., NFPA recently launched *Outthink Wildfire*<sup>TM</sup>, an initiative to advocate for policy change in five key areas that will stop the destruction of communities by this hazard. We write to ask for your support for key Federal programs.

The five tenets are: (1) all homes and business in areas of wildfire risk must be retrofitted to resist ignition; (2) current codes, standards, and sound land use planning practices must be used and enforced; (3) local fire departments must have adequate resources to protect their communities; (4) fuel management on Federal and non-Federal lands must be a priority; and (5) the public must be well-informed and motivated to embrace their role in reducing wildfire risk. While action on these

<sup>2</sup> Does not include locality pay.

<sup>3</sup> <https://bestplacestowork.org/rankings/detail/DJ09>

fronts is urgently needed at all levels of government, Federal programs need to play a key role in ending the devastating wildfire losses communities are now experiencing as discussed in this letter.

#### *Mitigating Wildfire Severity*

NFPA supports the Administration's fiscal year 2022 proposal to provide \$1.7 billion in funding for high-priority hazardous fuels and forest-resilience projects to the U.S. Forest Service (USFS), in addition to the proposed \$340 million to the Department of the Interior (DOI) for hazardous fuel treatments on its lands. As identified in the *National Cohesive Wildfire Management Strategy*, denser, more continuous fuel on landscapes now outside of their natural ecological fire regimes is a major contributor to the severe wildfires that threaten communities and drain Federal fire suppression resources. The U.S. must increase the rate of fuel treatments, including prescribed burning, to address the millions of acres now at high or very high risk of wildfire.

In addition to increased resources for hazardous fuel treatment projects, NFPA supports programs that enable collaboration between the USFS and its partners, assist State and private land managers in restoring forest health, and encourage landscape-scale restoration projects. For example, the Collaborative Forest Landscape Restoration program has been successful in reducing fire risk and achieving other management objectives through a stakeholder-driven process aimed at minimizing conflict.<sup>1</sup> Given the National Cohesive Strategy's call for increased landscape-scale fuel treatment and forest health projects, funding this program at its authorized level of \$80 million can help continue and expand on its success. Similarly, the Landscape Scale Restoration Program should receive \$20 million.

Finally, NFPA supports a robust budget for forestry research, including programs to better understand wildfire behavior and landscape treatment strategies, as well as programs to develop new wood products and markets to create more financial incentives for hazardous fuel treatment. As part of that funding, the Joint Fire Sciences Research program should receive \$8 million each for the USFS and DOI. NFPA also believes research funding for the built environment aspect of wildfire resilience should be increased and thus supports the Administration's proposal to increase funding for the National Institute of Standards and Technology (NIST), particularly for efforts to improve resiliency through building codes.

#### *Assisting State & Local Fire Departments*

State and local fire response resources play a major role in preparing for and responding to wildfires on both public and private lands, making the USFS funds provided by the State Fire Assistance (SFA) and Volunteer Fire Assistance (VFA) programs critical to public safety. According to the National Association of State Foresters, members of State and local fire departments are the first to respond to 80 percent of wildfires. Findings from NFPA's 2016 *Fourth Needs Assessment of the U.S. Fire Service*<sup>2</sup> that the majority of fire departments with wildfire response responsibilities lack sufficient training and personal protective equipment reveal a significant gap in safety, for both the responders and the lives and properties of the communities they protect.

SFA and VFA are critical safety programs for supporting wildland urban interface (WUI) communities, funding hazardous fuels treatment in the WUI, supporting fire planning projects, and helping to train and equip State and local responders. SFA also supports public education and community capacity development programs like *Firewise USA*® and the *Fire Adapted Communities Learning Network*. These programs teach WUI residents how to lower wildfire risk to their homes and support community mitigation activities. Therefore, NFPA supports funding the State Fire Assistance program at \$88.5 million and the Volunteer Fire Assistance program at \$20 million.

<sup>1</sup> See e.g., Schultz, Courtney, et al. (2017) *Strategies for Success Under Forest Service Restoration Initiatives*, Ecosystem Workforce Working Paper, Number 81 (<https://tinyurl.com/38b3cpz4>)

<sup>2</sup> National Fire Protection Association (2016) *Fourth National Needs Assessment*, <https://www.nfpa.org/News-and-Research/Data-research-and-tools/Emergency-Responders/Needs-assessment>, (Eighty-eight percent of U.S. fire departments—some 23,000 departments—provide wildland and/or WUI firefighting services, but 63 percent of those have not formally trained all of their personnel involved in wildland firefighting on these skills. Only 32 percent have all of their responders equipped with appropriate personal protection equipment (PPE), and 26 percent do not have any of the necessary PPE at all. Only 27 percent of departments have a health and fitness program).

*Mitigation for Communities*

The National Cohesive Strategy also identifies the need for fire adapted communities—communities where homes and businesses are retrofitted to resist ignition and wildfire safety codes, standards, and land use planning practices are applied. According to the *U.S. Fire Administration*, the Nation has over 70,000 thousand communities in areas at risk from wildfires, home to 46 million housing units. Preparing for wildfire through creating defensible space and home retrofits can greatly reduce the risk of loss. NFPA supports the Federal Emergency Management Agency's (FEMA) Building Resilient Infrastructure and Communities (BRIC) program and the Administration's proposal to add \$540 million in new resources to programs tasked with helping communities undertake pre-disaster planning and make investments in resiliency. The USFS' Wildfire Hazard Severity Mapping for Communities program also supports community risk assessment and hazard mitigation planning and should continue. In addition, NFPA is also highly supportive of proposed efforts to improve resiliency and safety in HUD-assisted housing with an additional \$800 million in new investments.

Thank you for the opportunity to share our views on Federal support for reducing wildfire risk to communities. NFPA strongly urges the Committee to support a robust budget for wildfire mitigation and we stand ready to provide any additional information that would be useful.

[This statement was submitted by L. Seth Statler, Director of Government Affairs.]

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 PREPARED STATEMENT OF THE NATIONAL LEGAL AID & DEFENDER ASSOCIATION

This testimony is submitted on behalf of the National Legal Aid & Defender Association (NLADA), America's oldest and largest national organization whose resources are exclusively dedicated to excellence in the delivery of legal services and to promoting access to justice for all. We are grateful for the opportunity to provide comments to the committee regarding the Legal Services Corporation (LSC) and U.S. Department of Justice (DOJ) programs.

## LEGAL SERVICES CORPORATION

NLADA urges Congress to address the ongoing failure of our country to meet its foundational promise of equal justice. Even prior to the COVID-19 pandemic, LSC grantee organizations did not have sufficient resources to meet the legal needs of low-income Americans. This serious threat to our democracy has been greatly exacerbated by the events of the past year. NLADA therefore recommends an appropriation of \$1.36 billion for LSC for fiscal year 2022. Civil legal aid ensures that regardless of how much money a person has, they have the same level of access to a fair adjudication of their civil legal problems as anyone else. Legal aid organizations provide assistance that enables low-income people to protect their livelihoods, health, housing, family, and other basic human needs. LSC is not only the single largest funder of civil legal aid, but also the foundational infrastructure of civil justice in the United States, making sure help is available to people in every ZIP code.

However, many eligible clients receive only minimal service, or no help at all, due to insufficient resources. In 2017, LSC conducted a comprehensive study of its grantee organizations and found that roughly 40 percent of eligible people seeking help from an LSC grantee were turned away and, of those who did receive services, only a little over half were able to have their problem fully addressed.<sup>1</sup> At the time, LSC's budget was \$385 million. While we are sincerely appreciative for this committee's decision to provide incremental funding increases in the following years, LSC's budget remains far smaller than it would be had it simply kept pace with Federal discretionary spending, which since 1995 has in percentage terms has increased more than 12 times as much as LSC's budget has grown, or with inflation: LSC's peak funding level in fiscal year 1980 would be around \$1 billion today.

It is clear that the pandemic has greatly deepened the need for additional resources, by creating a larger population of eligible clients as a result of increases in poverty and unemployment. In order to qualify for services from an LSC grantee organization, a person's household income must generally be lower than 125 percent, but can be considered up to 200 percent percent of the Federal poverty level. At around 6 percent, the unemployment rate remains almost twice as high as it was

<sup>1</sup>Legal Services Corporation. (2017). *The Justice Gap: Measuring the Unmet Civil Legal Needs of Low-income Americans*. <https://www.lsc.gov/sites/default/files/images/TheJusticeGap-FullReport.pdf>

in February 2020.<sup>2</sup> For Black Americans it is nearly 10 percent. In February, the Urban Institute estimated that this year the National poverty rate would be around 13.7 percent,<sup>3</sup> compared to 10.5 percent before the pandemic.<sup>4</sup>

At the same time, the pandemic has also greatly increased the prevalence of civil legal problems. In July 2020, LSC reported that more than 85 percent of LSC grantees reported an increase in requests for assistance in each of the areas of housing, income, and domestic violence, and through December, LSC grantees have closed 72,115 cases linked to the pandemic.<sup>5</sup> This data accounts for legal problems for which a person seeks help, but an estimated 86 percent of legal problems experienced by low-income people are not even brought to a legal aid provider.<sup>6</sup> It is therefore certain that the actual increase in need is far higher still, and in some cases this is further exacerbated by the nature of the problem. For example, there is consensus among experts that the social isolation and economic instability caused by the pandemic have significantly increased the prevalence of domestic violence and child abuse,<sup>7</sup> while also making such violence and abuse more difficult to report.

Last year, NLADA used projected increases in long-term unemployment to approximate the need for civil legal aid in 2022. We estimated that when combined with resource needs that existed prior to the pandemic, \$1.36 billion would be required for LSC. While it is not possible to know exactly how economic recovery for low-income Americans will develop, data continues to demonstrate widespread hardship that will persist beyond the resolution of the health crisis. For example, if eviction moratoria are allowed to expire, a swathe of low-income families will face homelessness. Emergency rental assistance programs will blunt this problem considerably but porously; not only are funds limited but reports of landlords refusing to accept funds that have been secured are growing.<sup>8</sup> The data is clear that access to a lawyer will make a difference, as numerous studies have demonstrated that representation can reduce the likelihood of eviction by up to around 80 percent.<sup>9</sup>

The need for a substantial increase in resources is further compounded by cuts to non-LSC sources of public and private funding for legal aid, such as Interest on Lawyers Trust Accounts (IOLTA) programs.<sup>10</sup> As our country begins to look towards recovery from the COVID-19 pandemic, Congress can help ensure that low-income Americans are not left behind by providing an appropriation for LSC that is commensurate with the level of need.

#### U.S. DEPARTMENT OF JUSTICE PROGRAMS

##### *Tribal Civil and Criminal Legal Assistance, Training and Technical Assistance*

We also urge this subcommittee to continue funding in fiscal year 2022 to support the work done on behalf of Native Americans by Indian Legal Services programs that are connected with the Legal Services Corporation. We request that funding be maintained within the Department of Justice, Office of Justice Programs, under the State and Local Law Enforcement Assistance appropriations account, at a level similar to that provided in recent years, which is approximately \$1 to 2 million, for the Tribal Civil and Criminal Legal Assistance, Training and Technical Assistance grant program (TCCLA). This could be either within a specified line item for “assistance to Indian Tribes,” such as the \$50 million the Administration has requested for fiscal year 2022 and the \$46 million Congress appropriated in the fiscal year

<sup>2</sup>U.S. Bureau of Labor Statistics. (2021). Civilian Unemployment Rate. Retrieved at: <https://www.bls.gov/charts/employment-situation/civilian-unemployment-rate.htm>

<sup>3</sup>Urban Institute. (2021, February). 2021 Poverty Projections. <https://www.urban.org/sites/default/files/publication/103656/2021-poverty-projections.pdf>

<sup>4</sup>United States Census Bureau. (2020, September). Income and Poverty in the United States: 2019.

<sup>5</sup>Legal Services Corporation. (2021) Data on CARES Act Funding & Services. Retrieved at: <https://www.lsc.gov/about-lsc/lsc-and-covid-19/data-cares-act-funding-services>.

<sup>6</sup>Legal Services Corporation. (2017). The Justice Gap: Measuring the Unmet Civil Legal Needs of Low-income Americans. <https://www.lsc.gov/sites/default/files/images/TheJusticeGap-FullReport.pdf>

<sup>7</sup>Bright, C., Burton, C., and Kosky, M. (2020, October). Considerations of the impacts of COVID-19 on domestic violence in the United States. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7539928/pdf/main.pdf>

<sup>8</sup>Will Parker. (March 19, 2021). Why Some Landlords Don't Want Any of the \$50 Billion in Rent Assistance. Wall Street Journal

<sup>9</sup>Heidi Schultheis and Caitlin Rooney. (October 2, 2019). A Right to Counsel Is a Right to a Fighting Chance: The Importance of Legal Representation in Eviction Proceedings. Center for American Progress.

<sup>10</sup>National Association of IOLTA Programs. (2020, May 29). \$157.4 Million Projected Loss in Critical Sources of State Funding for Civil Legal Aid [Press release]. <https://www.iolta.org/images/NAIP-Press-Release-5-29-20.pdf>

2021 Consolidated Appropriations Act (Public Law 116–260), or within a Tribal set-aside percentage of Office of Justice Programs accounts.

The consortium of 24 Indian Legal Services programs operating in 23 States provides legal representation to thousands of American Indian and Alaska Native individuals in Tribal and State courts, and assists more than 160 Tribal governments and/or Tribal judicial systems to enhance or develop their justice systems. In at least 46 Tribal courts, these programs provide the only public defender service available. Many of these Indian Legal Services programs have been awarded funding under the TCCLA grants program. They have recently responded to the program’s solicitations for fiscal year 2021 funding for both Tribal civil and criminal legal assistance.

Examples of the Indian Legal Services programs’ civil legal assistance work done under TCCLA awards generally include initial drafting of Tribal laws as well as revisions to civil codes, policies and procedures; developing alternative resolution systems, based on Tribal customs and traditions; and developing and conducting Tribal court advocate training programs. Civil and criminal representation of individuals in Tribal and State courts ranges from counseling and advice to full representation in trials and appeals. Individual Indian Legal Services programs have created a comprehensive set of self-help forms for family law cases; assisted with birth certificate changes for Tribal enrollment purposes; assisted with enforcement of domestic violence protections under Tribal laws; represented families in Indian Child Welfare Act cases in State court; and provided a toll-free legal advice hotline.

Examples of the Indian Legal Services programs’ criminal legal assistance work under TCCLA include assisting Tribes with drafting, revising and updating their civil and criminal codes (including children’s codes), policies and procedures; Tribal court development, restructuring and improvement; training of judicial, law enforcement and justice systems personnel, and Tribal court lay advocates and guardians ad litem; and negotiation or litigation to address jurisdictional issues with State court systems. The programs are engaged in helping 18 of the 160 Tribes they serve to implement the Tribal Law and Order Act of 2010 (TLOA) and the Violence Against Women Reauthorization Act of 2013 (VAWA). Specific Indian Legal Services programs are working to enforce existing and to develop new “diversion” agreements with the State government to address criminal justice matters (and potentially-related civil matters, such as child protection) within civil Tribal proceedings—such as in Healing-to-Wellness courts; to conduct outreach to and represent individual clients in an expungement program, with the goal of alleviating barriers to employment and safe housing and restoring treaty-based hunting rights for those individuals who lost the right to possess firearms because of non-violent felony convictions; and to update Tribal codes for truancy and domestic violence while ensuring that the codes reflect Tribal customs and traditions.

In fiscal year 2022, whether the subcommittee recommends funding to DOJ for assistance to Indian Country Tribal justice programs at a specific amount, as enacted in fiscal year 2021, or as a Tribal set-aside percentage of overall DOJ funding, as has been proposed in prior fiscal years, we request that both bill and report language direct that some DOJ funding be allocated for the purpose of the provision of both Tribal civil and criminal legal assistance to individual Tribal citizens and to Tribal judicial systems pursuant to the Indian Tribal Justice Technical and Legal Assistance Act (Public Law 106–559).

#### *John R. Justice Student Loan Repayment Assistance Program*

A law degree is a requirement of all public defenders and prosecutors, but obtaining such a degree routinely leaves graduates with a six-figure student loan debt. This debt can make it financially impossible to enter low-paying jobs at public defender organizations, or to remain in those jobs for long enough to gain the experience needed to become a highly effective advocate for their clients. When this happens, it slows the functioning of the entire court system as less experienced defense attorneys and prosecutors require more time to process the same caseload.

The John R. Justice program provides relief from student loan debt by contributing to an individual’s monthly student loan payments, which helps alleviate some of the problems that lead to recruitment difficulties and higher rates of turnover in public defender and prosecutor offices. However, the fiscal year 2021 appropriation for John R. Justice was just \$2 million. This level of funding severely limits the scope and effectiveness of the program. This committee should fully fund the John R. Justice program at the authorized amount of \$25 million for fiscal year 2021.

#### *Violence Against Women Act (VAWA) Programs*

As described earlier in this testimony, the COVID–19 pandemic has fueled concerns of rise in the prevalence of domestic violence and abuse. Even prior to that,

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. We urge the committee to provide an appropriation that builds on the prior success of VAWA programs, but also reflects the urgency of the need to broaden their reach. In particular, we request the \$77 million for grants for civil legal assistance for victims recommended by the President's budget for fiscal year 2022. Civil legal aid helps survivors secure their physical safety, break legal links with their abuser, and rebuild their lives over the long term.

None of this appropriation should be drawn from the Crime Victims Fund administered by the Department of Justice Office for Victims of Crime, because this reduces the total amount available to serve victims of crime and jeopardizes the sustainability of Crime Victims Fund over the long-term. The sustainability of the Crime Victims Fund is a bipartisan concern, as demonstrated by passage of H.R. 1652, the VOCA Fix to Sustain the Crime Victims Fund Act.

[This statement was submitted by Don Saunders, Senior Vice President for Policy.]

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PREPARED STATEMENT OF THE NATURAL SCIENCE COLLECTIONS ALLIANCE  
FUNDING FOR THE NATIONAL SCIENCE FOUNDATION

The Natural Science Collections Alliance appreciates the opportunity to provide testimony in support of fiscal year 2022 appropriations for the National Science Foundation (NSF). We encourage Congress to provide the NSF with *at least \$10.2 billion* in fiscal year 2022.

*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 a vital component of our Nation's research infrastructure. These collections and their associated experts contribute to the expansion of our bioeconomy. Whether held at a museum, government managed laboratory or archive, or in a university science department, these scientific resources form a coordinated network of specimens, samples, and data (for example, genetic, tissue, organism, and environmental) that are a unique and irreplaceable foundation from which scientists are studying and explaining past and present life on earth.

Natural science collections advance scientific research and education, and that informs actions to improve public health, agricultural productivity, natural resource management, biodiversity conservation, and American economic innovation. Current research involving natural science collections also contributes to the development of new cyberinfrastructure, data visualization tools, and improved data management practices. A few examples of how scientific collections have saved lives, enhanced food production, and advanced scientific discovery include:

- Scientists used museum specimens in U.S. collections to gather data on the distribution of the mosquito *Culex quadrofaciatus*, which is known to carry West Nile Virus and other pathogens. They then modeled the distribution under different scenarios of changing climates to predict regions where the species may expand in the future. Predicting the spread of disease vectors such as these mosquitoes helps the health care community prepare for disease outbreaks and where they will happen.
- Researchers from Boston University documented Tau proteins in the brains of fluid preserved museum specimens of Downy Woodpecker (*Dendrocopus pubescens*). 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.
- In 1993, a deadly new disease appeared in the southwestern United States. Using NSF-supported biological collections at Texas Tech University and University of New Mexico, the agent was determined to be Hantavirus carried by a few species of rodents. When rodent populations increased following an El Niño weather event, the animals spread into human environments and increased the transmission of Hantavirus. With the vector known, it was possible

to lessen the risk to humans by reducing opportunities for disease transmission. Using other specimens, scientists have now identified more than 40 other strains of Hantavirus worldwide that are carried by bats, moles, and shrews. Similar work is underway to identify the carrier of Ebola in Africa.

—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.

Scientific collections enable us to tell the story of life on Earth. There are more than 1,600 biological collections in the United States. These resources are the result of more than 200 years of scientific investigation, discovery, and inventory of living and fossil species. Scientists have collected and curated more than one billion specimens within those collections. This work is on-going as new questions continue to be asked and answered.

The institutions that care for scientific collections are important research infrastructure that enable other scientists to study the basic data of life; conduct biological, geological, anthropological, and environmental research; and integrate research findings from across these diverse disciplines. Their professional staff members train future generations with the tools and expertise required to move science forward. In-house institutional staff expertise is vital to the development and deployment of this critical research infrastructure.

Recent reports highlight the value of mobilizing biodiversity specimens and data in spurring new scientific discoveries that grow our economy, improve our public health and wellbeing, and increase our National security. In 2019, the Biodiversity Collections Network issued a community-informed call for the development of an Extended Specimen Network. The report, *Extending U.S. Biodiversity Collections to Promote Research and Education*, outlines a national agenda that leverages digital data in biodiversity collections for new uses and calls for building an Extended Specimen Network. This endeavor requires robust investments in our Nation's scientific collections, whether they are owned by a Federal or State agency or are part of an educational institution or free-standing natural history museum or another research center.

A 2020 report by the National Academies of Science, Engineering and Medicine (NASEM), *Biological Collections: Ensuring Critical Research and Education for the 21st Century*, provides guidance to the NSF regarding the sustainability of living stock and natural history collections. The report argues that collections are a critical part of our Nation's science and innovation infrastructure and a fundamental resource for understanding the natural world.

According to the U.S. Interagency Working Group on Scientific Collections (IWGSC), "scientific collections are essential to supporting agency missions and are thus vital to supporting the global research enterprise." A 2020 report by the IWGSC presents a framework for estimating and documenting the long-term benefits, both monetary and non-monetary, generated by Federal institutional collections.

The NASEM, BCoN, and IWGSC reports, articulate a common vision of the future of biological collections and define a need to broaden and deepen the collections and associated data to realize the potential for biodiversity collections to inform 21st century science. Because the NSF is the only agency that supports research in all fields of science, it is ideally suited lead a national effort to build the Extended Specimen Network, which will require the engagement of computer and information scientists, geoscientists, life and environmental scientists, and anthropologists.

Collections are a critical resource for advancing the knowledge needed to address current global challenges such as climate change, biodiversity loss, and pandemics. The COVID-19 crisis has illustrated how inextricably linked humans are to the natural world. Biological collections, their extended data, and the experts that build and study them are globally important for understanding where viruses such as SARS-CoV-2 exist in nature or when they cross from their current hosts to humans.

In 2019, the United Nation's (UN) Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) issued a warning that about a million species of plants and animals worldwide face extinction within the next few decades. This would not only be an unprecedented loss of global biodiversity but also a loss of valuable genetic diversity that has implications for human health and well-being. Robust investments must be made to support efforts to grow and digitize natural history collections and conduct critical collections-based science that can help prevent these losses.

The NSF plays a unique role in protecting and expanding access to our Nation's scientific collections. It supports research that uses existing collections as well as

studies that gather new natural history specimens. NSF's Directorates for Biological Sciences (BIO), Geosciences (GEO), and Social and Behavioral and Economic sciences support research and student training opportunities in natural history collections. The NSF is also an important supporter of national biological research infrastructure that houses natural history collections, such as living stock collections and field stations.

The NSF funds evolving work to digitize high priority specimen collections. The result of this effort is that irreplaceable biological specimens and their associated data are now accessible through the Internet to researchers, educators, and the public. More than 125 million specimens are now online, with millions more awaiting digitization. This project involves biologists, computer scientists, and engineers in multi-disciplinary teams who develop innovative imaging, robotics, and data storage and retrieval methods. Resulting new tools and approaches expedite the digitization process and contribute to the development of new products and services of value to other industries. Museum specimens and associated data represent an extraordinary resource for teaching core concepts in science.

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 the NSF have always been in the National interest and their value continues to grow. Scientific collections contribute to improved public well-being and national economic security. It is not possible to replace this important documentation of our Nation's heritage. Specimens collected decades or centuries ago are increasingly used to develop and validate models that explain how species, including viruses, parasites, and pathogens have dispersed around the world, as well as how and when they might infect humans now and in the future. The 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.

Investments in NSF programs that support natural science collections research and education are essential if we are to maintain our global leadership in innovation and biodiversity research. We also see these investments as critical for our efforts to grow diversity and inclusion in the scientific workforce. Please support funding of at least \$10.2 billion for NSF in fiscal year 2022. We also request that Congress provide additional economic relief, such as the provisions outlined in the RISE Act (HR. 869, S. 289), to the U.S. research community, including natural history museums, botanical gardens, and other science centers, that have suffered significant budget disruptions resulting from reduced public attendance or closures associated with responding to the COVID-19 pandemic. Many natural history organizations are non-profits that operate on tight budgets with limited capacity to absorb abrupt and significant losses of revenue, such as that generated from public visitation and engagement programs.

In addition to appropriations, Congress is currently considering reauthorization legislation to significantly expand NSF's mission and budget. The proposed investments in technological research will enable the biodiversity collections community to build the cyberinfrastructure and databases necessary to mobilize biodiversity data in ways that bolster 21st century science and drive innovation. We applaud these efforts to invest in our Nation's scientific and technological enterprise and urge that robust investments also be made in basic and foundational research.

Thank you for your thoughtful consideration of this request and for your prior support of the National Science Foundation.

[This statement was submitted by John Bates, Ph.D., President.]

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#### PREPARED STATEMENT OF THE NATURE CONSERVANCY

PROGRAMS UNDER THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION FOR  
FISCAL YEAR 2022

Chair Shaheen, Ranking Member Moran and Members of the subcommittee, thank you for the opportunity to comment on the fiscal year 2022 appropriations for the National Oceanic and Atmospheric Administration (NOAA). The Nature Con-

servancy (TNC) is a nonprofit working across the States and territories and in 72 countries to conserve the lands and waters on which all life depends.

We thank the subcommittee for its efforts to help address not only the Nation's ongoing vital ocean, coastal and Great Lakes issues but also the economic challenges of the COVID-19 pandemic. Investment in ocean, coastal and Great Lakes restoration and management can be part of the country's economic recovery. According to NOAA data, each year the U.S. ocean and coastal economy contributes \$304 billion to the Nation's GDP and 3.3 million jobs. NOAA's funding keeps this growing ocean, coastal and Great Lakes economic engine running. It not only helps NOAA catalyze local and regional action but also reduces risk and saves money based on the tangible economic and societal benefits that natural resources provide.

We appreciate that in fiscal year 2021, the subcommittee was able to provide some moderate but necessary program increases in a constrained budget environment. Recognizing the significant benefit NOAA's programs provide to the Nation, the Biden administration has proposed a significant increase to the agency's fiscal year 2022 budget. Many of these increases are targeted to improve research, resource management and public engagement to address the considerable climate and biodiversity needs of the Nation. The demand for NOAA's products and technical and financial assistance exceeds available funding. TNC supports the administration's thoughtful approach to increases across NOAA programs. The NOAA budget levels detailed below represent a prudent investment in the United States' future, and your support is requested.

#### NATIONAL OCEAN SERVICE

*Title IX Fund—National Coastal Resilience Fund Grants:* The Conservancy supports the requested level of \$68 million requests at least \$5 million be set aside for planning, technical assistance, and assessment activities. The National Coastal Resilience Fund provides the resources and tools to build coastal resilience to avoid costly Federal disaster assistance and sustain healthy fisheries, maintain robust tourism opportunities, provide for increased shipping demands and support other coastal industries. Coastal communities have clearly shown an ability to match and leverage this funding to take proactive measures to protect their ways of life. TNC appreciates Congress's support for funding for planning and assessment activities in fiscal Year 2021.

*Coastal Zone Management and Services:* The Conservancy supports the requested level of \$64.789 million. This level of funding will provide for increased capacity to provide coastal resilience technical assistance to communities across the country, including additional emphasis on under-resourced and underserved communities. Fully funding the Digital Coast Partnership following passage by Congress of the Digital Coast Act in 2020 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 increase will support the designation process for three new National Estuarine Research Reserves in Louisiana, Connecticut and Wisconsin to provide better representation and connectivity of habitats across the system.

*Coastal Management Grants:* The Conservancy supports the requested level of \$108.5 million for coastal zone management grants. TNC collaborates with State and territorial coastal programs around the country to meet multiple goals for coastal communities, including economic development, enhancement of public access and recreation, coastal resilience, and conservation of coastal resources. After years of essentially flat funding, the additional funding would support State and territorial coastal zone management programs expanding coastal resilience efforts through vulnerability assessments, planning and design of resilience projects, monitoring and evaluation, technical assistance and training to local governments.

*Coral Reef Conservation Program:* The Conservancy supports the requested level of \$43.194 million. The increase will help NOAA, States, territories and community, research, and non-governmental partners address the continued decline of coral reefs. This decline has had significant social, economic and ecological impacts on people and communities in the United States and around the world. TNC works with NOAA's Coral Reef Conservation Program under a competitively awarded, multiyear cooperative agreement to address the top threats to coral reef ecosystems: changing ocean conditions, overfishing and land-based sources of pollution. Together, TNC and NOAA develop place-based strategies, measure the effectiveness of management efforts and build capacity among reef managers.

*National Estuarine Research Reserve System (NERRS):* The Conservancy supports the requested level of \$42.5 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 expand the capacity of NERRS to conduct climate research and monitoring, incorporate this research into training and technical assistance to local communities and enhance public engagement.

*Sanctuaries and Marine Protected Areas:* The Conservancy supports the requested level of \$84.503 million. National marine sanctuaries support economic growth and hundreds of coastal businesses in sanctuary communities, preserve vibrant underwater and maritime treasures for Americans to enjoy and provide critical public access for more than 42 million visitors each year. Through a transparent, inclusive approach, the marine sanctuaries provide for the conservation of U.S. marine resources while balancing multiple uses and diverse stakeholder needs. The increased funding would enable the program to expand engagement of partners, underrepresented communities, Tribes and Indigenous communities; increase capacity for protection, conservation and stewardship; and support the designation process for five community-nominated candidate sites and Papahānaumokuākea Marine National Monument to become sanctuaries.

#### NATIONAL MARINE FISHERIES SERVICE (NMFS)

*Fisheries and Ecosystem Science Programs and Services:* The Conservancy supports the requested level of \$170.603 million. Science is the foundation of successful fisheries management. While many gains have been achieved, there remain unfunded opportunities in each NMFS region, especially related to electronic monitoring and reporting (EM/ER). NMFS has also begun a fisheries information management modernization effort that would enhance capacity to take in, integrate and make accessible data from a variety of sources to improve management. Modernizing data management would support implementation of the proposed Climate-Ready Fisheries Initiative and enhance the government's ability to conduct offshore wind consultations. The enhanced research capacity would help fill gaps in stock productivity, fisheries adaptations, improve future projections and risk assessments and translate these efforts into management strategies to support decision-makers.

*Habitat Conservation and Restoration:* The Conservancy supports the requested level of \$99.704 million. NOAA funding for coastal habitat restoration supports, on average, 15 jobs per \$1 million invested and up to 30 jobs per \$1 million spent on labor-intensive restoration projects. Project funds are awarded on a competitive basis and typically leverage the resources and capacity of multiple partners. This funding also provides for NOAA's consultations on and implementation of Essential Fish Habitat. The Regional Fishery Management Councils address fishing impacts on these areas, and NOAA must have sufficient capacity to provide technical assistance to the councils and to work with Federal agencies to avoid, minimize and mitigate impacts on these important fishery habitats. The proposed increase would support large-scale habitat restoration to build climate resilience as well as competitive grants for multi-year awards to develop restoration planning, project design and permitting and project implementation. TNC supports not only this project but the thoughtful approach to assess the problem, identify goals and articulate a schedule and cost for the project.

*Fisheries Data Collections, Surveys and Assessments:* The Conservancy supports the requested level of \$197.645 million. Limited or poor-quality information on the status of fishery stocks undermines the effectiveness of fisheries management and can erode community support for conservation measures. Accurate and timely stock assessments are essential for the sound management of fisheries and the sustainability of fishing resources. The proposed increase would provide long-needed funding to expand surveys, sampling and analysis capabilities to better track shifting species. The funding would increase the use of technology to conduct surveys, a capacity that became increasingly important when the pandemic disrupted data collection. The increase would also begin implementation of a Federal survey mitigation program to cover the operational lifespan of offshore wind developments.

*Fisheries Management Programs and Services:* The Conservancy supports the requested level of \$136.782 million. With a \$214 billion fisheries and seafood sector, U.S. fishing communities rely on management services and information from NOAA to make the most informed decisions on where, how and when to fish. NOAA Fisheries has made important strides in addressing these challenges and strengthening fisheries management. Support for these efforts is necessary to recover fish stocks

so they can provide food and jobs now and in the future. Increased funding will enable NOAA to take the next steps to better incorporate ecosystem and changing climate considerations into management activities. It will also allow for workforce training and development in environmental justice and equity as well as improved engagement and outreach for diverse participation in regulatory and science processes. Funding would increase consultation capacity to assess effects of planned offshore energy activities and to establish a national Wind Center of Excellence to coordinate review of wind projects nationwide.

*Observers and Training:* The Conservancy supports at least \$55.468 million, including \$10.3 million for at-sea monitoring in the New England multispecies fishery, consistent with fiscal year 2021 funding. After several years of collaborative work with fishery participants, scientists and other stakeholders, the New England Fishery Management Council voted to increase monitoring on groundfish vessels to 100 percent for a period of at least 4 years if, and only if, funding is available to support it. Because of ongoing support from Congress to develop electronic monitoring systems, fishermen can now meet the at-sea monitoring requirement with these systems or observers. Continued funding along with leveraged private funding should provide sufficient resources to aid in the near-term transition to increased monitoring and expand the use of electronic monitoring.

*Pacific Coastal Salmon Recovery Fund (PCSRF):* The Conservancy supports at least \$70 million, an increase of \$5 million above fiscal year 2021 funding. PCSRF has funded hundreds of successful on-the-ground salmon conservation efforts, but habitat project needs exceed available funding. It invests in cooperative efforts and projects are matched at a 3:1 ratio (Federal: non-Federal). PCSRF has catalyzed thousands of partnerships among Federal, State, local and Tribal governments and conservation, business and community organizations.

*Protected Resources Science and Management:* The Conservancy supports the requested level of \$237.127 million. Increasing funding for the competitive Species Recovery Grants would allow the agency to strengthen and expand State and territorial partnerships to address the growing number of listed species and allow for larger-scale, ecosystem-level recovery efforts. It will enhance capacity to integrate climate science into protected species management and assessments, including scenario planning, recovery planning, implementing recovery actions, threat projections and long-term monitoring and research. Additional listed species and emerging offshore wind activities have increased the number and complexity of NOAA's consultation and permitting requirements. Funding is needed to aid NOAA's ability to complete these requirements in a timely and predictable manner.

Thank you for this opportunity to share TNC's priorities. Please contact me if you have questions or would like additional information.

[This statement was submitted by Stephanie Bailenson, Senior Policy Advisor for Ocean and Coasts.]

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PREPARED STATEMENT OF THE NEW HAMPSHIRE OFFICE OF THE CHILD ADVOCATE

SUBMITTED ON BEHALF OF A COALITION LED BY YOUTH FIRST INITIATIVE AND COLUMBIA JUSTICE LAB'S YOUTH CORRECTIONAL LEADERS FOR JUSTICE—REGARDING A NEW JUVENILE JUSTICE INITIATIVE AT THE OFFICE OF JUVENILE JUSTICE AND DELINQUENCY PREVENTION IN THE DEPARTMENT OF JUSTICE

Chairwoman Shaheen, Ranking Member Moran, and Members of the subcommittee, my name is Moira O'Neill. I serve as the Child Advocate for the State of New Hampshire. The Office of the Child Advocate provides independent oversight of all State supervised services for children with a special focus on child protection and juvenile justice services. In addition to investigating complaints and examining State systems, our statutory mandate includes promoting children's best interests and strengthening State services by working with agencies and providing advice to policy makers. The foundation of all our efforts is the science of child development. This approach is essential to juvenile justice, a separate system that should accommodate children's developing brains and capacity for executive decision making, impulse control, and emotional regulation. I am pleased to submit testimony on behalf of a coalition of organizations, co-led by the Youth First Initiative and Columbia Justice Lab's Youth Correctional Leaders for Justice. These organizations assist States in building on the past 15 years of successful youth crime reduction and decarceration to strengthen and expand access to more effective community-based alternatives for youth. *To accomplish this goal, we seek \$100 million for a new initiative at the Office of Juvenile Justice and Delinquency Prevention (OJJDP) in the Department of Justice that would support State efforts to:*

- Engage in a planning and stakeholder consultation process to close youth prisons, repurpose closed youth prisons, and reinvest State resources from those facilities to support more effective and cost-efficient community-based alternatives; and
- Provide support for workforce development services for correctional staff who will need new employment upon facility closures.

I want to thank the subcommittee for its past funding of Federal juvenile justice programs and urge it to support this new initiative at OJJDP to support States in moving from costly and ineffective incarceration to more effective community-based alternatives that produce dramatically better outcomes for youth, their families, and their communities.

*The time for transforming juvenile justice is now and New Hampshire is ready.* We are a small State with under 2,000<sup>1</sup> children—less than 1 percent of an estimated 260,000 population under 18<sup>2</sup>—who are adjudicated delinquent at any given time of the year. Despite the small size of the population, there are disparities and children at risk. Children of color are just 16 percent of the State population but account for 37 percent of detention admissions, 22 percent of new probation cases, and at least 22 percent of out of home placements.<sup>3</sup> *Children with disabilities also are disproportionately represented with an estimated 65–70 percent having a diagnosed disability and 75 percent having experienced some form of trauma, which impacts healthy development.*

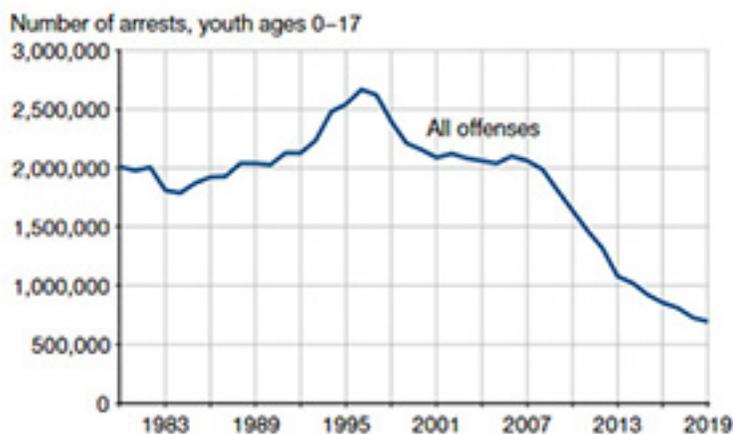
*With these outcomes in mind and armed with the latest science for practice improvement, New Hampshire is experiencing extraordinary progress in transforming juvenile justice services under a broad, bipartisan group of champions.* We are in the midst of implementing significant investments in a responsive and trauma-informed mental health system for children. We are transforming juvenile probation from a punitive and ineffective system to a child development-informed system that will emphasize positive youth development and incentivize pro-social behavior. *Moreover, the Granite State has succeeded in minimizing the number of detained or committed children through legislative actions increasingly limiting criteria for incarceration. The General Assembly has just passed a 2022–23 biennium budget that provides for the closure of our 144-bed children’s prison, currently housing 10–15 children, by March 2023.* This is promising progress in children’s best interest. New Hampshire has momentum. However, overall success will depend upon careful planning and assessment for community-based alternatives to intervene, rehabilitate, and prevent children from engaging in anti-social behavior. A promise to support staff in prison transition, not currently in the budget, would go far to keeping children safe until closure. *The requested \$100 million for a new Federal initiative at OJJDP would galvanize and support New Hampshire’s efforts to ensure a truly successful and just system.*

<sup>1</sup> <https://www.dhhs.nh.gov/dcyf/documents/dcyf-data-book-2020.pdf>

<sup>2</sup> <https://www.census.gov/quickfacts/NH>

<sup>3</sup> Division for Children, Youth and Families Probation Transformation Team, State of New Hampshire Department of Health and Human Services. 2021.

**After falling 67% since 2006, the number of juvenile arrests reached a new low in 2019**



*“The Decline in Arrests of Juveniles Continued Through 2019,” Statistical Briefing Book [ojjdp.gov/ojstatbb](http://ojjdp.gov/ojstatbb)*

Nationwide, from 2000 to 2018, the number of incarcerated youth fell by 65 percent, and juvenile justice facilities decreased by 50 percent. During this time youth crime also dropped. From 2006 to 2019, juvenile arrests for violent crimes fell by 50 percent, and from 2008 to 2019, juvenile arrests for property crimes fell by 73 percent.

Racial and ethnic disparities and incidents of abuse continue to plague these extremely expensive and ineffective prison environments. 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 percent of girls and 1.5 percent of boys in juvenile facilities but less than 1 percent of youth nationally.

Long term outcomes for incarcerated youth are poor and 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. Given these limitations, many prosecutors, youth correctional administrators and youth advocates now recommend the closure of youth prisons in favor of more effective community-based alternatives. However, there are many youth prisons still operating and taking up precious State resources, especially during this time of strapped State budgets. Federal funds would assist States in closing youth prisons and directing State and local resources to support more effective community-based alternatives.

Research shows that community-based alternatives perform far better than the youth prison model. The youth incarceration environment is incongruous with child development and trauma-informed care that relies upon stimulating, engaging, encouraging, and safe space for children’s intellectual capacity and resilience to develop. I will never forget the boy at the Sununu Youth Services Center who told me, “I feel my brain rotting in here.” He was right.

There are effective alternatives to youth incarceration. Community mentoring programs that link young people to trusted adults show strong results. In Pennsyl-

vania, Youth Advocates Program found that 97 percent of program participants were not convicted or adjudicated of a new offense while in the program, 85 percent were living safely in the community at discharge, and 76 percent 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 percent after 12 months. At the 24-month mark, it was still 57 percent lower. These results show that evidence-based alternatives delivered in the community can reduce recidivism.

*During the COVID-19 pandemic, incarceration has put youth at serious risk for illness, including long-term health impacts, and sometimes death.* While not specific to youth prisons, as of December 2020, the rate of people incarcerated in prisons who tested positive for COVID-19 was more than 4 times as high as the general population and in some States up to 8 times as high. It is likely that youth prisons have similarly high rates of COVID-19 infection, putting in jeopardy the health of young people and staff in those settings, as well as the health of their families and communities to which they return.

*Closing youth prisons both saves money and increases public safety.* The cost of youth incarceration is astronomically high, especially considering these poor outcomes. According to one recent study, the average cost of the most expensive confinement option for a young person in 48 States was \$588 per day, or \$214,620 per year. In New Hampshire, the Sununu Youth Services Center costs taxpayers \$12 million to \$15 million per year to accommodate 10-15 children on any given day. A Washington State Study showed that youth detention produced fewer benefits in reduced crime and other outcomes than many less costly programs. For example, spending \$1 for diversion and mentoring programs resulted in \$3.36 in benefits of reduced crime, while multisystemic therapy, a more service intensive alternative, produced \$13.36 in benefits.

*In 2016, Kansas decided to shift resources from youth prisons to community-based interventions, and this shift is expected to save \$72 million by 2022.* The State has invested savings in community-based programs. Georgia also instituted a similar plan in 2012 and estimated its savings over 5 years at \$85 million. It also avoided the significant cost of building two new juvenile facilities.

Such community-based alternatives, including mentoring programs, evidence-based therapies, and small, rehabilitative and home-like facilities for the very few young people who commit serious crimes cost much less than prison and are safer for youth and staff. New York City's investment in small, homelike facilities resulted in a 53 percent drop in youth arrests and a 68 percent reduction in youth placement. Using similar reforms, Texas decreased youth incarceration by 38 percent and further decreased youth arrests by 49 percent. After California's closure of youth prisons in 2016, youth arrests for violent crimes in the State fell to less than half what they were in 1990. These States have demonstrated that closing youth prisons both saves money and increases public safety.

*Americans nationwide support Federal funding to incentivize States to close youth prisons to capture resources to reinvest in more effective and cost-efficient community-based alternatives.* In a recent Youth First Initiative poll, 78 percent of adults endorsed the proposal to provide Federal funds for State planning and consultation with stakeholders to close youth prisons and invest savings to expand access to community-based alternatives and provide workforce development services to workers from closed facilities. At least 7 in 10 Democrats, Independents, and Republicans, and at least 7 in 10 Black, white, Hispanic, and Asian Americans endorsed these policies, demonstrating support across political affiliation as well as racial and ethnic groups.

Youth First Initiative polled residents in Maine and found that 85 percent of residents overwhelming favor a youth justice system focused on prevention and rehabilitation over punishment and incarceration. Additionally, 87 percent of Mainers support providing financial incentives for States to invest in alternatives to youth incarceration. Just recently, the Maine House and Senate passed legislation to close its only youth prison, Long Creek Youth Development Center. The legislation also requires that savings captured from the closure be used to create and support community-based programs in Maine.

At a time when our Nation is debating how to reduce the negative impacts of the justice system while still maintaining public safety, I urge you to support this proposal since it provides a winning strategy that would accomplish all of the key goals: reducing incarceration and its negative impacts on youth; reducing racial disparities; achieving cost efficiencies that produce more effective outcomes; and improving public safety.

Thank you so much for your time and consideration of these critical issues. Please do not hesitate to contact me or Jenny Collier at [jcollier@colliercollective.org](mailto:jcollier@colliercollective.org) if you have any questions or need additional information.

[This statement was submitted by Testimony by Moira O'Neill, PhD, The Child Advocate.]

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PREPARED STATEMENT OF NONPROFIT CIVIL AND HUMAN RIGHTS ADVOCACY AND  
RELIGIOUS ORGANIZATIONS

FUNDING TO THE DEPARTMENT OF JUSTICE FOR EFFORTS TO PREVENT, MEASURE, AND  
MITIGATE THE HARM DONE BY HATE CRIMES

June 22, 2021

The Hon. Jeanne Shaheen, Chair  
Commerce, Justice, Science  
Subcommittee  
Senate Appropriations Committee  
125 Hart Senate Office Building  
Washington, DC 20510

The Hon. Jerry Moran, Ranking Member  
Commerce, Justice, Science  
Subcommittee  
Senate Appropriations Committee  
142 Dirksen Senate Office Building  
Washington, DC 20510

DEAR CHAIR SHAHEEN, RANKING MEMBER MORAN, AND MEMBERS OF THE SUB-  
COMMITTEE:

As organizations that represent communities targeted by hate incidents ranging from vandalism and verbal harassment to life-threatening attacks, we write to urge you to increase funding in the fiscal year 2022 Commerce-Justice-Science appropriations bill for community-based non-profits that provide holistic education and support services to mitigate the harm hate causes; for grants that improve data about and understanding of hate; and for restorative justice research and Community Relations Service interventions that address the roots of hate-motivated violence.

Our recommendations are grounded in our alarm at increases in reports of hate crime, and in our conviction that to further racial justice we must ensure that government agencies and nongovernmental organizations work together to support, validate, and vindicate each person and community at risk of being targeted because of race, national origin, religion, gender, gender identity, sexual orientation, or disability. As you know, in spite of declining law enforcement agency participation, the FBI's Hate Crime Statistics Act reports have documented year-to-year growth in the number of recorded hate crimes in recent years, culminating in the most deadly year on record in 2019, in which at least 51 people lost their lives in bias-motivated attacks. Anecdotal data captured by community-based organizations and surveys that ask Americans about their subjective experiences indicate that hate crime is a far more widespread and devastating phenomenon than even the FBI's report demonstrates. Behind each victim is an entire community of people who share the characteristics for which the person was attacked, and who experience the fear and instability that these acts cause.

Mitigating and preventing the enormous harm that bias-motivated violence does is necessary if we are to dismantle deep systemic inequities that have impeded our growth and achievement throughout American history. Moreover, at a time when our differences and conflicts threaten our ability to collaborate with one another to sustain democratic governance and protect public health, it is as important as ever that we stand up to hate and create an environment in which all of us are equally safe and empowered to thrive. We urge you to further these crucial efforts by adopting the following appropriations provisions and report language.

*Increase Funding for Community-Based Anti-Hate Work*

When hate incidents occur, the people, institutions, and communities that are affected often turn first for assistance and support to familiar and trusted organizations that work outside the criminal justice system to provide legal advice and defense, culturally-appropriate medical and mental health care, and other complementary services such as anti-bias education and help with basic needs. Strong indicators of the important role that community-based nonprofits play in documenting, countering and mitigating hate include the significant volume of hate incidents reported directly to organizations and associations such as Stop AAPI Hate, the Southern Poverty Law Center, and the Anti-Defamation League, and the proliferation in recent years of programs and partnerships that aim to call out, and accel-

erate the fight against, hate, such as the Lawyers Committee for Civil Rights Under Law's James Byrd Jr. Center to Stop Hate. The Federal Government's investments in preventing and supporting healing from hate crimes must reflect the unique and indispensable role of non-government actors through a movement toward greater parity in distribution of funding to both community-based and government-run institutions. Therefore, we urge you to adopt the following report language:

“Department of Justice—Office of Justice Programs—‘COMMUNITY SUPPORT FOR VICTIMS OF HATE CRIME.—The Committee recognizes that individuals and communities that perpetrators of hate crimes target are frequently the same individuals and communities that have been historically discriminated against and overrepresented among those investigated, arrested, convicted and incarcerated by law enforcement officials. Hate crime victims include noncitizens and people with immigrant family members who may fear immigration enforcement-related consequences of contact with law enforcement. For these and other reasons, communities affected by hate crime have called for increased investment in community-based social support and advocacy for victims as a necessary complement to law enforcement involvement in preventing and responding to hate crime. Accordingly, the Committee directs the agency to prioritize grants from programs for which institutions of higher education, museums, and nongovernmental nonprofit organizations are eligible to those applicants that are institutions of higher education, museums, and nonprofit organizations that propose to use funding to provide services that reduce the risk of hate crime or to provide legal, material, social, and other support to people and institutions affected by hate crimes. The agency should consider grant programs including but not limited to the Antiterrorism and Emergency Assistance Program, the Byrne Criminal Justice Innovation Program, Research and Evaluation on Domestic Terrorism Prevention, and Research and Evaluation of Services for Victims of Crime.’”

*Fund Improvements in Hate Crime Statistics*

A more complete understanding of where, when, and against whom hate crimes occur is a necessary component of an effective and coordinated campaign to eradicate this scourge. In the nearly 30 years during which the FBI has compiled data pursuant to the Hate Crime Statistics Act, however, DOJ has yet to produce information that paints an accurate and comprehensive picture of hate crime. Multiple factors contribute to deficits in our knowledge about this phenomenon, including victimized communities' distrust and avoidance of law enforcement agencies; lack of training for officers in recognizing and investigating bias motivations; and frontline agencies' limited capacity to maintain and share records with DOJ combined with the lack of a reporting mandate. Congress can and must support stakeholders in overcoming these challenges by providing funding for data improvement programs authorized by the Jabara-Heyer NO HATE Act. To implement this priority legislation, we urge you to provide total funding of at least \$15 million in the Commerce-Justice-Science Appropriations bill for grant programs to State, local, and Tribal law enforcement agencies to implement the National Incident-Based Reporting System, to create State-run hate crime reporting hotlines, and to conduct training and develop protocols for identifying, analyzing, investigating and reporting hate crimes. In addition, we urge you to adopt the following corresponding report language:

“DOJ—State and Local Law Enforcement Assistance: ‘HATE CRIME STATISTICS REPORTING IMPROVEMENT.—The Committee is concerned that more than two thousand law enforcement agencies did not participate in the FBI's most recent compilation of statistics about hate crimes, including 10 agencies serving cities with populations greater than 100,000. In addition, underreporting of hate crime by participating agencies leads to an exponential gap between the number of hate crimes victims report experiencing in the National Crime Victimization Survey, and the number of hate crimes recognized and reported by law enforcement. Missing reports impair the ability of public safety officers and civil society to prevent and respond to hate crime. The Committee looks forward to receiving the report required in Sec. 5(g) of the COVID-19 Hate Crimes Act, Public Law 117-13, and to obtaining a better understanding of ways that DOJ can support law enforcement agencies in strengthening hate crime data collection and reporting, and more effectively meeting the needs of communities affected by hate crime.’”

*Increase Support for Eliminating Hate by Ramping Up Peacebuilding and Advancing Restorative Justice*

To secure a nation free from the fear and division that hate incidents cause, DOJ and other stakeholders must further develop ability and capacity to challenge the prejudices that lead to attacks. Within the agency, this work should start with and

be led by an empowered and better-resourced Community Relations Service. This body's efforts are symbolically important and practically effective. As Liz Hume and Theo Sittler of the Alliance for Peacebuilding wrote in *The Hill* on March 17, 2021, "CRS has brokered agreements that have resolved underlying systems of injustice and division in communities experiencing high levels of conflict." Recognizing that CRS's interventions save lives and preserve community cohesion, we urge you to take its work to scale and increase CRS's annual funding to \$40 million to meet expanding demand resulting in part from COVID-19-related hate crimes targeting AAPI individuals and institutions, and from accelerating hate incidents inspired by international affairs that have targeted Jews, Muslims, and members of other faith-based and immigrant communities. We recommend adoption of the following report language in support of CRS's work:

"DOJ—Salaries and Expenses, Community Relations Service: 'COMMUNITY RELATIONS SERVICE.—The Committee recommends \$40,000,000 for the Community Relations Service (CRS). CRS has a unique and important role to play in complementing the Justice Department's law enforcement activities, particularly when those activities involve members of vulnerable and marginalized communities. CRS is charged with pursuing justice and reconciliation throughout all of the States and territories, by engaging crime victims, government agencies, civil rights groups, and community leaders in healing and conflict resolution. CRS concentrates on developing mutual understanding in communities most challenged by tension and helps them develop local capacity and tools to prevent hate crimes from reoccurring. The Committee expects these efforts to expand, and CRS's services to be offered in more communities, in Fiscal Year 2022.'"

Moreover, we implore you to acknowledge that members of communities targeted by perpetrators of hate crimes have themselves suffered from disproportionate surveillance and criminalization by the criminal justice infrastructure. As a result, many fear that punitive anti-hate crime policies are likely to be misused against marginalized communities, and question whether traditional punishment is the best possible means of redressing hate crime in a way that challenges offenders' beliefs and gives pause to others who may express or act on hate. Instead, alternatives to carceral sentencing, which might include educational and community service requirements or moderated conciliation and dispute resolution sessions, hold promise as a means of advancing stakeholders' interests and helping victims heal and regain confidence. Further study is needed to determine which interventions have a successful track record or have shown promise in experimentation, so we hope that you will reserve at least \$5 million of the funding provided to the Office of Justice Programs for Research, Evaluation, and Statistics for evaluation and development of restorative justice programming, and adopt the following report language:

"Research, Evaluation and Statistics: 'RESTORATIVE JUSTICE RESEARCH.—The Committee recognizes that many members of communities targeted by hate crimes have also been disproportionately negatively affected by a criminal justice system suffused with institutional racism and prejudice against other minority communities. As a result, a number of victims of hate crimes advocate responses to bias-motivated attacks that do not involve only or primarily carceral or punitive measures. The Committee notes the dearth of studies that evaluate the effectiveness of restorative justice alternatives to criminal punishment for commission of a hate crime, and directs the Department to fund and conduct research that can inform the adoption of sentencing alternatives that best serve hate crime victims' needs. The Department is encouraged to partner with academic institutions to evaluate the effectiveness of existing programs that employ conciliation, education, and other interventions to disrupt the malign beliefs of people convicted of hate crimes'"

We appreciate your consideration of these requests and look forward to working with you to ensure that fiscal year 2022 appropriations advance the fight against hate in ways that best serve the needs of communities that are targeted because of members' race, ethnicity, national origin, religion, gender, sexual orientation, gender identity, and disability. If you have questions about these recommendations or seek additional information, please contact Erin Hustings at [ehustings@adl.org](mailto:ehustings@adl.org) and 202-316-3086.

Sincerely,

ACCESS (Arab Community Center for  
Economic and Social Services)  
Act To Change  
American Jewish Congress

Anti-Defamation League  
B'nai B'rith International  
Interfaith Alliance  
Japanese American Citizens League

Jewish Council for Public Affairs  
 Matthew Shepard Foundation  
 National Council of Jewish Women  
 Not In Our Town  
 Rabbinical Assembly

Sikh Coalition  
 UnidosUS  
 Union for Reform Judaism  
 UNITED SIKHS

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PREPARED STATEMENT OF NONPROFIT VOTER ASSISTANCE, CIVIL RIGHTS, AND  
 RELIGIOUS ORGANIZATIONS

June 18, 2021

The Hon. Jeanne Shaheen, *Chair*  
 Commerce, Justice, Science  
 Subcommittee  
 Senate Appropriations Committee  
 125 Hart Senate Office Building  
 Washington, DC 20510

The Hon. Jerry Moran, *Ranking Member*  
 Commerce, Justice, Science  
 Subcommittee  
 Senate Appropriations Committee  
 142 Dirksen Senate Office Building  
 Washington, DC 20510

DEPARTMENT OF JUSTICE'S VOTING SECTION

DEAR CHAIR SHAHEEN, RANKING MEMBER MORAN, AND MEMBERS OF THE SUB-  
 COMMITTEE:

The undersigned organizations write to strongly urge you to designate increased funding for DOJ's Civil Rights Division for the addition of positions in the Voting Section to enforce the Voting Rights Act's protections against discrimination in elections. As advocates for full and equal participation in American democracy, we are alarmed by the accelerating adoption of State and local policies that make voting disproportionately more difficult for members of communities that have historically been the subject of blatant and targeted disenfranchisement efforts. There is no other entity that can as ably represent the interests of voters of color and voters from language minority communities with the authority, expertise, and deep resources available to DOJ, and so we call on Members of Congress to ensure that the agency has what it needs to rise to the present challenge and preserve the broad access to the ballot that our foundational civil rights laws promise.

Before, during, and after the 2020 Presidential Election, disinformation about threats to election security and integrity spread widely, and in significant part due to some public figures' repeated critiques of procedures that are normal and familiar, such as mail voting, and of extraordinary measures undertaken to avoid COVID-19-related perils, including proactive mailing of mail ballot applications and expansion of early voting hours and periods. Election administrators, Federal and international experts at agencies like the Department of Homeland Security's Cybersecurity and Infrastructure Security Agency, and independent audits of paper records of votes cast have all affirmed that election results were valid and no significant or widespread fraud or irregularities occurred. Nonetheless, according to the Brennan Center for Justice, as of April 1, 2021, State lawmakers had introduced 361 bills that would restrict access to the ballot in 47 States' 2021 legislative sessions.

These measures take direct aim at aspects of the voting process that disproportionately affect voters of color and language minority voters, and preserving equal access to elections in 2021 and beyond will depend upon the strength and readiness of the most capable and expert voting rights prosecutor in the Nation, the Civil Rights Division's Voting Section. For example, Georgia recently signed into law a bill that expands voter identification requirements, which Black, Latino, Native American, and other voters of color are disproportionately likely to be unable to meet and to perceive as a barrier to voting; the bill also makes it a crime to approach voters waiting in line to give them food or water, and restricts the use of ballot drop boxes for mail voters. Iowa enacted a bill that shortens the State's early voting period and polling place hours, and restricts the use of satellite voting sites, all flexibilities that have proven particularly important to the State's growing population of young Latino voters, according to LULAC Iowa Political Director Joe Henry. Utah adopted a change that streamlines the process for cancelling voter registration records based on a voter's apparent death, opening the door to striking living people who share names with deceased individuals from voter rolls without notice. Such a policy is very likely to harm historically marginalized voters, who are

statistically more likely to share the same surnames, and to be mistakenly removed from registration lists, than are white voters.

DOJ's Voting Section requires expanded capacity to respond to the States and localities that already have and are poised to follow suit, as well as to monitor, evaluate, and enforce anti-discrimination standards in the post-2020 Census redistricting process that will soon begin in virtually every State and municipality in the Nation. As you know, the redistricting cycle that approaches will be the first to occur in the absence of the protective mechanisms of the Voting Rights Act's fully-functional preclearance process. As a result, the Voting Section will not receive explanation and analysis of new district maps from jurisdictions with long histories of acting deliberately to limit marginalized voters' opportunity to elect representatives of their choice, and will instead have to exponentially increase its own original review of as many as hundreds, or thousands, of new plans. It cannot afford to reduce its efforts to identify and challenge discriminatory redistricting, knowing that the process of redrawing districts has uniformly been infected with intentional bias and produced inequitable results when left to its own devices. In the last two cycles of redistricting during which the Voting Rights Act was in full effect alone, DOJ objected at least 42 times to implementation of redistricting plans that would have disproportionately diminished the influence of voters of color and language minority voters.

As we consider the work before the Voting Section, we are also mindful of the need for more capacity to ensure the effective implementation of Section 203 of the Voting Rights Act after new coverage determinations are published in calendar year 2021. In light of the continued growth of language minority communities, we anticipate the extension of obligations to conduct elections in multiple languages to additional jurisdictions, and along with it, an increase in demand for DOJ's technical assistance and oversight. In our experience, newly-covered municipalities in particular often struggle to understand and comply with requirements such as recruitment and training of multilingual pollworkers, education of monolingual pollworkers about the rights of voters who are not fully fluent in English, and customized translation of not only ballots and instructions but also key assets such as websites and polling place signage. The volume of the Voting Section's historical language assistance enforcement actions also attests to the frequency with which election administrators and elected officials experience challenges and require added assistance or pressure, or both, to provide the materials and interpretation that the law requires.

Taking into consideration these acute needs, we urge you to provide at least \$5 million in additional funding for General Legal Activities at DOJ, and to designate the increase for the purpose of adding positions in the Voting Section dedicated to Voting Rights Act enforcement. We also ask that you adopt the following explanatory report language:

DOJ—Salaries and Expenses, General Legal Activities: "VOTING RIGHTS ACT ENFORCEMENT.—The Committee is concerned that multiple factors including the effects of the Supreme Court's decision in *Shelby County v. Holder*; the increasing proposal and adoption of discriminatory restrictive State and local voting policies following the 2020 Presidential Election; and ongoing need for negotiation of agreements that ensure compliance with Section 203 of the Voting Rights Act (VRA) will require the Voting Section of the Civil Rights Division to undertake an increased caseload of resource-intensive litigation to meet its responsibility under the Voting Rights Act to ensure equal access to elections regardless of race, ethnicity, and linguistic ability. The Committee recommends an increase of not less than \$5,000,000 for additional expenses relating to the enforcement of Sections 2, 4(e), 5, 10, 11, 203, and 208 of the VRA (52 U.S.C. §§ 10301–10311; 10503–10505; 10508)."

We appreciate your consideration of these recommendations, and encourage you to contact Erin Hustings at [ehustings@adl.org](mailto:ehustings@adl.org) and 202–316–3086 if we may provide any additional information.

Sincerely,

American Association of People with  
Disabilities  
Anti-Defamation League  
Asian American Legal Defense and  
Education Fund (AALDEF)  
Asian and Pacific Islander American  
Vote  
Autistic Self Advocacy Network

The Brennan Center for Justice at NYU  
School of Law  
Center for Common Ground  
Coalition on Human Needs  
Common Cause  
Congregation of Our Lady of Charity of  
the Good Shepherd, U.S. Provinces  
Democracy North Carolina  
Demos

End Citizens United/Let America Vote Action Fund	National Coalition on Accessible Voting
Fair Elections Center	The National Coalition on Black Civic Participation
Faith in Public Life	National Council of Jewish Women
Faith in Public Life Action Fund	National Council on Independent Living
Franciscan Action Network	National Urban League
Government Accountability Project	NETWORK Lobby for Catholic Social Justice
Human Rights Campaign	Ohio Voter Rights Coalition
Lawyers for Good Government (LAGG)	People for the American Way
Leadership Conference of Women Religious	Rock the Vote
League of Women Voters of the United States	SPLC Action Fund
Missouri Voter Protection Coalition	State Voices
National Action Network (NAN)	Texas Progressive Action Network
National Advocacy Center of the Sisters of the Good Shepherd	UFCW International Union
National Association of Councils on Developmental Disabilities	UnidosUS
NALEO Educational Fund	Union for Reform Judaism
	Unitarian Universalists for Social Justice

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PREPARED STATEMENT OF THE NORTHWEST INDIAN FISHERIES COMMISSION

NATIONAL OCEANIC & ATMOSPHERIC ADMINISTRATION

Chair Shaheen, Ranking Member Moran and Honorable Members of the subcommittee, my name is Lorraine Loomis 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 resources and fishery management program funding requests for the National Oceanic & Atmospheric Administration (NOAA)/National Marine Fisheries Service (NMFS) Fiscal Year 2022 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. In light of the past year's extreme difficulties, it is now more important than ever that the Federal trustee support management, supplementation, and restoration of fisheries—paramount to the Tribes physical, cultural and economic wellbeing, as well as an important link in our Nation's food supply chain.

SUMMARY OF FISCAL YEAR 2022 APPROPRIATIONS REQUESTS

- \$70.0 million plus for NOAA Pacific Coastal Salmon Recovery Fund
- \$7.0 million for NOAA Hatchery Genetic Management Plans
- \$43.5 million for NOAA Pacific Salmon Treaty
- \$26.5 million for NOAA Mitchell Act Hatchery Programs
- Continued Support for NOAA Fisheries Disaster Assistance Program

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 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 fiscal year 2002 levels (\$110.0 million)

We respectfully request, at a minimum, \$70.0 million for PCSRF, an increase of \$5.0 million over the fiscal year 2021 enacted level. It is worth noting that this re-

quest is a significant departure from the PCSRF peak level of \$110.0 million in fiscal year 2002 or subsequent years in which budget authority was maintained upwards of \$80.0 million through fiscal year 2011. We ultimately would like to see PCSRF funding fully restored to fiscal year 2002 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.

The PCSRF is a multi-State, multi-Tribe program established by Congress in fiscal year 2000 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 in an effort 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 of fish abundance, which is then used to forecast adult returns and subsequently develop annual harvest rates that achieve conservation objectives and provide for Tribal and non-Tribal harvest opportunities. Since its inception, PCSRF has been the primary salmon recovery response. This has resulted in the restoration and protection of over 1.1 million acres of spawning and rearing habitat and re-established salmon access to more than 11,980 miles of previously inaccessible streams in our region.

*—Provide \$7.0 million for NOAA Hatchery Genetic Management Plans (within Pacific Salmon), including \$2.0 million for implementation*

We respectfully request \$7.0 million to expedite NMFS's review and approval of the backlog of western Washington Hatchery Genetic Management Plans (HGMPs) and, at a minimum, \$2.0 million of that funding directed toward implementation of those plans that are now approved. We recommend that the Pacific Salmon line be funded at no less than \$69.0 million, which is \$2.0 million above fiscal year 2021 enacted level of \$67.0 million to accommodate these requests, while ensuring maintenance of existing programs under this line. We also request an explanatory statement clarifying that program funding may be used to pass-through to, or contract with Tribes to implement those plans that are already approved. Review and approval of HGMPs is necessary to provide hatcheries with 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. 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 to implement the plans' recommendations, which both the Federal Government and Tribes have extensively invested in.

*—Provide \$43.5 million to implement the National commitments in the renegotiated Pacific Salmon Treaty agreements (within NOAA Salmon Management Activities)*

We support the Pacific Salmon Commission (PSC) U.S. Section's fiscal year 2022 request of \$43.5 million within Salmon Management Activities, an increase of \$4.0 million over the fiscal year 2021 enacted level of \$39.5 million. This line item includes annual operational costs of \$5,850,000 for Sound Science, \$13,460,000 for hatchery conservation programs and habitat restoration for Puget Sound critical stocks and \$5,540,000 to increase prey availability for southern resident killer whales.

The fiscal year 2022 request would support implementation of the National commitments in the recently renegotiated Pacific Salmon Treaty (PST) Annex Chapters. The recommended funding also helps meet the requirements of the biological opinion for listed species and supports effective, science-based implementation of negotiated salmon fishing arrangements and abundance-based management approaches

for Chinook, southern Coho, and Northern Boundary and Transboundary River salmon fisheries.

Adult salmon returning to most western Washington streams migrate through U.S. and Canadian waters and are harvested by fishers from both countries. For years, there were no restrictions on the interception of returning salmon by fishers of neighboring countries. Eventually, the U.S. and Canada agreed to cooperate on the management of salmon by developing and ratifying the PST in 1985. The PSC was created to implement the PST and is responsible for developing management recommendations and assessing compliance with the treaty. Negotiations to revise the provisions of the Annex Chapters were successfully completed in 2018 and 2019. These chapters contain the specifics for implementing the treaty for each species in each geographic area. These revised chapters represent the combined efforts of the participants to ensure healthy salmon populations for the next 10 years, and as such include commitments from the U.S. to improve current management strategies.

*—Provide \$26.5 million for NOAA Mitchell Act Hatchery Programs (within Salmon Management Activities)*

We respectfully request \$26.5 million for the Mitchell Act Hatchery Programs, an increase of \$4.5 million over the fiscal year 2021 enacted level of \$22.0 million. The request for this additional increase in Mitchell Act funds is to ensure that mitigation hatcheries operate at full production level to meet Federal obligations. This program is funded through the Salmon Management Activities subactivity.

Mitchell Act hatchery production is intended to mitigate for fish and habitat loss caused by the Federal hydropower dam system on the Columbia River. Funding for these programs supports the operation and maintenance of hatcheries that release around 40 million juvenile salmon and steelhead in Oregon and Washington. 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.

*—Continue to support the NOAA Fisheries Disaster Assistance Program with Annual Funding*

We respectfully request Congress's continued support of the Fisheries Disaster Assistance Program. This program was not funded in fiscal year 2020 and fiscal year 2021 annual appropriations. However, the program received \$15.0 million in fiscal year 2019 and \$20.0 million in fiscal year 2018. This funding is necessary to implement the Department of Commerce's declarations of Tribal fisheries disasters. Unfortunately, these disasters are becoming more frequent in light of a variety of natural and manmade circumstances beyond the control of Tribal fishery managers, which have led to severely depressed stocks and/or limited access to fisheries. Our member Tribes are currently waiting on requested determinations from the Secretary of Commerce as a result of numerous disasters in 2019 and earlier.

Lack of access to fisheries in 2020 due to the COVID-19 pandemic has only exacerbated the economic threats to Tribal fishing fleets. CARES Act and other COVID relief funding for fishery participant assistance has only covered a fraction of the Tribes' economic impacts and is not sufficient to maintain Tribal fishing fleets and food security during these difficult times. Forthcoming disasters could prove to be the tipping point if assistance is not readily on hand to support fisheries. Because of the seasonal nature of fishing, a single disaster can have significant impacts on annual revenues forcing fishers to drop out of the sector, and therefore sometimes lead to diminished fishing fleets. Under the current circumstances, Tribes are facing repeated disasters that are devastating to Tribal economies and cultures. Therefore, an ongoing, annually funded Fisheries Disaster Assistance Program is a much-needed stop gap measure to prevent the collapse of this important economic sector during difficult times. Providing timely fishery assistance shouldn't be solely based upon the passage of disaster relief legislation, but rather it should be programmatically funded and on hand to allow NOAA to rapidly respond.

#### 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 aforementioned 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 economies for both Indian and non-Indian communities alike. Thank you.

[This statement was submitted by Lorraine Loomis, Chairperson.]

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PREPARED STATEMENT OF THE OCEAN CONSERVANCY

FISCAL YEAR 2022 APPROPRIATIONS FOR THE NATIONAL OCEANIC AND ATMOSPHERIC  
ADMINISTRATION

Thank you for this opportunity to provide Ocean Conservancy's Fiscal Year 2022 (FY 2022) funding recommendations for the National Oceanic and Atmospheric Administration (NOAA). Ocean Conservancy has worked for 50 years to address threats to the ocean through science-based, practical policies that protect our ocean and improve our lives.

We greatly appreciate the subcommittee's efforts to ensure a positive outcome for NOAA in the fiscal year 2021 omnibus, which made important investments in NOAA programs, including the National Marine Fisheries Service, the Marine Debris Program, and the Regional Ocean Data Portals.

The Biden administration's proposed budget makes historic investments in NOAA, providing a \$1.4 billion increase in agency funding, including an additional \$800 million to expand climate-related services and a \$500 million increase for satellites and forecasting technologies. We support President Biden's request for NOAA and urge Congress to appropriate at least this level of funding for the agency.

NOAA's mission to understand, protect, restore, and manage our ocean, coasts, and Great Lakes is vitally important as we mitigate and adapt to the impacts of climate change and responsibly build our blue economy. Our ocean and coastal communities are at the frontlines of climate change. Many of these communities—particularly those whose residents are black, indigenous, and people of color—have disproportionately experienced these impacts over the course of history. Sea level rise, coastal flooding, ocean acidification, and increased ocean temperatures are all impacting our coastal residents and their ability to safely work and enjoy our ocean and coasts. These impacts are also affecting our marine species, from fish to whales and sea turtles, as well as the habitat they rely upon. Robust funding is needed to continue to understand the impacts of climate change and provide resources for local communities to better adapt and mitigate changes in our ocean and coast.

The U.S. blue economy contributes \$373 billion annually to the Nation's GDP and supports 2.3 million jobs, with nearly half of that impact coming from tourism, recreation and fisheries. A healthy and resilient ocean is vital to maintain and grow our coastal economies and communities. As climate change, however, causes sea levels to rise, altering our coasts and significantly damaging our infrastructure, and as marine species leave their historic grounds, we risk losing these substantial drivers of our coastal economy.

Some of NOAA's most successful programs work to provide resources and decision-making authority to regions, States, and local communities to ensure a bottom up approach to solving the issues these communities face today. NOAA is providing leverage for hardworking people on the coast and on the water who are building resilience to climate change and fighting for a stronger blue economy through region-by-region fishery management, region-specific programs, extramural funding that supports State agencies and universities, place-based conservation in our estuaries and oceans, and more.

As you craft the fiscal year 2022 spending bills, we ask that you consider the balance between NOAA's oceanic and atmospheric missions and the nexus between the two. Americans should not have to choose between weather forecasts and ocean and coastal resources like fisheries, coral reefs and marine mammals. Frequently, these aspects of NOAA's mission interact with each other, as well as other agencies, to enhance the outcome of their mission. For example, ocean observations and monitoring provide critical information for climate monitoring, severe storm tracking and weather forecasting. Ocean programs also facilitate homeland security and national defense functions, including U.S. Navy operations and U.S. Coast Guard search and rescue missions.

We offer the following recommended funding levels and justifications for certain critical NOAA programs and activities.

Account, Program or Activity	Fiscal Year 2021 Enacted	Fiscal Year 2022 Recommendation
Operations Research and Facilities		
National Ocean Service:		
Coastal Science, Assessment, Response and Restoration: Marine Debris.	\$9 m .....	\$18 m
Coastal Zone Management and Services: Regional Ocean Data Portals.	\$2.5 m .....	\$10 m
National Marine Sanctuaries .....	\$56.5 m .....	\$84.5 m
National Estuarine Research Reserves	\$28.5 m .....	\$42.5 m
IOOS Regional Observations .....	\$40.5 m .....	\$69.5 m
National Marine Fisheries Service .....	\$964.862 m .....	\$1,197 m
Fisheries Science and Management: Fisheries Data Collections, Surveys and Assessments.	\$175.927 m .....	\$206 m
Fisheries Science and Management: Fisheries and Ecosystem Science Programs and Services.	\$146.927 m .....	\$170.6 m
Regional Councils and Fisheries Commissions.	\$41.500 m .....	\$45.650 m
Office of Oceanic and Atmospheric Research		
Integrated Ocean Acidification .....	\$15.5 m .....	\$22 m
National Sea Grant College Program ....	\$75 m for Sea Grant and \$13 m for aquaculture.	\$130.6 m total, with \$115.6 m for the National Sea Grant College Program and \$15 m for Sea Grant Aquaculture.

*Marine Debris—\$18 million*

Marine debris, particularly plastic waste pollution, is one of the biggest pollution problems threatening the world's oceans and waterways. An estimated 150 million metric tons of plastic waste are in the ocean today, and every year an estimated 8 million metric tons more are being added. Without immediate intervention, 250 million metric tons of plastic waste could be in the ocean in fewer than 10 years. Marine debris has serious effects on the marine environment and the economy. It impacts wildlife through entanglement, ingestion and ghost fishing and also impacts marine transportation, causing navigational hazards and vessel damage. In 2018, Congress reauthorized NOAA's Marine Debris Program via the Save Our Seas Act, which enjoyed broad bipartisan support in both chambers. In 2020, Congress again reauthorized NOAA's Marine Debris Program through the bipartisan Save Our Seas Act 2.0, which increased the responsibilities of the Marine Debris Program. We request \$18 million for the program, consistent with the President's budget, to allow the agency to meet the current challenge of marine debris.

*Regional Ocean Data Portals—\$10 Million*

Regional Ocean Data Portals are publicly available online tools that disseminate maps, data, and information to inform decisions and enhance entrepreneurial opportunities. They are managed by Regional Ocean Partnerships, which provide inter-agency engagement with States, Tribes, localities, and Federal agencies to collaborate on cross-jurisdictional ocean and coastal matters. These partnerships also coordinate and engage ocean and coastal stakeholders, including academia, non-governmental organizations, and industry. Regions are sufficiently underfunded to address the most pressing management and data integration challenges, and Federal funding is currently split among the four Regional Ocean Partnerships and their nine functional equivalents, which totals nine regions. Appropriating \$10 million would provide a necessary boost that will allow regions to better address ocean and coastal management needs.

*National Marine Fisheries Service—\$1.197 Billion*

Fisheries are an important part of our Nation: fishing feeds us, supports coastal communities, connects us to the ocean and sustains vibrant cultures. Fish and the fisheries they support, however, are experiencing the impacts of climate change. Rapidly changing ocean conditions are disrupting where fish are found, what they can eat, where they can live, and how many fish there are. There is an urgent need

to move towards climate-ready fisheries—fisheries that prioritize sustainability, resilience and equity in the context of rapid changes and increased uncertainty associated with climate change. There is a clear path forward: the agency must work to accelerate research on climate change impacts to fisheries, increase the adoption of proven tools and approaches for managing with change, and take steps to provide information and analysis that can help managers incorporate this understanding into decision-making. This requires investments to be made across programs at NMFS to ready our fisheries for climate change. Programs such as the Integrated Ecosystem Assessment and others work to better understand how changes are affecting marine resources and develop products to enhance the scientific advice provided to managers. Additional funding could enable more engagement by NMFS with the Fishery Management Councils and greater ability to enact climate-ready management. To manage for the impacts of climate change on our fisheries, we request \$1.197 billion for NMFS, consistent with the President's budget.

*Integrated Ocean Acidification—\$22 million*

The Integrated Ocean Acidification line item funds NOAA's ocean acidification program (OAP), which was established and mandated by the Federal Ocean Acidification Research and Monitoring (FOARAM) Act of 2009. Ocean acidification (OA) is the rise in acidity of the earth's ocean caused by uptake of carbon dioxide from the atmosphere. This rising acidity makes it harder for shell-forming species such as oysters and crabs to grow, and fundamentally alters many other processes (e.g., reproduction, risk avoidance) necessary for healthy ecosystems and the coastal industries that depend on them. Prior Federal investments in OAP have greatly expanded our knowledge of ocean acidification and its risks to coastal communities and industries, but current funding levels are not at the scale needed to understand this global problem and its impacts. We request \$22 million for this program.

*Marine Operations and Maintenance*

Marine operations and maintenance should be funded at \$193.9 million, consistent with the President's budget. Days at sea funded by this line are functionally tied to fishery stock assessments, and the two programs must be viewed together.

Thank you again for the opportunity to provide this testimony in support of robust funding for NOAA.

[This statement was submitted by Reggie Paros, Director, Government Relations.]

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PREPARED STATEMENT OF OPENSECRETS

Dear Chairman Shaheen, Ranking Member Moran, and distinguished Members of the Senate Appropriations subcommittee on Commerce, Justice and Science, and Related Agencies.

Thank you for the opportunity to submit written testimony before the Committee to discuss fiscal year 2022 budget priorities regarding the modernization of the Foreign Agents Registration Act (FARA), a statute intended to inform the American public of foreign influence and lobbying operations attempting to impact U.S. policy or public opinion.

This written testimony is respectfully offered on behalf of OpenSecrets to the Committee for use during its consideration of Department of Justice funding and for inclusion in the official committee record.

OpenSecrets is a nonpartisan nonprofit research organization tracking money in U.S. politics and its effect on elections and public policy. Our vision is for Americans across the ideological spectrum to be empowered by access to clear and unbiased information about money's role in the U.S. political system and to use that knowledge to strengthen our democracy.

Activities of foreign agents and lobbyists divulged under FARA are a subject of sustained public interest. In this testimony, we respectfully request that the Committee include report language directing a review of the U.S. Department of Justice's implementation of FARA and a comprehensive audit of the use of the Lobbying Disclosure Act (LDA) exemption that will both be publicly accessible.

A publicly-accessible report to Congress is necessary to evaluate the feasibility and steps needed to require all filings by foreign agents to be made in an electronic, machine-processable electronic format yielding structured data. This would allow users to search and sort or download FARA data, ensuring the same level of accountability from lobbyists representing foreign interests as domestic ones.

Despite recommendations from the Department's Inspector General and outside experts, the Justice Department has been slow to implement changes to improve the

public's access to information about foreign influence and lobbying intended to impact U.S. policy or public opinion.

In September 2019, the Department of Justice launched new features enabling registrants to submit data through a web-form yielding some standardized data. While we believe this is a step in the right direction, only initial registrations are required to be submitted this way, so information reported in some of the most important records such as semi-annual supplemental statements may remain trapped in less accessible formats.

Continuing implementation of a modernized FARA reporting system that collects detailed structured data would provide the tools necessary for better oversight and ensure information about foreign influence is provided in an accurate, complete, and timely manner.

Using web-forms or submitting data in other structured formats across the board would allow the government to provide this information in an accessible form with little or no additional burden. FARA reporting is already conducted through an e-filing system that requires a web browser unless a registrant demonstrates limited access to the internet. Modernizing FARA's e-filing system can ultimately help ease the administrative burden associated with FARA registration.

The current system requires FARA filers to electronically submit information in most forms, including semi-annual supplemental statements that contain activities and receipts, using images or PDFs even though many of the records are originally produced in electronic formats such as CSV files. Image and PDF formatted files destroy critical aspects of the data included in the original formats and cannot be marked for sensitive information or used for automated calculations. Essential information about foreign lobbying activities remains locked away in hard-to-digest image files that complicate the process of publishing FARA information in a machine-readable format. Even the basic disclosure of how much money foreign actors spend to influence U.S. policy and public opinion is obscured, leaving the American public in the dark about how our laws are shaped and influenced.

FARA also has a number of exemptions that can be misunderstood or exploited.

One commonly used exemption enables some foreign agents to claim an exemption from FARA registration and disclosure rules if they register as lobbyists under the LDA, a disclosure statute designed to regulate the activities of domestic lobbyists.

Any individuals lobbying on behalf of a foreign commercial interest, rather than a foreign government or political party, may evade FARA disclosure requirements by merely registering under the LDA.

Domestic lobbying records are already required to be filed to Congress electronically and are immediately converted to structured data that are available to the public over the Internet. More parity between disclosure requirements under the LDA and FARA is necessary to ensure at least the same level of transparency from lobbyists representing foreign interests as domestic ones.

We respectfully urge the Committee to direct the Comptroller General of the United States, in consultation with the Inspector General of the Department of Justice, to conduct a comprehensive audit of the use of the LDA exemption examining (1) whether the LDA exemption has contributed to a decline in the number of registrations under FARA; (2) whether the LDA exemption has contributed to a lack of public awareness of lobbying activities on behalf of foreign entities; (3) the impact and feasibility of phasing out the LDA exemption; and (4) how to develop policy recommendations for increasing compliance with Federal lobbying registration and disclosure requirements.

We are confident that the report will provide valuable insight to the American people and pave the way to increased transparency of the activities disclosed by those foreign agents. We urge you to appropriate the funding necessary to evaluate modernizing this invaluable resource.

Our recommendations are based on our experiences using FARA, including efforts to republish FARA data online in ways that support greater access and meaningful analysis. OpenSecrets built the Foreign Lobby Watch database containing foreign lobbying documents and data. Our reviews of the DOJ's available foreign lobbying records found significant problems with how the data is currently structured.

We've designed our databases to make up for some of the shortfalls in how foreign lobbying information is currently made available to the public. Structured data directly from the government could streamline this process, improving the quality, utility, and clarity of the information collected by the FARA Unit.

Thank you for your attention to our concerns on this critical issue. We would welcome the opportunity to work with you further on this issue and make any additional recommendations about this or other important issues before the Committee.

[This statement was submitted by Anna Massoglia.]

## PREPARED STATEMENT OF THE PEW CHARITABLE TRUSTS

Chair Jeanne Shaheen  
 Ranking Member Jerry Moran  
 Subcommittee on Commerce, Justice, Science, and Related Agencies  
 Senate Committee on Appropriations

Chairwoman Shaheen and Ranking Member Moran, we appreciate the opportunity to provide public comments on fiscal year 2022 appropriations. Over the past year, agencies and departments across the Federal Government implemented proactive policies and programs in response to the pandemic. As the committee begins the process of determining next fiscal year's funding levels, it is important that the agencies and departments levels include funding for the collection, evaluation, and analysis of data and programs.

The Pew Charitable Trusts Civil Legal System Modernization project works to support efforts to deliver a more accessible and effective civil legal system. We'd like to take this opportunity to highlight the importance of collecting and reporting State civil legal system data to inform Federal policy.

As the country continues to respond to and recover from the pandemic, our Nation's civil legal system will continue to face strains, both in adapting to changing environments and increasing caseloads. With the growing number of evictions and foreclosures exacerbated by the COVID-19 pandemic, and the CDC's current moratorium on evictions, as well as rising debt in collections, State civil courts have developed a variety of approaches to manage what will likely become a tsunami of court cases that will have long-lasting financial consequences for millions of Americans.

By passing the Foundations for Evidence-based Policymaking Act, Congress not only showed the importance of data collection, but also how it can play a critical role in developing Federal policies. For example, identifying the rate of eviction case filings could inform CDC decisions related to the cessation or extension of the Federal eviction moratorium. Likewise, a better understanding of the scope of debt collection lawsuits could facilitate rule-making at the Consumer Financial Protection Bureau. More immediately, State court data could help the CFPB evaluate the efficacy of its new rule requiring debt collectors in eviction cases to inform tenants of their rights under the CDC moratorium.

Prior to the pandemic, there was already a lack of data and transparency surrounding our civil court system. A Pew report found that 38 States do not report on the number of debt cases in their civil legal systems and only two provide data on the number of default judgments. Though there is no comprehensive analysis of State court data on housing cases, we anticipate a similar lack of data. While it has a mandate to collect and analyze civil justice data, the last national study conducted by the Bureau of Justice Statistics was done in 2005. This subcommittee can play an important role in better understanding the impact of the civil justice system on Americans as evictions and debt lawsuits loom.

Thank you again for the opportunity to comment.

[This statement was submitted by Erika Rickard, Project Director, Civil Legal System Modernization.]

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PREPARED STATEMENT OF THE POPULATION ASSOCIATION OF AMERICA/ASSOCIATION  
 OF POPULATION CENTERS

FISCAL YEAR 2022 APPROPRIATIONS FOR THE CENSUS BUREAU AND NATIONAL SCIENCE  
 FOUNDATION

The Honorable Jean Shaheen, Chair and The Honorable Jerry Moran, Ranking Member:

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 and the National Science Foundation (NSF). These agencies are important to the Population Association of America (PAA) ([www.populationassociation.org](http://www.populationassociation.org)) 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 fiscal year 2022, we urge the subcommittee to provide the Census Bureau with \$2 billion, which is approximately \$600 million above the Administration's request. In addition, PAA and APC support \$10 billion for the National Science Foundation (NSF), consistent with the recommendation of the Coalition for

National Science Funding, which largely reflects the Administration's fiscal year 2022 request.

The PAA and APC are two affiliated organizations that together represent over 3,000 social and behavioral scientists and the nearly 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 rely on data produced by the Nation's statistical agencies, including the Census Bureau, to conduct research and research training activities.

#### THE CENSUS BUREAU

The Census Bureau is the premier source of data regarding U.S. demographic, socio-economic, and housing characteristics. While PAA/APC members have diverse research expertise, they share a common need for access to accurate, timely data about the Nation's changing socio-economic and demographic characteristics that only the U.S. Census Bureau can provide through its conduct of the decennial census, American Community Survey (ACS), and a variety of other surveys and programs.

PAA and APC understand that the Census Bureau's funding level declines dramatically in the initial years of the decennial planning cycle, and the Administration's request reflects, appropriately, this anticipated decrease in funding. Nonetheless, PAA and APC urge the subcommittee to support increased funding for the Census Bureau in fiscal year 2022 above the Administration's request. In fiscal year 2022, 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 fiscal year 2022 funding recommendation (\$2 billion) that census stakeholders are supporting would enable the Bureau to pursue, among other things, the following initiatives:

*Modernizing the Bureau's data infrastructure.*—The Census Bureau needs to harness currently available Big Data technology and methodology to reduce respondent burden and realign the Bureau's already-existing data from multiple sources into universal "frames." A significant increase in funding for the Census Frames initiative, which was only funded at about \$12.7 million in fiscal year 2021, will allow the Census Bureau to reduce duplication, increase ease and usability of Federal statistical data, enhance the quality of Bureau products, facilitate analysis of the U.S. population and economy, and ensure that the Federal Government can utilize administrative data, responsibly and appropriately, to maximum advantage before burdening survey respondents.

*Enhancing the American Community Survey (ACS).*—ACS data are an invaluable resource that data users, including population scientists, rely on throughout the decade to make key investment and policy decisions as well as to conduct applied and scientific research and evaluate programs. The Bureau also needs to continue to use the ACS "as a testbed for innovative survey and data processing techniques," as Congress directed in fiscal year 2021. Funding for the ACS has remained relatively stagnant in recent years, including a little over \$226 million in fiscal year 2021. The Bureau needs additional funding (no less than \$45 million to increase the sample size by at least 1 million households) to properly plan and execute an expansion of the ACS, beginning in fiscal year 2022.

*Stabilizing and increasing funding for Survey of Income and Program Participation (SIPP).*—After multiple COVID-19 relief bills, policymakers and scientists need to understand how the individual provisions in these supplemental appropriations measures assisted (or failed to assist) families and communities. The Survey of Income and Program Participation (SIPP) is designed to achieve that goal, yet its funding has fluctuated routinely. Stabilizing and increasing support for SIPP, to no less than \$48 million in fiscal year 2022, will help Congress make evidence-based policy decisions on the effectiveness of government assistance programs. Additional funding for SIPP could be reinvested to address long term erosion of the survey's funding and response rates, putting that money toward increased non-response follow up.

*Extending Pulse Surveys.*—The Bureau’s “Pulse Surveys” have provided timely data regarding the economic, social, and health effects of COVID–19 on U.S. communities and businesses. The surveys have attracted support from other Federal agencies that have requested to add questions and collaborated with the Census Bureau to produce the surveys. The Census Bureau needs no less than \$6 million in fiscal year 2022 to sustain and expand this innovation that provides much more timely data on current economic and social issues. Additional funding could be used to further expand the success of this novel program.

*Completing the 2020 Census.*—Additional funding is necessary to complete delayed final assessments and evaluations of the 2020 Census and to release all remaining data products.

*Initiating the 2030 Census.*—PAA and APC support the Census Bureau’s proposal to accelerate planning for the 2030 Census by initiating a research and testing program to pursue innovations, early in the decennial planning cycle, including improvements to the address list, evaluations to assess the appropriateness of using administrative records in the enumeration process, and strategies for making field operations more efficient.

In sum, PAA and APC join other census stakeholders in urging the subcommittee to provide the Census Bureau with \$2 billion in fiscal year 2022 to complete all 2020 Census operations and data delivery objectives; enhance the ACS, including plans to increase the survey’s sample size; initiate planning for the 2030 Census; improve the SIPP; extend and expand the Pulse Surveys and improve the quality and granularity of all census data sets. Further, PAA and APC urge the subcommittee to exercise its oversight authority and ask questions about the agency’s proposed budget restructuring proposal, especially as it affects the status and integrity of the ACS.

#### NATIONAL SCIENCE FOUNDATION (NSF)

For over 75 years the mission of NSF has been to promote the progress of science; to advance the National health, prosperity, and welfare; and to secure the National defense. Understanding the implications of complex population dynamics is vital to the agency’s mission. The Directorate of Social, Behavioral and Economic (SBE) Sciences is the primary source of support for the population sciences within the NSF. The Directorate funds critical large-scale longitudinal surveys, such as the *Panel Study of Income Dynamics*, that inform pressing policy decisions and provide the empirical evidence to help policy makers to formulate effective decisions. It also has participated in cross-cutting, interdisciplinary initiatives of interest to population scientists, such as the *Coastlines and People* program, which supports research on the implications of climate change on populations, and *Mid-scale Infrastructure*—two areas of emphasis among the agency’s research priorities.

NSF is the funding source for over 20 percent of all federally supported basic research conducted by America’s colleges and universities, including basic behavioral and social research. Moreover, the SBE Directorate funds approximately 67 percent of basic, university-based social and behavioral sciences research in the Nation.

PAA and APC, as members of the Coalition for National Science Funding (CNSF), applaud the Administration’s proposed NSF fiscal year 2022 budget request, \$10.2 billion, which represents a nearly 20 percent increase in funding over the fiscal year 2021 enacted level. Moreover, the budget request envisions an allocation for SBE that would grow by approximately 13 percent, reflecting, we believe, a recognition that not only has SBE’s funding stagnated vis-a-vis other directorates, but more importantly that SBE related research offers significant contributions to scientific progress. We continue to support the Committee’s longstanding practice of not stipulating specific funding levels for individual NSF directorates; however, it is helpful to understand the Administration’s views on research priorities, and in this instance we concur.

We are also aware of the growing consensus within Congress and the Administration around the concept of establishing a new directorate within NSF that would support translational research, emerging technologies and public-private partnerships. We hope that the Committee will ensure that a new directorate will be funded through an expansion of NSF’s footprint and budget—and not through siphoning resources from other research directorates. We note that the budget request includes a reprogramming of funds from existing NSF initiatives that would be transferred to the new directorate, but also requests new spending for the majority of the new directorate’s budget.

We urge Congress to accelerate the growth of NSF’s budget by providing NSF with at least \$10 billion in fiscal year 2022. The funding level will enable the NSF SBE Directorate to continue its support of social science surveys and a robust portfolio of population research projects. The NSF also continues to focus on inter-

disciplinary 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 fiscal year 2022 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.

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.]

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PREPARED STATEMENT OF THE REGIONAL INFORMATION SHARING SYSTEMS

Information sharing and officer and citizen safety are top priorities of law enforcement leaders. For more than 47 years, law enforcement officers and criminal justice professionals have turned to and grown to rely on a nationally recognized and respected program known as the Regional Information Sharing Systems (RISS). RISS is a proven resource for law enforcement. It is difficult to place a dollar amount on RISS's return on investment because it not only helps law enforcement *detect, deter, and resolve criminal investigations*, RISS helps *keep officers and citizens safe*, while *ensuring that privacy and civil liberties* are protected. RISS is a leader in secure information sharing and investigative case support and has enabled an unprecedented level of collaboration among all levels of law enforcement. Our Nation and communities face threats every day—from national security to the opioid and methamphetamine epidemic, from violence against women and sex trafficking to property and financial crimes, and from cybercrime to identity theft. RISS offers quality and evidence-based support to law enforcement agencies and communities; often agencies cannot obtain these services and resources anywhere else. It is critical that RISS be sustained and expanded. It is respectfully requested that RISS be funded in fiscal year 2022 at \$48 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 RTSC is RISS's nationwide technology operation and maintains, operates, and enhances RISS's secure infrastructure and applications. The RISS Centers work regionally and nationwide to respond to each region's unique crime problems while working together on a nationwide basis to strengthen and advance criminal justice priorities. RISS is a trusted, secure, and cost-effective program law enforcement agencies and officers utilize to:

- Share critical law enforcement and intelligence data across jurisdictions.
- Access case and analytical services that help solve crimes and prosecute offenders.
- Prevent friendly fire and safeguard the men and women protecting our streets.
- Preserve the integrity of operations and protect citizens and communities.
- Equip officers and criminal justice professionals with training, technical assistance, and research.

RISS receives hundreds of shared success stories from 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](http://www.riss.net/Impact).

*Investigative Case Support:* RISS provides investigative and analytical services, training, publications development, and investigative research, including the following:

- Analytical services, such as cell tower mapping, link charts, 2D and 3D crime scene diagrams, telephone-toll analysis, financial analysis, digital forensics, and audio/video enhancements.
- Intelligence and investigative research, which helps identify suspect addresses, monikers, criminal associates, and other investigative information.
- Specialized equipment, such as cameras, recorders, and other devices.
- Technical support through RISS's field services staff and field-based solutions.
- Training opportunities on topics such as investigative techniques and emerging crime. Examples include *Advanced Search Technique: Hidden Compartment; Courtroom Testimony; Financial Crimes Against Seniors; Basic Crash Investiga-*

*tions; Narcotics and Counterfeit Goods; Death Investigations; and Unemployment Fraud.*

—Law enforcement briefings and publications, such as *Global Pandemic-Implications on the Drug Trade and the Drug Concealment Report: Traffickers' Unusual Places.*

RISS has set and achieved evidence-based goals since its inception. Below are some highlights of RISS's fiscal year 2020 results and productivity.

- Developed 20,924 analytical products.
- Loaned 2,752 pieces of specialized equipment.
- Responded to 47,363 requests for research and technical assistance.
- Sponsored or cosponsored 749 training opportunities and helped train 33,119 individuals.
- Provided access to more than 60.9 million investigative records to authorized personnel.
- Enabled users to conduct more than 4.5 million inquiries to RISS resources.

*Secure Information and Intelligence Sharing:* RISS integrates advanced technology and field-based solutions that connect systems and officers across jurisdictions.

The RISS Secure Cloud (RISSNET) provides a system of systems concept, connecting networks and databases, providing bidirectional information sharing, and offering 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, such as the:

- RISS Criminal Intelligence Database (RISSIntel).*—Provides for a real-time, online federated search of connected systems; adheres to 28 Code of Federal Regulations Part 23.
- RISSLeads Investigative Website.*—Facilitates multijurisdictional information sharing.
- Law Enforcement Secure Hosted Websites.*—Provide partners a solution to securely share information and materials with specific groups or partners.
- RISS Property and Recovery Tracking System (RISSProp).*—Houses pawn, secondhand, and other shop transactions to enable officers to identify and return stolen property and identify other related criminal activities.
- RISS Master Telephone Index (MTI).*—Compares and matches telephone numbers in law enforcement investigations.
- RISS Money Counter Network (MCN).*—Stores currency serial numbers compared to currency submitted by officers in previous cases.
- 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.

Below are examples of RISS technology-related accomplishments during fiscal year 2020.

- Designed, developed, and began deploying the next generation of RISSIntel. The new RISSIntel is housed in the secure government cloud, provides advanced features and functionality, and contains a new infrastructure and user interface.
- Connected intelligence systems to RISSIntel and enabled bidirectional sharing of information among more than 75 RISS and partner intelligence databases.
- Migrated RISSNET resources to a cloud environment and further enhanced security.
- Advanced the use of RISSProp to support organized retail crime investigations and launched application enhancements. RISSProp has helped recover more than \$8 million in property since its inception.
- Leveraged RISSafe Watch Centers to support nationwide threat-to-life tips and leads.
- Enhanced and expanded the use of the RISS MTI and the RISS MCN.

RISS streamlines processes, increases information sharing and officer access to critical data, enhances officer and community safety, and advances important technology solutions.

*Deconfliction:* RISS provides officer safety event deconfliction.

Event deconfliction helps support and protect law enforcement officers in a variety of ways. Officers partaking in high-risk operations enhance their personal safety and the safety of those around them, and they identify operational conflicts and collaborate with other law enforcement agencies and officers. It also safeguards community members, helps ensure operational integrity, strengthens information sharing, helps reduce risk and liability, and builds community confidence. Officers can leverage each other's information and successfully apprehend criminals. Event deconfliction helps prevent "friendly fire" and helps solve investigations.

The RISS Officer Safety Event Deconfliction System (RISSafe) supports law enforcement personnel who are conducting an event near one another at the same time. 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 2.2 million operations have been entered into RISSafe, resulting in more than 506,000 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, 29 RISSafe Watch Centers are operational, 23 of which are operated by organizations other than RISS.

*Partnerships and Collaboration:* At the heart of police work is collaboration. RISS helps connect agencies and officers at every level and constantly seeks and strengthens partnerships with criminal justice associations, professional groups, and Federal partners. Example partnerships include the following:

- Federal Bureau of Investigation (FBI)
- FBI's Law Enforcement National Data Exchange (N-DEx)
- High Intensity Drug Trafficking Areas
- National Fusion Center Association
- National Motor Vehicle Title Information System
- Nlets-The International Justice and Public Safety Network
- Office of the Director of National Intelligence
- U.S. Attorneys' Offices
- U.S. Department of Homeland Security
- U.S. Department of Justice

*RISS Funding Increase in Fiscal Year 2022:* RISS helps save agencies money and time and produces results. With increased funding, RISS can continue to provide its current programs while maximizing and expanding its secure infrastructure, proven services, and trusted partnerships. With increased funding at \$48 million, RISS will support the following:

- Expand the new RISSIntel to law enforcement agencies and connect additional systems.
- Expand access to RISSafe, including agencies and users in rural and Tribal communities.
- Expand RISSafe's 24/7/365 coverage and establish additional RISSafe Watch Centers.
- Enhance the RISS Officer Safety Website and develop training videos, publications, and other materials.
- Increase support for the WSIN RISS Center's threat-to-life endeavor and facilitate fusion center involvement.
- Expand RISSProp to other regions and agencies and expand the RISS MCN by connecting additional money counter machines.
- Replace or obtain new equipment, including protective gear for law enforcement personnel.
- Expand the ability for small and rural agencies to access sophisticated, up-to-date investigative tools and equipment.
- Leverage Federal and nationwide partnerships to expand information sharing capabilities and available resources to officers and law enforcement personnel.
- Expand the MAGLOCLEN RISS Center's school safety action response plans initiative.
- Build on RISS's investigative support services and resources to further aid law enforcement efforts to combat the opioid, methamphetamine, and heroin crisis.

The year 2020 was challenging for everyone. As our Nation's leaders, you have many critical topics to address and resolve moving ahead. Your leadership and support are valued and appreciated. Your job is hard. Our men and women in uniform also face challenges every day. A program like RISS helps them by providing re-

sources, training, and information. RISS helps keep them safe. Our nation should continue to invest in and support the RISS Program.

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](http://www.riss.net).

[This statement was submitted by Donna Williams, Chair, RISS National Policy Group.]

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PREPARED STATEMENT OF RESEARCH!AMERICA

FISCAL YEAR 2022 APPROPRIATIONS FOR THE NATIONAL SCIENCE FOUNDATION

Research!America appreciates the opportunity to submit testimony for the record. We are the Nation's largest nonprofit alliance advocating for science, discovery, and innovation to achieve better health for all. We greatly appreciate the subcommittee's dedicated stewardship over funding for such critical priorities as the National Science Foundation (NSF). As you consider fiscal year 2022 allocations, we request that NSF receive at least \$10.2 billion, an increase of 20 percent, in fiscal year 2022 to create jobs, support sustained economic growth, and bolster the wellbeing of Americans and people around the globe.

An increase of that amount aligns with the President's fiscal year 2022 request for NSF. We agree that bolstering our science and technology (S&T) capability is essential to fueling innovation and discovery that can improve the Americans' lives and lift our knowledge to new heights.

In that context, we are grateful to both parties in both chambers of Congress for pursuing legislation to greatly enhance our S&T strength and competitiveness. The NSF for the Future Act and U.S. Innovation and Competition Act are indicative of a forward-thinking approach to tackling threats—existing, emergent, and unknown—to Americans and individuals across the globe.

NSF's portfolio is intentionally diverse because science investment can yield unknown discoveries, spanning biology, economics, engineering, mathematics, computational science, data analytics, the social and behavioral sciences, and other high impact disciplines. We strongly believe that robust funding for NSF is a sound strategy for advancing the United States' strategic interests in an ever-more complex international landscape, preempting and overcoming threats to our Nation and world, and for meeting the aspirations of the American people.

*What the NSF Provides*

The NSF is a key driver for our Nation's S&T leadership, supporting strategically important research at more than 1,900 academic institutions in all 50 States, the District of Columbia, and three U.S. territories. An estimated 313,000 students, teachers, researchers, and postdoctoral fellows were empowered by the NSF in fiscal year 2020. Approximately 95 percent of NSF funding is allocated to grants or cooperative agreements to researchers through a competitive merit review process. Since 1950, NSF has supported more than 248 Nobel Prize winners, including seven Nobel Laureates in 2020. The research supported by NSF bears on virtually every sector of our economy, supports cyber—and other crucial areas of national security, and factor importantly into the productive use of big data and other highly promising avenues of S&T.

*NSF's COVID Response*

The NSF has been a key part of our National response to COVID-19. In March 2020, as the pandemic bore down on our Nation, NSF issued a call for Rapid Response Research (RAPID) proposals to address this new health threat. By April 10, 2020, more than 60 RAPID projects around the country were funded, supporting research related to the pandemic. For example, NSF-funded researchers modeled the spread of the virus and worked to understand transmission and prevention. Decades of NSF research investment was utilized in the response to the virus, including NSF-backed 3D printing technology for the production of PPE and computer software creating simulations to provide insight into the molecular structure of the virus.

NSF investments are also helping us prepare for future public health threats. Research in artificial intelligence and big data have the potential to identify disease threats before they spread. Other NSF-backed initiatives, like the Civic Innovation

Challenge, demonstrate how partnership between government and technology can equip communities to manage emergencies.

*NSF Leverages American Ingenuity to Break New Ground in Science and Technology*

NSF supports the type of high-risk research that drives progress and has resulted in recent groundbreaking discoveries. Researchers funded by NSF have made key breakthroughs in their 20-year quest to create quantum internet with a new process by which information stored at the atomic level can be received and read. Quantum internet can be used to send “un-hackable” messages and will improve GPS, both of which are key to national security. Though this is a long-term project, the invaluable applications are unquestionably worth the time and investment.

NSF funding also made possible a smartphone app which can identify signs of eye disease in children. Using smartphone photos, the program identifies a telltale “white sheen” which can indicate retinoblastoma, as well as cataracts or an infection. Research like this forms the basis for future apps which help with early detection and diagnosis of disease.

NSF-funded research also continues to propel progress through collaboration across multiple fields. Through NSF’s continued support, scientists work together to produce cutting-edge research that pushes the fields of medicine, engineering, and biology forward. In 2019, interdisciplinary collaboration between multiple countries and more than 300 researchers allowed the Event Horizon Telescope (EHT) to capture the first image of a black hole. This discovery increased confidence in the fundamental laws of physics while creating a technological basis for future breakthroughs. Projects like this drive innovation and create, as a by-product, advances in technology and information exchange, which in turn, are used for other research.

*Americans Understand the Value NSF Delivers*

Since 1992, Research!America has commissioned national and State-level surveys to assess public sentiment on issues related to research and innovation. Our surveys have explored Americans’ perspectives on the role of NSF-funded S&T in advancing key national priorities. One of the most consistent findings over time has been Americans’ support for basic research. In our most recent survey, fielded in January 2021, 85 percent of respondents agreed that “even if it brings no immediate benefits, basic scientific research that advances the frontiers of knowledge is necessary and should be supported by the Federal Government.”

*NSF is Essential to Training the Next Generation of American Scientists and Innovators*

The U.S.’s global leadership is directly tied to our strength in the fields of Science, Technology, Engineering, and Mathematics (STEM). NSF cultivates future American leaders in these strategically important disciplines. Since 1952, NSF has supported more than 61,700 students through Graduate Research Fellowships and has provided grant support to thousands of postdoctoral fellows and young investigators.

The agency has also engaged in unique public-private partnerships, including the High Performance Computing (HPC) Consortium, a partnership between IBM, the White House Office of Science and Technology Policy, the U.S. Department of Energy, and the NSF. This partnership gave researchers studying the COVID-19 virus access to powerful computational platforms which allowed for major breakthroughs in modeling COVID-19 transmission and the atomic structure of the virus. Efforts like this set the stage for future success as our Nation seeks to accelerate the pace of medical and scientific progress.

Research!America appreciates the complicated and complex task facing the subcommittee as it seeks to prioritize funding in a manner that best serves the American people. We urge you to provide at least \$10.2 billion, an increase of 20 percent, for NSF in FY22. We hope you will call on our organization if additional information would prove useful.

Thank you for your continued leadership and consideration.

[This statement was submitted by Mary Woolley, President and CEO.]

PREPARED STATEMENT OF THE SAC AND FOX NATION

FISCAL YEAR 2022 BUDGET FOR THE OFFICE OF JUSTICE PROGRAMS, DEPARTMENT OF JUSTICE

Chairwoman Shaheen and distinguished Members of this subcommittee, on behalf of the Great Sac and Fox Nation, I submit testimony of our Tribal priority requests for funding programs in the fiscal year 2022 budget for the Office of Justice Programs (OJP) in the Department of Justice (DOJ). The Sac and Fox Nation is the

home of Jim Thorpe, one of the most versatile athletes of modern sports who earned Olympic gold medals for the 1912 pentathlon and decathlon. The Nation would like to thank Congress for providing relief that is allowing Tribes to begin the recovery process from the pandemic that will remain as prominent in the minds of the world as the name Jim Thorpe.

The Sac and Fox Nation would like to advance the following Department of Justice budget requests for fiscal year 2022:

1. Fully Fund the Tribal Law and Order Act
2. Fully Fund All Tribal Provisions of the Violence Against Women Act
3. Tribal Grants—Utilize DOJ Appropriations as Base Funding with Tribes Setting Their Own Priorities
4. 10 percent Tribal Set-Aside from All Discretionary Office of Justice Programs
5. Approve a Streamlined Funding Mechanism for the Coordinated Tribal Assistance Solicitation (CTAS)

The Sac and Fox Nation also supports the appropriation requests of the National Congress of American Indians.

#### *About the Sac and Fox Nation*

The Sac and Fox Nation is a Self-Governance Tribe headquartered in Stroud, Oklahoma. Our Tribal jurisdictional area covers all or parts of Lincoln, Payne, and Pottawatomie counties. Of the over 4,000 enrolled Tribal members, 2,600 live in Oklahoma. Our culture is based upon respect for the life within ourselves, our families, our communities, and all of creation. The Sac and Fox way of life is spiritually based. The Creator gave this way of life to the Sac and Fox people and we seek the guidance of the Creator in how to live. The oldest continuing religious practices are ceremonies like clan feasts, namings, adoptions, and burials. More recent religious practices include the Drum Dance, the Native American Church and Christianity.

#### *Fully Fund Tribal Law and Order Act as Authorized*

The Tribal Law and Order Act (TLOA) has three basic purposes:

1. Make Federal departments and agencies more accountable for serving Native peoples and land;
2. Provide greater freedom for Indian Tribes and Nations to design and run their own justice systems; and,
3. Enhance cooperation among Tribal, Federal, and State officials in key areas such as law enforcement, training, interoperability, and access to criminal justice information.

The Sac and Fox Nation operates a Juvenile Detention Center which provides services to 46 Tribes in Oklahoma, Kansas and Texas, as well as the State of Oklahoma. We are anxious to advance the opportunities that TLOA can offer to further expand and increase access to our facility. However, unless TLOA is fully funded, facilities such as ours will not be able to attain the full potential and help to guide children in the system towards a successful future.

The U.S. Commission on Civil Rights has consistently reported about the chronic underfunding and the breakdown in the trust and treaty obligations of the United States to Tribes. In both the Quiet Crisis and Broken Promises reports, it was noted that “*Native Americans as a group suffer from one of the Nation’s highest rates of crime victimization. At the same time, the criminal justice system in Indian Country faces structural barriers and struggles to fully recognize Tribal sovereignty. The additional failure to provide sufficient Federal funding undermines the ability of Tribal governments to provide criminal justice and public safety for their citizens.*”<sup>1</sup> The full potential of TLOA cannot be realized or implemented without sufficient resources for Tribal justice systems and ongoing coordination and consultation between Tribal governments and appropriate Federal agencies. While Sac and Fox is optimistic that President Biden’s *Memorandum on Tribal Consultation and Strengthening Nation-to-Nation Relationships* has benefitted those working in the Federal Government, we need Congress and staff to better understand how dire Tribal communities need resources to improve our quality of life and protect our people, land, and traditions.

While DOJ recognized the importance of completing the circle when it issued the “Proposed Statement of Principles”<sup>2</sup>, in which it is referenced that stable funding at sufficient levels for essential Tribal justice functions is critical to the long-term

<sup>1</sup> A Quiet Crisis: Federal Funding and Unmet needs in Indian Country, July 2003, and Broken Promises: Continuing Federal Funding Shortfall for Native Americans, December 2018 by U.S. Commission on Civil Rights

<sup>2</sup> Guidelines Stating principles for Working with Federally Recognized Indian Tribes, Eric Holder, The Attorney General, U.S. Department of Justice, December 3, 2014

growth of Tribal institutions. Yet, more than 10 years after passage of TLOA, provisions of the act remain under funded.

*Office of Violence Against Women.*—Fully fund the programs authorized in the Violence Against Women Act (VAWA), including the \$5 million authorized for Tribal implementation of VAWA special domestic violence criminal jurisdiction and continue to fund the Indian Country Sexual Assault Clearinghouse at \$500,000.

Thank you for helping us to protect our mothers, daughters, sisters and wives from jurisdictional gaps or safe havens for criminals to include Indian Women in the 2013 reauthorization of VAWA. But without funding to implement the law, this is an idle victory. We urge you to fully fund all of the Tribal provisions of VAWA and offer survivors of these crimes protection and access to much-needed services.

It is estimated that over 85 percent of American Indians and Alaska Natives will experience intimate partner violence, stalking, or sexual violence in their lifetime. This violence threatens the lives of Native women and children and the future of American Indian Tribes and Alaska Native villages. The Office of Violence Against Women (OVW) provides funding to Tribal governments to address violence against women in their communities. OVW's largest source of funding for Tribal governments is the Grants to Tribal Governments Program, which is funded via statutory allocations from other OVW programs. Full funding for these OVW programs results in full funding for the Grants to Tribal Governments Program.

*Tribal Grants.*—Eliminate the competitive grant funding process and utilize Justice Department appropriations as base funding where Tribes and Tribal Courts themselves determine their own priorities.

One of the biggest issues with DOJ funding is that it is competitive. In order to obtain essential funding Tribes must compete against each other based on DOJ's priorities and guidelines rather than Tribes identifying their own priorities to best serve their citizens at the local level.

Tribes have advocated to dispel grant funding for desperately needed services at the local level. Instead, the approach should be to utilize DOJ appropriations as base funding so that Tribes can develop sustainable programs for the benefit of their citizens. Grants offer one-time funding streams with no assurances of future funding to build staff capacity and generally does not allow Tribes enough time to design and implement effective programs without having to engage in the next cycle to compete for funds. It appears that DOJ understands this concept inasmuch as it has previously proposed the idea of base funding in the form of a block grant during an earlier Tribal consultation on the OVW funding. We propose that DOJ not merely propose this for OVW but consider this for all Tribal appropriations in the Department so that Tribes can determine their own priorities.

*Tribal Set-Aside (Ten Percent).*—Create a 10 percent Tribal set aside from funding for all discretionary OJP programs and ensure that those funds are allocated as flexible base funding. A 10 percent set Tribal set aside would streamline the Federal funding process by which Tribes receive resources to establish Tribal courts; assist in developing detention facilities; provide legal assistance; develop and maintain juvenile delinquency prevention programs; and provide substance abuse prevention programs. In addition, the set-aside funding would give Tribes the flexibility to develop a comprehensive strategy on how best to spend these resources to meet needs at the local level.

Congress and the Administration should enact an amendment to the Budget Control Act of 2011 to fully exempt Indian program funding from future sequestrations to honor the Federal trust responsibility and the chronic and severe underfunding of all Tribal programs.

*The Coordinated Tribal Assistance Solicitation (CTAS).*—CTAS attempts to streamline the grant application process for Tribes and Tribal Consortia to enable them to submit a single grant application for most of the Tribal grant programs in DOJ, as opposed to previous years in which Tribes were required to submit multiple grant applications. However, consideration was not given to the capacity of Tribes to prepare this large application model, which, for many Tribal communities, remains a struggle to apply for these multiple grant awards with separate reporting requirements, award periods, and grant managers. CTAS will not achieve its intended purpose of streamlining Tribal grants until it is accompanied by a streamlined funding mechanism.

Thank you for allowing the Sac and Fox Nation to submit our funding priorities and comments on the Office of Justice Programs and the overall Department of Justice funding for Tribes.

[This statement was submitted by the Honorable Justin F. Wood, Principal Chief.]

## PREPARED STATEMENT OF THE SEA GRANT ASSOCIATION

The Sea Grant Association (SGA) recommends Congress appropriate at least \$107.9 million in fiscal year 2022 for the National Sea Grant College Program (Sea Grant) and at least \$15 million for Sea Grant Aquaculture. The SGA recommendation of \$107.9 million for Sea Grant includes a minimum of \$25 million to expand Sea Grant's capacity to address coastal resilience issues.

Sea Grant is funded out of appropriations provided to the National Oceanic and Atmospheric Administration (NOAA), Office of Oceanic and Atmospheric Research (OAR) in the Operations, Research, and Facilities account. The SGA is a non-profit organization dedicated to furthering the Sea Grant's vision, mission, and goals. SGA's regular members are the academic institutions that participate in the National Sea Grant College Program. The SGA advocates for greater understanding, use, and conservation of marine, coastal and Great Lakes resources.

On December 18, 2020, the President signed into law the *National Sea Grant College Program Amendments Act of 2020*, Public Law 116–221. This legislation reauthorized Sea Grant through fiscal year 2025. The legislation reiterated Sea Grant's core activities of supporting research, education, extension, and outreach. The legislation also called out support for several specific activities including efforts to strengthen coastal economic, environmental, and community resilience, and to conduct research and extension to further sustainable aquaculture. This testimony is submitted to the subcommittee to request the resources necessary for Sea Grant to meet the programmatic objectives and priorities called out in Public Law 116–221.

## JUSTIFICATION FOR THE FISCAL YEAR 2022 SEA GRANT ASSOCIATION'S REQUEST FOR SEA GRANT

Over 126 million residents—40 percent 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 that support coastal and non-coastal communities. Weather- and climate-related hazards impacting these communities have increased at an alarming rate. The total cost of all U.S. billion-dollar disasters over just the last 5 years (2015–2019) exceeds \$525 billion. Weather and climate risks are deeply connected to threats to critical infrastructure, water and food supplies, social instability, unemployment, and governance challenges. Most recently, we are seeing these types of interdependencies play out as the COVID–19 pandemic and resultant economic crisis have clearly exacerbated impacts to coastal communities, particularly under resourced communities and communities of color. Sea Grant, with its partners and through the expansion of its resilience portfolio, will apply the knowledge gained via research to help communities of color, (including Native American and Indigenous communities), and low-income communities reduce or eliminate the barriers to the implementation of adaptation, mitigation, and resilience strategies.

Increasing physical and economic damages, social inequities, and personal despair have tested our level of preparedness to deal with and respond to major weather and climate threats. Hurricanes, typhoons and tsunamis are compounded by other challenges including coastal inundation (due to rising sea levels and land subsidence), increasing storm intensity, aging infrastructure, uneven enforcement of building codes, lack of adequate zoning ordinances, poor planning and construction, continued development in high-risk areas, and the inexperience of coastal dwellers to prepare for and recover from these events. The frequency of “sunny day” flooding alone has doubled since 2000 in the United States. Exacerbated by sea level rise, these events overwhelm sewage treatment plants and public utilities, disrupt transportation corridors, reduce property values of homes and businesses, and threaten public health. In addition, many regions may be at increased risk of anthropogenic disasters such as oil or chemical spills, which could occur alone or be exacerbated by other hazardous events. Communities of color and low-income communities are often on the frontline of these threats, experiencing the first and worst impacts of changes in climate and weather patterns. Only through knowledge, understanding, preparation and partnerships will communities be able to address the hazards that are uniquely concentrated in coastal counties.

The resilience of our communities—the very safety, security and survival of their residents—depends on how well prepared they are for these threats and for recovery following an event. Community-level preparedness includes a number of considerations, from how individuals prepare to where and how critical infrastructure and buildings are constructed. Resilient communities have residents, businesses and infrastructure that are positioned to reduce the impacts of risks to lives and property. This allows people to return to their homes and businesses, and recover more quickly after an event than in communities that are not as prepared. Resilient commu-

ities also have thriving living shorelines and coastal resources such as mangroves, oyster reefs, barrier dunes, salt marshes, and other natural infrastructure that buffer waves and coastal storms and protect the shoreline from erosion during storms.

Sea Grant is a network of research, education and outreach professionals who work in partnership with universities, communities, and stakeholders. Sea Grant's vision is to enhance the use and conservation of coastal, marine and Great Lakes resources to create a sustainable economy and environment. Sea Grant helps coastal and Great Lakes communities become more resilient through its activities that strengthen the ability of communities to effectively prepare and plan for environmental and economic challenges. Sea Grant has a proven track record of doing this at local, State, regional and national levels in partnership with its stakeholders and like-minded entities. With increased capacity, Sea Grant will help our coastal and Great Lakes communities become more resilient. Expanding Sea Grant's resilience portfolio will protect lives, sustain critical infrastructure, protect and restore critical natural resources, enhance economic opportunity and recovery from the COVID pandemic, and support more rapid economic recovery after events. Sea Grant is recognized for its ability to develop locally relevant solutions to build coastal community resilience. Sea Grant's strength lies in its ability to work effectively at the local government and community level with tailored information, guidance and support.

To address coastal resilience issues more adequately, the Sea Grant Association recommends an increase in base funding for Sea Grant of at least \$25 million. This investment would focus on two major areas:

- Capacity building (\$10M) to support recruitment of additional resilience extension, communication or education staff in each State Sea Grant program and support a national coordinator and;
- Research, engagement, decision support, implementation (\$15M) proposed to be directly allocated to each State Sea Grant program to support local State-based research, training, technical assistance and coordination that enhance community resilience.

#### QUANTIFYING SEA GRANT'S CONTRIBUTION TO COASTAL COMMUNITIES

Within Sea Grant, 20 national office staff, 34 university-based State programs, 646 extension staff and educators, 488 researchers, and at least 2,700 partners are funded and leveraged to cooperatively reach the program's goals. Sea Grant's mission is to address the needs of America's coastal and Great Lakes communities using the best available science, beginning with an understanding of the needs of diverse stakeholders. Since its inception Sea Grant has been at the forefront of actionable science addressing priorities of national, State, and local importance. Sea Grant has coordinated efforts to solve problems locally and regionally, emphasizing partnerships, meeting stakeholder needs, and using feedback from end-users to inform research, with a \$412.4 million economic benefit from an \$80 million Federal investment in 2019. In addition, in 2019, Sea Grant created or supported 10,400 jobs; created or sustained 998 businesses; provided the 34 State-level programs with funding that assisted 263 communities improve their resilience; helped nearly 13,000 people adopt safe and sustainable fishing practices; helped restore or protect an estimated 1.8 million acres of habitat; worked with over 1000 industry and private sector, local, State and regional partners; and supported the education and training of nearly 2000 undergraduate and graduate students.

Sea Grant's locally based staff and specialists collaborated with governments, academia, industries, non-profit groups, and individuals to ensure thriving coastal and Great Lakes communities. Just as it has done in response to hurricanes, oil spills, and other environmental and economic challenges, Sea Grant in 2020 learned how to draw from past experiences to use its strengths to support its constituents during the COVID-19 pandemic. Sea Grant's credibility in scientific and disaster communications was an advantage to coastal and Great Lakes communities around the Nation by providing online resources to enhance at-home STEM education, assisting the seafood industry and other coastal businesses in their direct marketing of their products, navigating the complexities of Federal and State assistance programs, and working quickly to find innovative ways to connect with and support their stakeholders.

Sea Grant sends 95 percent of its appropriated funds to coastal States through a competitive process to address issues that are identified as critical by public and private sector constituents and coastal communities throughout the United States. Sea Grant fosters cost-effective partnerships among State universities, State and local governments, NOAA, and coastal communities, businesses, and relevant non-governmental organizations. Funding for Sea Grant results in support for sustainable fisheries and aquaculture, resilient communities and economies, healthy coastal

ecosystems, environmental literacy, the Sea Grant Knauss Fellows and other fellowship programs, and workforce development. In its 50 plus-year history, Sea Grant's successes can be attributed to its ability to respond to the changing needs of our coastal communities.

Local, State, regional, and national partnerships are critical to addressing issues central to the survival of our coastal communities, economies, and ecosystems. Coastal and Great Lakes communities need to be informed, engaged, and prepared to respond to these threats and to turn these adversities into opportunities. This is precisely what Sea Grant does.

Sea Grant has been an integral player in creating economic opportunities, enhancing food and water security, and reducing risks from natural hazards and extreme events facing coastal communities through research and outreach efforts. Sea Grant is user-driven and university-based, and fully engaged with regional, State, and local organizations.

With the funding recommendations contained in this statement, Sea Grant will leverage significant State and local support, continue to increase the economic development and resiliency of coastal communities—particularly coastal communities of color, and help sustain the health and productivity of the ecosystems on which our communities depend.

Thank you for the opportunity to present this testimony.

[This statement was submitted by Dr. Susan White, President.]

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PREPARED STATEMENT OF THE SOCIETY FOR INDUSTRIAL AND APPLIED MATHEMATICS  
(SIAM)

FISCAL YEAR 2022 FOR THE NATIONAL SCIENCE FOUNDATION

*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 2022 by providing NSF with at least \$10 billion. In particular, we urge you to provide strong support for the Research and Related Activities Account (R&RA) that supports key applied mathematics and computational science programs in the Division of Mathematical Sciences and the Office of Advanced Cyberinfrastructure. SIAM also requests your support for the Education and Human Resources (EHR) directorate that addresses fundamental challenges in mathematics and STEM education.

*Full Statement:* On behalf of SIAM, we submit this written testimony for the record to the subcommittee on Commerce, Justice, Science, and Related Agencies of the Committee on Appropriations of the U.S. Senate.

SIAM has over 14,000 members, including applied and computational mathematicians, computer scientists, numerical analysts, engineers, statisticians, and mathematics educators. They work in industrial and service organizations, universities, colleges, and government agencies and laboratories all over the world. In addition, SIAM has almost 500 institutional members, including colleges, universities, corporations, and research organizations. SIAM members come from many different disciplines but have a common interest in applying mathematics in partnership with computational science to solve real-world problems, which affect national security and industrial competitiveness.

First, we would like to emphasize how much SIAM appreciates your Committee's continued leadership on and recognition of the critical role of the National Science Foundation (NSF) and its support for mathematics, science, and engineering in enabling a strong U.S. economy, workforce, and society.

Today, we submit this testimony to ask you to continue your support of NSF in fiscal year 2022 and beyond. *In particular, we join with the research and higher education community and request that you provide NSF with at least \$10 billion in funding for fiscal year 2022.* This is consistent with the President's budget request for fiscal year 2022 that calls for \$10.2 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 fiscal year 2017, NSF rejected close to four billion dollars of proposals rated "very good or higher" due to budget constraints. Funding of \$10 billion would help the agency address critical unmet national research needs, reverse historical underinvestment, and allow new activities related to translation, innovation, and partnerships that will enable expanded approaches to critical technologies and science and engineering solutions.

As we are reminded every day, the Nation's health, economic strength, national security, and welfare are being challenged in profound and unprecedented ways.

Many of these challenges are fueled by gaps in our understanding of complex systems such as biologic processes, the energy grid, cyberspace, terrorist networks, or the human brain. Mathematics and computational science play a foundational and cross-cutting role in understanding these systems through advanced modeling and simulation, developing techniques essential to designing new breakthrough technologies like artificial intelligence (AI), and providing new tools for managing resources and logistics. Progress in computational sciences and applied mathematics also underpins advances across an array of fields and challenges in computing, materials, biology, engineering, and other areas.

#### NATIONAL SCIENCE FOUNDATION

NSF serves a unique and critical function supporting all areas of science and engineering to further innovation and seed the knowledge and technologies for a strong future America. NSF provides essential Federal support for applied mathematics and computational science, including more than 60 percent of all Federal support for basic academic research in the mathematical sciences. Of particular importance to SIAM, NSF funding supports the development of new mathematical models and computational algorithms, which are critical to making substantial advances in such fields as neuroscience, energy technologies, genomics, and nanotechnology. In addition, new techniques developed in mathematics and computing research often have direct application in industry. Modern life as we know it—from search engines like Google to the design of modern aircraft, from financial markets to medical imaging—would not be possible without the techniques developed by mathematicians and computational scientists using NSF funding. NSF also supports mathematics education at all levels, ensuring that the next generation of the U.S. workforce is appropriately trained to participate in cutting-edge technological sectors and that students are attracted to careers in mathematics and computing.

SIAM applauds NSF's investments in Industries of the Future areas with programs such as the AI Institutes, Institutes for Data-Intensive Research in Science and Engineering, Quantum Leap Challenge Institutes, TRIPODS<sup>1</sup> Institutes, and the NSF-Simons Research Centers for Mathematics of Complex Biological Systems. Furthermore, SIAM supports the new Directorate for Technology, Innovation, and Partnerships (TIP) included in the President's budget request for NSF. SIAM applauds the aims of the new proposed Directorate to advance science and engineering research and innovation, accelerate the translation of basic research, solve national and societal problems, and support education pathways. While investment in emerging areas like AI is important, SIAM urges Congress to provide sufficient NSF support for core programs, such as those funded by the Division of Mathematical Sciences (DMS) and the Office of Advanced Cyberinfrastructure (OAC), which have stagnated in recent years and whose foundational investments underpin advances across many science and engineering challenges.

*SIAM urges strong investment in the Research and Related Activities account (R&RA) to enable robust funding for the Division of Mathematical Sciences (DMS), the Office of Advanced Cyberinfrastructure (OAC), and other core programs and crosscutting initiatives for essential mathematical and computational science research, workforce development programs, and early career researcher support.*

#### NSF DIVISION OF MATHEMATICAL SCIENCES

The NSF Division of Mathematical Sciences (DMS) in the Directorate for Mathematical and Physical Sciences (MPS) provides core support for all mathematical sciences. DMS also funds national mathematical science research institutes; infrastructure, including workshops, conferences, and equipment; and postdoctoral, graduate, and undergraduate training.

The activities supported by DMS and performed by SIAM members, such as modeling, analysis, algorithms, and simulation, underpin advancements across science and engineering and provide new ways of obtaining insight into the nature of complex phenomena, such as the power grid, software for military applications, and the human body.

Investment in DMS is critical because of the foundational and cross-cutting role that mathematics and computational science play in sustaining the Nation's economic competitiveness and national security, and in making substantial advances on societal challenges such as energy and public health. NSF, with its support of a broad range of scientific areas, plays an important role in bringing U.S. expertise together in interdisciplinary initiatives that bear on these challenges. Agencies such

<sup>1</sup>Transdisciplinary Research on Principles of Data Science

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 (QuBBD).

#### 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 OAC's efforts as a steward for computational science, building bridges across NSF to accelerate transformational science and engineering, and driving universities to improve their research and education programs in this multidisciplinary area. SIAM strongly endorses NSF'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.

#### SUPPORTING THE PIPELINE OF MATHEMATICIANS AND SCIENTISTS

A lack of sufficient funding for NSF's Education and Human Resources (EHR) directorate has left critical gaps in addressing fundamental challenges for mathematics and STEM education across educational levels. SIAM supports EHR and its programs like *Improving Undergraduate STEM Education* (IUSE), which is key to both advancing STEM professional development and developing a STEM literate citizenry. SIAM notes that mathematical education is foundational to STEM learning across disciplines, and NSF should continue to fund development of mathematical and computational skills, including at the undergraduate level when young scientists and engineers gain critical interests and competencies.

SIAM supports the NSF *CAREER* awards, *Graduate Research Fellowships*, and *Mathematical Sciences Postdoctoral Research Fellowships (MSPRF)* that are crucial to the training and professional development of the next generation of leadership in mathematical sciences research and education.

#### CONCLUSION

We would like to thank you again for your ongoing support of NSF that enables the research and education communities it supports, including thousands of SIAM members, to undertake activities that contribute to U.S. health, security, and economic strength. NSF needs sustained growth to maintain our competitive edge in science and technology, and therefore we respectfully ask that you continue robust support of these critical programs in fiscal year 2022.

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 fiscal year 2022 appropriations process.

[This statement was submitted by Susanne C. Brenner, President, Anne Gelb, Vice President for Science Policy, and Suzanne L. Weekes, Executive Director.]

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#### PREPARED STATEMENT OF THE SOCIETY FOR INDUSTRIAL AND ORGANIZATIONAL PSYCHOLOGY

#### FISCAL YEAR 2022 NATIONAL SCIENCE FOUNDATION APPROPRIATIONS AND LANGUAGE

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 two requests: provide the requested amount of \$10.2 billion for the National Science Foundation (NSF), including strong support for the Directorate for Social, Behavioral, and Economic Sciences (SBE), in the fiscal year 2022 appropriations process; and 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.

### *Appropriations Support*

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, and practitioners to collaborate, implement, and evaluate cutting-edge approaches to workplace challenges across sectors.

We have evidence that Federal investment in social and behavioral science research directly and positively impacts the U.S. economy, national security, and the health and well-being of Americans. Through SBE, NSF supports basic research to develop a scientific evidence base for improving the performance, effectiveness, management, and development of organizations and the workforce. The methods, measurements, and theories developed through this Federal investment enhance business practices, policymaking, and interprofessional collaboration. The evidence base derived from basic research in the science of organizations is applied throughout the public and private sectors.

SBE is critically important to NSF and has been highly responsive to the transformative events of the past year. This was especially evident during the COVID–19 outbreak when SBE supported the second most research grants to address the virus among NSF Directorates. This included significant support for the field of I–O psychology as the nature of work had fundamentally shifted. Through SBE investments, including those from the Science of Organizations program, I–O psychologists developed data-driven methods to address workplace dysfunction, including impacts on employee well-being, work-life balance, performance, and engagement; the effects of rapid changes to workers across various levels of job structure, socioeconomic status, and race; and the challenges and opportunities related to remote collaboration during COVID–19 and as industries shift to a “new normal.” Further, SBE provided support to I–O psychologists to study other pressing issues, including how job-related stressors impact police officers and, in turn, the communities they serve. With support from SBE for I–O psychologists, society is better positioned to learn from our collective experiences and design more effective, equitable workplaces.

SIOP also supports NSF’s dedication to its *Future of Work at the Human-Techology Frontier* Big Idea, which seeks to address and improve human-technology interactions as workplaces integrate and adapt to artificial intelligence, automation, machine learning, and beyond. In addition to developing these technologies, successful implementation relies on understanding human learning at various stages of life, and improving education and training to appropriately use these technologies.

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, accounting for the technology-enabled workforce, and developing preventative sexual harassment workforce interventions, among many others.

Given NSF’s critical role in supporting fundamental research and education across science and engineering disciplines, SIOP supports an overall fiscal year 2022 NSF budget of \$10.2 billion. SIOP requests robust support for the NSF SBE Directorate, which funds important research studies, enabling an evidence base, methodology, and measurements for improving organizational function, performance, and design across sectors and disciplines.

### *Science of Team Science*

In last year’s testimony, SIOP requested report language to encourage the further adoption of the Science of Team Science (SciTS) in NSF programs and policies. SciTS is the empirical examination of the processes by which large and small scientific teams organize, conduct, and communicate research. I–O psychologists with expertise in SciTS have engaged with NSF program officers and leadership, as well as some congressional staff to ensure their findings are fully ingrained in the agency’s new models and approaches for funding cross-disciplinary science and/or large-scale research projects (e.g. Engineering Research Centers; Science and Technology Centers; Convergence Accelerators; and National Artificial Intelligence [AI] Institutes). As NSF increasingly encourages and promotes collaboration, SIOP believes it is important that the agency take additional steps to ensure evidence-based team science is considered in multi-partner initiatives to improve communication between researchers, productivity, efficiency and cost-effectiveness. This is especially important as NSF continues to focus on public-private partnerships.

In fiscal year 2020, the House Appropriations bill report included the following language that was in the spirit of the original request:

*“Scientific collaboration.—NSF is encouraged to improve the understanding of scientific collaboration and how scientists work together.”*<sup>1</sup>

While this language was most appreciated and helpful, SIOP is of the opinion that the message would be more impactful if it were to specifically mention the importance of “team science” in multi-disciplinary research programs and projects.

Team science is a well-known research subject at NSF and the language should be understood by the agency. NSF has funded several team science studies through SBE and program officers across directorates have expressed interest in leveraging team science to improve multi-disciplinary awards, including participating in one-on-one conversations with SIOP experts and inviting them to present on NSF panels. SIOP appreciates NSF’s interest in learning more about leveraging SciTS to improve programs and collaborations at the agency. While NSF has taken some steps forward to address the importance of team science in some multi-disciplinary awards, we feel that appropriations report language that specifically mentions the importance of team science would build on this existing momentum and further catalyze meaningful action.

For further reference, SIOP members served on the National Academies’ Committee on the Science of Team Science, which produced the 2015 report on this topic: <https://www.nap.edu/catalog/19007/enhancing-the-effectiveness-of-team-science>. Also, slides and recordings from NSF’s 2018 Accelerating Engineering Research Center Preparedness Workshop can be found at: <https://ercbiennial.asee.org/2018-pgw/program/>. SIOP members Drs. Steve Kozlowski and Kara Hall present on team science.

#### *Requested Report Language*

*Team Science.—NSF is encouraged to continue to seek ways to implement the science of team science to improve scientific collaboration as the agency develops new models and approaches for funding large-scale and cross-disciplinary research projects. 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.*<sup>2</sup>

Thank you for the opportunity to offer SIOP’s support for NSF. Please do not hesitate to contact SIOP should you have any questions. Additional information is also available at [www.siop.org](http://www.siop.org).

[This statement was submitted by Dr. Steven Rogelberg, President, and Tracy L. Vanneman, Executive Director.]

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#### PREPARED STATEMENT OF THE SOCIETY FOR NEUROSCIENCE

##### SUPPORT OF FISCAL YEAR 2022 APPROPRIATIONS FOR THE NATIONAL SCIENCE FOUNDATION

Chair Cartwright, Ranking Member Aderholt, and Members of the subcommittee, on behalf of the Society for Neuroscience (SfN), we are honoured 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 \$10.2 billion, an increase of approximately \$1.7 billion, in funding for NSF in fiscal year 2022. Dr. Moses Chao and I, as Chair of the Government and Public Affairs Committee and President of SfN respectively, understand the critical importance of Federal funding for neuroscience research in the United States. I currently serve as a researcher and as a Professor in the Department of Psychology at Cambridge University and Dr. Chao is a professor of Cell Biology, Physiology and Neuroscience, and Psychiatry at the New York University School of Medicine. Our research serves as two examples of the wide variety of neuroscience research advancing our collective understanding of the brain.

My own research focuses on the neural and psychological basis of drug addiction and is dedicated to understanding the maladaptive engagement of the learning, memory, and motivational mechanisms underlying compulsive drug use. Drug abuse and addiction have devastating consequences at the individual, family, and society levels, as clearly evidenced by the opioid crisis and also increased alcohol drinking during pandemic lockdowns. My research group made significant advances in showing structural and neurochemical changes in the brain associated with behavioral

<sup>1</sup> <https://appropriations.house.gov/sites/democrats.appropriations.house.gov/files/FY2020%20CJS%20CJS%20Filed%20Report%20-%20HR3055.pdf>

<sup>2</sup> <https://www.nap.edu/catalog/19007/enhancing-the-effectiveness-of-team-science>

impulsivity confer a major risk on vulnerability to develop cocaine addiction. We also demonstrated the neural circuit basis of the transition from recreational to the compulsive use of opioids, stimulants, and alcohol, revealing commonalities as well as differences in the neural basis of addiction to these drugs. This understanding opened the door to the development of novel pharmacological and psychological treatments for addiction which may promote and maintain abstinence from drug use.

Dr. Chao's research efforts focus on growth factors (also called neurotrophins) in the brain. These proteins are crucial for everything from neuron differentiation, growth, and survival during development to learning and memory in children and adults. Deficits in neurotrophins are involved in neurodegenerative disorders such as Alzheimer's, Parkinson's and Huntington's diseases, and Amyotrophic Lateral Sclerosis (ALS), as well as limiting recovery after stroke or brain injury.

Dr. Chao and I cover different areas of neuroscience research, though we have come together to convey the need for further and ongoing investment in neuroscience research. SfN believes strongly in the research continuum: basic science leads to clinical innovations, which lead to translational uses positively impacting the public's health. Basic science is the foundation upon which all health advances are built. To cure diseases, we need to understand them through fundamental discovery-based research. However, basic research depends on reliable, sustained funding from the Federal Government. SfN is grateful to Congress for its support of the important mission of the NSF, which includes a focus on promoting the progress of science and advancing the National health, prosperity, and welfare, through increased appropriations in recent years.

#### THE IMPORTANCE OF THE RESEARCH CONTINUUM

NSF funding for basic research is critical for facilitating groundbreaking discoveries and for training researchers at the bench. For the United States to remain a leader in biomedical research, Congress must continue to support basic research fueling discoveries as well as the economy. The deeper our grasp of basic science, the more successful those focused on clinical and translational research will be. We use a wide range of experimental and animal models not used elsewhere in the research pipeline. These opportunities create discoveries—sometimes unexpected discoveries—expanding knowledge of biological processes, often at the molecular level. This level of discovery reveals new targets for research to treat all kinds of brain disorders that affect millions of people in the United States and beyond.

NSF basic research funding is also a key economic driver of science in the United States through funding universities and research organizations across the country. Federal investments in scientific research fuel the Nation's pharmaceutical, biotechnology and medical device industries. The private sector utilizes basic scientific discoveries funded through NSF to improve health and foster a sustainable trajectory for American's Research and Development (R&D) enterprise. Basic science generates the knowledge needed to uncover the mysteries behind human diseases, which leads to private sector development of new treatments and therapeutics. This important first step is not ordinarily funded by industry given the long-term path of basic science and the pressures for shorter-term return on investments by industry. Congressional investment in basic science is irreplaceable in the pipeline for development of drugs, devices, and other treatments for brain-related diseases and disorders.

Another example of NSF's success in funding neuroscience is the Brain Research through Advancing Innovative Neurotechnologies (BRAIN) Initiative. A part of the research landscape in neuroscience, the BRAIN Initiative has been critical in promoting future discoveries across neuroscience and related scientific disciplines. By including funding in 21st Century Cures, Congress helped maintain the momentum of this endeavor. Note, however, using those funds to supplant regular appropriations would be counterproductive. There is no substitute for robust, sustained, and predictable funding for NSF. SfN appreciates Congress' ongoing investment in the BRAIN Initiative and urges its full funding in fiscal year 2022. Some recent exciting advancements in NSF funded neuroscience research include the following:

#### *Increasing happiness through new experiences*

As COVID-19 has affected Americans' daily routines, NSF-funded research may point the way towards strategies to improve people's moods. In a study conducted before the pandemic, participants wore GPS trackers for several months and reported on their mood throughout each day. The researchers found a correlation between a more positive mood and days when participants went to more locations outside of their daily routine. When people had more variability in their day, they were more likely to report feeling "happy," "relaxed," or "excited." A follow-up study look-

ing at functional magnetic resonance imaging (fMRI) scans of participants' brains found these positive changes in mood are driven by communication between the hippocampus, the part of the brain that maps the environment, and the striatum, which plays a key role in reward. This work suggests adding a variety of experiences, even something as simple as a walk around the neighborhood, to our daily lives may be critical to maintaining a positive outlook.

*Understanding the origins of creativity*

Music, art, and other creative activities are fundamental endeavors to the human experience. Where this creativity comes from in the human brain and how it is controlled, however, is a question of great debate. Researchers funded by the NSF sought to answer this question by studying jazz guitarists performing while wearing electroencephalography (EEG) caps to measure their brain activity. These guitarists, who ranged in experience from novices to professionals, were asked to improvise several performances, which were recorded and judged by experts. Brain-activity data showed less-experienced guitarists relied more on right frontal hemisphere structures associated with conscious control over activity, while more-experienced participants had more activity in structures associated with the default mode network, suggesting their performances require less active control. This suggests as a creative endeavor is improved, the brain switches from conscious monitoring of the activity to a more automatic reliance on what has already been learned. This baseline knowledge reduces the active concentration an expert will need for these learned skills, allowing for more cognitive resources to be devoted to the creativity of their output.

COVID-19 IS A CHALLENGE AND OPPORTUNITY FOR NEUROSCIENCE RESEARCH

Unfortunately, the COVID-19 pandemic has slowed progress in neuroscience research, with social distancing requirements hampering ongoing research related to the brain. Investment in neuroscience research, including on the neurological aspects of the SARS-CoV-2 virus and the COVID-19 pandemic itself is needed though cannot be allowed to eclipse or replace regular funding for neuroscience research. We urge you to identify ways to ensure the funding surge needed to address the COVID-19 emergency does not slow progress on other important and innovative research, including the groundbreaking research in neuroscience and mental health. SfN encourages the subcommittee to fund basic research on the biology of how COVID-19 impacts brain function as well as impacts the virus has on the nervous system in preclinical models and, by extension, on humans. In doing so, SfN encourages Congress and the NSF to prioritize intentional collaboration and coordination to effectively allocate scarce resources so researchers can investigate all facets of infectious and non-infectious disease.

Ongoing research already demonstrates the need for scientists to examine the neurological impacts of COVID-19. While mortality due to SARS-CoV-2 may be primarily due to its effects on the lungs, it is now apparent the virus damages many other organs, including the central nervous system. We need to understand how these direct and indirect effects on other organ systems are producing chronic diseases and long-term disability, making people more susceptible to other chronic disorders covered by the different NIH Institutes. A recent study (Lancet article, Taquet et al 2021) shows an increased risk of anxiety, depression, post-traumatic stress disorder, and insomnia were reported after COVID-19 diagnosis. These data, though incomplete, suggest brain impairment may be associated with COVID-19 infection. Furthermore, it was found people with two copies of the risk gene for Alzheimer's disease were more likely to have severe COVID-19 (Kuo et al J. Gerontology 2020). These findings, coupled with incidents of memory loss, brain fog and hallucinations reported in the New York Times (3/23/21) illustrates a need for increased resources to study the impact of this virus on the peripheral and central nervous systems, as well as the immune and inflammatory systems. The COVID-19 public health emergency provides an important example of the critical need for collaborative research and coordinating data and resources across institutes. A balanced and collaborative research effort across institutes will likely be the path toward solving these multiple issues.

CONGRESS & NSF MUST SUPPORT ACCESS TO MODELS NECESSARY FOR NEUROSCIENCE DISCOVERY

Adequate NSF funding is necessary to advancing our understanding of the brain; however, full realization of this funding's promise requires appropriate access to research models, including non-human primate and other animal models. Animal research is highly regulated to ensure ethical and responsible care and treatment of

the animals. SfN and its members take their legal and ethical obligations related to this research very seriously. While SfN recognizes the goal of the reduction, refinement, and eventual replacement of nonhuman primate models in biomedical research, much more research and time is needed before such a goal is attainable. Premature replacement of non-human primate and other animal models may delay or prevent the discovery of treatments and cures-not only for neurological diseases like Alzheimer's disease, addiction, and traumatic brain injury, but also for communicable diseases and countless other conditions. There are currently no viable alternatives available for studying biomedical systems advancing our understanding of the brain and nervous system; or when seeking treatments for diseases and disorders like depression, addiction, Parkinson's Disease, and emotional responses. This research is critically important and presents an opportunity to benefit countless people around the world. SfN urges Congress to work with the NSF to ensure this important research can continue.

#### FUNDING IN REGULAR ORDER

SfN joins the biomedical research community supporting an increase in NSF funding to at least \$10.2 billion, a \$1.7 billion increase over FY21. This proposed increase is necessary to provide certainty to the field of science, allowing for the exploitation of new scientific opportunity, additional training of the next generation of scientists, increased economic growth and further improvements in the public's health. Equally as important as providing a reliable increase in funding for biomedical research is ensuring funding is approved before the end of the fiscal year. Continuing Resolutions have significant consequences on research, including restricting NSF's ability to fund grants. For some of our members, this means waiting for a final decision to be made on funding before knowing if their perfectly scored grant would in fact be realized or operating a lab with 90 percent of the awarded funding until appropriations are final. This negatively impacts all the positive benefits research provides the field. SfN strongly supports the appropriation of NSF funding in a timely manner which avoids delays in approving new research grants or causes reductions in funding for already approved research funding.

SfN thanks the subcommittee for your strong and continued support of biomedical research and looks forward to working with you to ensure the United States remains the global leader in neuroscience research and discovery. Collaboration among Congress, the NSF, and the scientific research community has created great benefits for not only the United States but also people around the globe suffering from brain-related diseases and disorders. On behalf of the Society for Neuroscience, we urge you to continue this critical cooperation and support of biomedical research.

[This statement was submitted by Barry Everitt, Sc.D., F.R.S., President, and Moses Chao, PhD, Chair, Government and Public Affairs Committee.]

PREPARED STATEMENT OF THE TRIBAL LAW AND POLICY INSTITUTE

DEPARTMENT OF JUSTICE

On behalf of the Tribal Law and Policy Institute (TLPI), this testimony addresses important programs in the Department of Justice (DOJ). First, TLPI joins the American Bar Association (see attached letter) in requesting substantially increased funding for Tribal courts in response to the \$1.2 billion annual shortfall for Tribal courts as identified in the Bureau of Indian Affairs (BIA) 2020 report to Congress, *Report to the Congress on Spending, Staffing, and Estimated Funding Costs for Public Safety and Justice Programs in Indian Country, 2018*.

Secondly, TLPI joins the National Congress of American Indians (NCAI) in requesting:

Program	NCAI Fiscal Year 2022 Request
DOJ: Tribal Grants: Eliminate competitive grant funding process and utilize Justice Department appropriations as base funding so that Tribal nations determine their own priorities.	Use DOJ appropriations as base funding.
DOJ: Tribal Set-Aside from Office of Justice Programs (OJP) ..	Create a 10 percent Tribal set-aside for all discretionary OJP programs.
DOJ: Tribal Set-Aside from Crime Victims Fund .....	Create a 5 percent set-aside for Tribal governments.
DOJ: Tribal Youth Program under the Juvenile Accountability Block Grants program.	\$25,000,000
DOJ: Tribal Civil and Criminal Legal Assistance (TCCLA) Grant.	\$3,000,000
DOJ: Community Oriented Policing Services (COPS) Tribal Law Enforcement.	\$52,000,000
DOJ: OVW Tribal programs under the Violence Against Women Act (VAWA).	Fully fund all VAWA-authorized programs including the Sexual Assault Clearinghouse and \$5,000,000 for Tribal implementation of VAWA special domestic violence criminal jurisdiction.

TLPI is a 100 percent Native American operated non-profit corporation organized to design and deliver education, research, training, and technical assistance programs which promote the enhancement of justice in Indian country and the health, well-being, and culture of Native peoples. TLPI focuses on collaborative programs that provide critical resources for Tribal court systems and other programs involved in promoting improvement of justice in Indian country.

The Federal Government's trust responsibility to Tribal nations is at the heart of TLPI's recommendation to follow NCAI's fiscal year 2022 Indian country budget request. Like all other governments, Tribal nations are responsible for the protection and care of their citizens, residents, and visitors on Tribal lands. Through treaties and other agreements, Tribal lands were ceded in exchange for the promise of protected self-governance and adequate resources from the United States. Those promises are the foundation of the government-to-government relationship that exists today.

Part of the Federal trust responsibility to Indian Tribes includes basic governmental services in Indian Country, funding for which is appropriated in the discretionary portion of the Federal budget. Tribal governments protect and preserve their unique cultures, identities, and natural environments for future generations. As governments, Tribes must deliver a wide range of critical services, such as education, workforce development, youth programs, and first-responder and public safety services, to their citizens. The Federal budget for Tribal governmental services reflects the extent to which the United States honors its promises to Indian people—and to date, those promises have not been truly honored.

Tribal justice systems historically have been under-funded and continue to be under-funded in most Tribal communities. In 1991, the United States Civil Rights Commission found that “the failure of the United States Government to provide proper funding for the operation of Tribal judicial systems . . . has continued for

more than 20 years.”<sup>1</sup> In 2014, the Attorney General’s Advisory Committee on American Indian and Alaska Native Children Exposed to Violence noted that Department of Justice (DOJ) funding for Tribal justice systems has been consistently decreasing in recent years.<sup>2</sup> The Indian Law and Order Commission (ILOC) noted that in addition to funding shortfalls, DOJ’s short-term, competitive funding approach is deficient because it reflects Federal priorities rather than Tribal ones, favors hired grant-writers, requires Tribes to compete against each other, and offers only 3-year programs that often leave Tribes with staff turnover and short-term programs.<sup>3</sup>

Further, the Civil Rights Commission continued reporting on this topic with *A Quiet Crisis: Federal Funding and Unmet Needs in Indian Country* in 2003 and *Broken Promises: Continuing Federal Funding Shortfall for Native Americans* in 2018. *Broken Promises* found that “Federal funding for Native American programs across the government remains grossly inadequate to meet the most basic needs the Federal Government is obligated to provide . . . . Since 2003, funding for Native American programs has mostly remained flat, and in the few cases where there have been increases, they have barely kept up with inflation or have actually resulted in decreased spending power.”<sup>4</sup>

Finally, in 2020, the BIA submitted a report to Congress, *Report to the Congress on Spending, Staffing, and Estimated Funding Costs for Public Safety and Justice Programs in Indian Country, 2018*. The total annual estimated need for Tribal public safety and justice programs included \$1.3 billion for Tribal law enforcement and \$1.2 billion for Tribal courts. According to the same report, BIA funding only meets 14.7 percent of estimated need. Leaving Tribes to fight for short-term funds via competitive grant processes, many administered by the DOJ.

DOJ funding across programs affecting Indian country should be dramatically increased and the distribution mechanism modified. As nations, Tribes should not have to compete for short-term grants that reflect Federal priorities. Rather, funds should be allocated as flexible base funding.

*Create a 10 percent Tribal allocation across all Office of Justice Programs (OJP) programs.*—A 10 percent OJP Tribal set-aside would simplify the Federal funding process by which Tribal nations receive resources to establish Tribal courts; assist in developing detention facilities; provide legal assistance; develop and maintain juvenile delinquency prevention programs; and provide substance abuse prevention programs. Further, the Tribal set-aside provides Tribes the flexibility to develop a comprehensive strategy on public safety and justice needs. It also would create new opportunities for coordinating BIA and DOJ funding to reduce inefficiencies and unnecessary administrative costs.

*Include Tribal governments in disbursements from the Crime Victims Fund.*—The Crime Victims Fund (CVF) is the Federal Government’s primary funding source for providing services to victims of crime. Unlike State and territorial governments, which receive an annual formula distribution from the CVF, Indian Tribes were only able to access CVF funds via pass-through grants at the discretion of the States or by competing for very limited resources administered by the DOJ. This system left a significant unmet need in most Tribal communities—communities where crime victimization rates far exceed the National average.

For the past 4 years, Congress has directed a portion of the overall disbursements from the CVF to Tribal nations. The 5 percent Tribal set-aside included in the fiscal year 2021 appropriations bill will direct \$100.75 million to support and improve crime victim services on Tribal lands. This funding greatly impacts crime victims’ services infrastructure on Tribal lands, and it is imperative that it be appropriated on an annual basis to sustain the programs and services that will be developed. TLPI urges the committee to keep disbursements from the CVF at the increased level and to direct an amount equal to 5 percent of overall CVF disbursements to Tribal governments on a non-competitive basis.

*If Congress declines to adopt the flexible 10 percent set-aside across OJP programs, restore fiscal year 2010 levels of \$25 million in funding for the Tribal Youth Program (TYP) under the Juvenile Accountability Block Grants Program.*—Native youth liv-

<sup>1</sup>United States Commission on Civil Rights, *The Indian Civil Rights Act: A Report of the United States Commission on Civil Rights* 71 (June 1991).

<sup>2</sup>Attorney General’s Advisory Committee on American Indian and Alaska Native Children Exposed to Violence, U.S. Dep’t of Justice, *Report of the Advisory Committee on American Indian and Alaska Native Children Exposed to Violence: Ending Violence So Children Can Thrive* 53 (November 2014).

<sup>3</sup>Indian Law and Order Commission, *A Roadmap for Making Native America Safer: Report to the President & Congress of the United States* 83 (2013).

<sup>4</sup>United States Commission on Civil Rights, *Broken Promises: Continuing Federal Funding Shortfall for Native Americans*, 4 (December 2018).

ing in Indian country face numerous overlapping barriers to safety, wellness, academic achievement, and positive youth development. Barriers occur at the individual, family, community, and regional levels, resulting in disproportionate involvement with juvenile justice, child welfare, and other youth-serving systems. Today's Native youth continue to face the effects of collective intergenerational and historical traumas.

TYP is the first OJJDP program dedicated to prevention, intervention, and juvenile justice system improvement in Native communities. The need for the program can be demonstrated by the application rates within the last 5 years. For the majority of those years, the DOJ Coordinated Tribal Assistance Solicitations, Purpose Area 9 (TYP) received some of the highest number of grant applicants and categorically received the least amount of funding. Further exacerbating the issue, TYP is currently funded at some of its lowest levels since its establishment in the 1990s. This is despite an increase in funding in fiscal year 2021, the first increase in 3 years. Due to this decreased funding, hundreds of Tribes across the United States are left grappling with how to ensure that their most cherished resource is provided equal opportunity as other youth in this country to heal, thrive, and realize their life potential. Funding for the TYP should, at minimum, be restored to its fiscal year 2010 level of \$25 million.

*Fund the Tribal Civil and Criminal Legal Assistance, Training and Technical Assistance (TCCLA) grant program at a level of \$3 million.*—The Indian Tribal Justice Technical and Legal Assistance Act of 2000 (Public Law 106–559) authorized DOJ to award grants to non-profit entities, such as the 25 Indian Legal Services programs connected with the Legal Services Corporation (LSC), to provide civil and criminal legal assistance to both Tribal governments and their justice systems and to individual indigent Tribal citizens. Services impacted by this funding include domestic violence, pro se assistance, re-entry and expungements, child welfare, free legal clinics and toll-free hotlines, and much more.

*Increase funding of Tribal law enforcement programs under DOJ's Community Oriented Policing Services (COPS) Grants to \$52 million.*—Since its inception, the COPS Office has awarded more than 2,000 grants totaling over \$400 million to Tribes to hire more than 1,700 new or redeployed law enforcement officers. It has helped Tribes obtain necessary law enforcement training, equipment, vehicles, and technology. The COPS Office has also become one of the primary resources available to Tribal law enforcement agencies attempting to develop and maintain policing infrastructure and upgrade outdated equipment. Yet, there is still substantial unmet need within Tribal justice systems for more COPS funding.

*Fully fund the programs authorized in the Violence Against Women Act (VAWA), including the funds authorized for the Sexual Assault Clearinghouse and Tribal implementation of VAWA special domestic violence criminal jurisdiction.*—It is estimated over 85 percent of American Indian and Alaska Native women will experience violent victimization in their lifetimes.<sup>5</sup> OVW provides funding to Tribal governments to address violence against women in their communities. OVW's largest source of funding for Tribal governments is the Grants to Tribal Governments Program, which is funded via statutory allocations from other OVW programs. Fully-funding these OVW programs results in full funding for the Grants to Tribal Governments Program and for the implementation of Special Domestic Violence Criminal Jurisdiction.

#### CONCLUSION

Thank you for your consideration of this testimony.

[This statement was submitted by Gerald Gardner, Executive Director.]

#### PREPARED STATEMENT OF THE UNITED STATES SECTION OF THE PACIFIC SALMON COMMISSION

##### FISCAL YEAR 2022 BUDGET FOR THE NATIONAL MARINE FISHERIES SERVICE

Mr. Chairman, and Honorable Members of the Committee, I am W. Ron Allen, the Tribal Commissioner and Chair for the U.S. Section Budget Committee of the Pacific Salmon Commission (PSC). I am also the Tribal Chairman/CEO of the Jamestown S'Klallam Tribe located on the Olympic Peninsula of Washington State.

<sup>5</sup>U.S. Department of Justice, *Violence Against American Indian and Alaska Native Women and Men: 2010 Findings from the National Intimate Partner and Sexual Violence Survey 2* (2016).

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 intended for the programs to fulfill national commitments created by the revised Treaty Annex Chapters was \$39,500,000 in the fiscal year 2021 budget. The U.S. Section recommends fiscal year 2022 funding of \$43,500,000 to implement national commitments created by the Treaty. This represents a \$4,000,000 increase from fiscal year 2021 funding levels.

The Department of Commerce principally funds programs conducted by the States of Washington, Oregon, Idaho and Alaska and the NMFS. However, the cost of programs conducted by the States to fulfill national commitments created by the Treaty continue to be substantially greater than the funding provided in the NMFS budget. Consequently, the States have supplemented the Federal Treaty appropriations from other sources, including State general funds. Many of those funding sources are limited or no longer available and this has been exacerbated by the ongoing global pandemic.

The \$20,000,000 increase in the fiscal year 2020 budget and the \$5,000,000 in the fiscal year 2021 budget were greatly appreciated, however it falls short of what the U.S. Section estimates is needed to fully implement the revised Annex Chapters to the Pacific Salmon Treaty.

The U.S. Section recommends that the Pacific Salmon Treaty line item in the Salmon Management Activities section of the NMFS budget be funded at \$43,500,000 for fiscal year 2022. This line item includes \$14,730,000 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 \$13,460,000 for hatchery conservation programs and habitat restoration for Puget Sound critical stocks, \$3,910,000 for Southeast Alaska Chinook Salmon mitigation, and \$5,540,000 to increase prey availability for Southern Resident Killer Whales. The recommended funding also includes \$5,850,000 for sound science initiatives to fill key science gaps and improve fishery management effectiveness. The recommended funding also helps meet requirements of the biological opinion for species listed as endangered or threatened under the Endangered Species Act.

The U.S. Section 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 25 Treaty Tribes conduct projects selected in a rigorous competitive process.

The International Fisheries Commissions line, under Regional Councils and Fisheries Commissions in the NMFS budget was funded at \$457,000 in fiscal year 2021 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 about \$463,000 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 fiscal year 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 commitments created by the Treaty, as costs and complexity increased over time, the States had to augment Federal funding with other Federal and State resources. However, alternative sources of funding have seen reductions or, in some cases, have been eliminated. The increases of \$20,000,000 for fiscal year 2020 and \$5,000,000 for fiscal year 2021 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 also require commitments to increase efforts to improve upon current management strategies for numerous salmon populations.

Finally, you should consider the fact 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 value of these fish to the 25 Treaty Tribes in Washington, Oregon, Idaho and Alaska goes far beyond their monetary value, to the cultural and religious lives of American Indian and Alaska Native peoples. A significant monetary investment is focused on salmon due to the listings of Pacific Northwest salmon populations under the Endangered Species Act.

Given these resources, the U.S. Section will continue to utilize the Pacific Salmon Commission process to develop recommendations that help with the development and implementation of solutions to minimizing impacts on listed stocks. We will continue to work towards the true intent of the Treaty, and with your support, we will manage this shared resource for mutual enhancements and benefits.

This concludes the statement of the U.S. Section of the Pacific Salmon Commission submitted for consideration by your Committee. We wish to thank the Committee for the support given to us in the past. Please let us know if we can supply additional information or respond to any questions the Committee Members may have.

Thank you.

[This statement was submitted by W. Ron Allen, Chair.]

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#### PREPARED STATEMENT OF THE WESTERN GOVERNORS' ASSOCIATION

Chair Shaheen, Ranking Member Moran, and Members of the subcommittee, the Western Governors' Association (WGA) appreciates the opportunity to provide testimony on two items within the jurisdiction of the subcommittee on Commerce, Justice, Science, and Related Agencies, both of which relate to the U.S. Department of Commerce. WGA is an independent organization representing the Governors of the 22 westernmost States and territories. The Association is an instrument of the Governors for bipartisan policy development, information-sharing and collective action on issues of critical importance to the western United States.

Western Governors support adequate and dedicated funding for the National Integrated Drought Information System (NIDIS) program under the National Oceanic and Atmospheric Administration (NOAA). WGA is well-acquainted with the significant environmental, economic, and social effects of drought on the West and its communities. Drought contributes to the incidence of forest and rangeland wildfire, impairs ecosystems and wildlife habitat, degrades agricultural productivity, and poses threats to municipal and industrial water supplies. A growing population's dependence on limited water resources creates challenges for water management across the West, from the Great Plains to the Intermountain West to the coastal, estuarine and marine environments of the Pacific States and islands. Planning for an adequate, reliable and clean water supply requires accurate and complete water and weather information.

NIDIS promotes a coordinated and integrated approach to managing future drought. This approach involves improved forecasting and monitoring to provide the kind of authoritative, objective and timely drought information that farmers, water managers, decision-makers, and local governments require for effective drought

preparation and response. Through NIDIS, NOAA is building a network of early warning systems for drought while working with local resource managers to identify and address unique regional drought information needs.

Western Governors value the approach used to build and improve NIDIS. Rather than creating a new NIDIS bureaucracy, the system draws from existing capacity in States, universities and multiple Federal agencies, as called for in the original authorizing legislation. Given our shared fiscal challenges, WGA regards this as a model for Federal-State collaboration in shared information services.

Water users throughout the West—including farmers, ranchers, Tribes, land managers, business owners, recreationalists, wildlife managers, and decision-makers at all levels of government—must be able to assess the risks of drought before its onset to make informed decisions and implement effective mitigation measures. For these reasons, Western Governors request continued support and adequate funding for the National Weather Service River Forecast Centers and Weather Forecast Offices and the NIDIS program, which perform a valuable role in western water management and drought response.

Many western communities, especially Tribal communities, lack access to broadband internet due to the high cost of infrastructure and the economic realities of serving low customer densities in potential service areas. This has left many rural businesses at a competitive disadvantage and citizens without access to telework, telemedicine and distance learning opportunities. Consequently, Western Governors support opportunities to improve connectivity on rural and Tribal lands and efforts to leverage State expertise through State block grants. The Governors appreciate the increased funding allocated to Tribal and State projects within the National Telecommunications and Information Administration (NTIA) last fiscal year, including funding to mitigate the effects of COVID-19 and the new Tribal Broadband Connectivity Program. The Governors look forward to engaging with NTIA on this funding and stand ready to implement projects for the benefit of rural and Tribal communities,

Deployment of broadband infrastructure to these underserved and unserved communities requires an accurate picture of nationwide broadband availability. Western Governors applaud recent efforts to address the accuracy of broadband data coverage measurements through the Federal Communications Commission's (FCC) Broadband Data Task Force and the Broadband Deployment Accuracy and Technological Availability Act, known as the Broadband DATA Act, and support continued investment in these efforts. WGA also encourages coordination of data collection strategies among the Federal Communications Commission, U.S. Department of Agriculture and other agencies involved in broadband mapping and deployment.

Western Governors recognize the enormous challenge you have in balancing competing funding priorities, and we appreciate the difficulty of the decisions the subcommittee must make. These recommendations are offered in a spirit of cooperation and respect, and WGA is prepared to assist you as the subcommittee discharges its critical and challenging responsibilities.

[This statement was submitted by James D. Ogsbury, Executive Director.]

#### PREPARED STATEMENT OF THE WESTERN STATES WATER COUNCIL

##### NOAA/NWS U.S. WEATHER RESEARCH PROGRAM APPROPRIATIONS

On behalf of the Western States Water Council (WSWC), a government entity advising the governors of 18 States, we wish to express our strong support for a \$15 million increase in the U.S. Weather Research Program line item within the National Oceanic and Atmospheric Administration's (NOAA) Fiscal Year 2022 appropriation for the National Weather Service (NWS), Office of Oceanic and Atmospheric Research (OAR) account.

The Weather Research and Forecasting Innovation Act of 2017 (Public Law 115-25), reauthorized in 2019 along with the National Integrated Drought Information System (NIDIS), directed NOAA to "collect and utilize information in order to make usable, reliable, and timely foundational forecasts of subseasonal and seasonal [S2S] temperature and precipitation." The statute further required submission of a report to Congress that described "specific plans and goals for the continued development of the subseasonal and seasonal forecasts" and "an identification of research, monitoring, observing, and forecasting requirements" needed to meet the statutory goals.

In 2020, the NWS submitted to Congress the report, *Subseasonal and Seasonal Forecasting Innovation: Plans for the Twenty-First Century*. The report outlines current uses of NOAA S2S products and services, and how NOAA plans to improve the usability and transference of data, information, and forecasts. Developed with input

from Federal, regional, State, Tribal, and local government agencies, research institutions, and the private sector, the report outlines innovations needed to achieve two goals for improving products and services: (1) improving the skill of the official S2S forecasts; and (2) enhancing the value of S2S products for stakeholders.

The report recommended a number of pilot projects, including one for improving forecasts of winter precipitation (which provides the snowpack sustaining water supplies in mountain areas) in the West, and one for spring/summer precipitation forecasts for agricultural water supply in the Plains States. Another was recommended for Arctic sea ice and one for tropical cyclones.

The WSWC urges the subcommittee to provide resources to start the western pilot project to improve S2S precipitation forecasting to support water management. In fiscal year 2021 NOAA's Weather Research Program line item was budgeted at \$26.5 million. The fiscal year 2022 President's budget request is \$26.7M. A \$15 million investment in S2S pilot projects would be on par with NOAA's successful Hurricane Forecast Improvement Project (HFIP).

Much of the West is currently experiencing unprecedented drought conditions. Currently, nearly all of our 18 member States are suffering from severe to exceptional drought, with half afflicted by the latter, the driest condition represented on the U.S. Drought Monitor scale ([www.drought.gov](http://www.drought.gov)). Agricultural interests are hit hardest as crops, feed, and forage deteriorate and rise in cost, threatening farmers, ranchers, and dairies. In some cases, producers are culling herds. Municipal water shortages are also possible, particularly for rural communities. Dry, hot, and windy weather combined with dried out vegetation has wildfires on the rise.

The scientific insights, data, and tools that the S2S pilot projects promise would help agricultural, rural, and urban water and land managers make better decisions. Better forecasts will provide private and public decisionmakers with longer lead times than are currently feasible to implement mitigation policies and programs. This would help to protect surface and ground-water supplies and provide greater certainty to farmers and ranchers who must make important crop, livestock, and conservation decisions now without reliable extended precipitation forecasts.

Current skill in S2S precipitation forecasting is not adequate to support water management decision-making, and a priority need to be placed on improving S2S forecasting capabilities. Water is the life-blood of the West, which experiences far greater variability in annual precipitation than does the eastern half of the country. Managing water in the West is about managing for the extremes of droughts and floods, and the need to store water when available to manage it during drier times for cities, farms, energy, and the environment. Better longer-term precipitation forecasts are a necessary tool for more efficient water resource management. Will this summer (or next winter) be wet or dry? This is a critical question asked every year by State, local, Federal, and Tribal water managers, as well as by cities, farmers, and hydroelectric powerplant operators.

Although the skill of conventional short-term weather forecasts (which go out as far as two weeks) has improved over the past several decades, the same cannot be said for the critical longer-term forecasts important for water management. These longer S2S forecasts span time periods of several weeks out to one or 2 years. The NWS's Climate Prediction Center (CPC) has minimal skill when producing available S2S forecasts.

As documented by NOAA's National Centers for Environmental Information, disasters at both wet and dry extremes of the hydrologic cycle are responsible for billions of dollars in losses. With better S2S forecasts, water managers can better prepare for and respond to drought and flooding, reducing loss of lives and property, as well as economic and environmental losses. Similarly, decision makers in agriculture, fisheries, hydroelectric power generation, and emergency management sectors share a common interest in more skillful and useful forecasts.

Lead time is critical in making water management decisions. Longer lead times are especially useful in planning and managing for the extremes of droughts and floods. Skillful S2S forecasts would inform and allow for more efficient operation of dams and reservoirs, balancing competing objectives of flood control and water storage. Absent good predictive capability, weeks ahead, reservoir operators must manage risk as conservatively as possible to ensure that space will be available to hold winter-spring runoff and manage floods. Better forecasts would allow operators to store more water for use during drought, while still providing flood protection—the equivalent of developing new water supplies at minimal cost. There are opportunities for improving S2S forecasting, but historically there has been a S2S research investment gap between conventional numerical weather modeling and century-scale climate modeling. Significant scientific progress has been achieved at the

weather and century-scale ends of this spectrum, thanks to ongoing Federal investments, but much remains to be done at the S2S scale.

According to the American Meteorological Society, the skill of 5- to 6-day NWS temperature forecasts in 2012 is equivalent to that of 3- to 4-day forecasts in 1992. Also, substantial Federal support from 1990 onwards for the U.S. Global Change Research Program resulted in major progress in developing increasingly complex climate models. However, similar progress and investment have not occurred at the S2S time scale so important for western water management. Improving S2S precipitation forecasting is a scientifically challenging subject that will require a commitment of dedicated, sustained funding. There is no silver bullet for S2S forecasting improvement, but the necessary ingredients for making progress include investment in all aspects of the subject (human resources, high-performance computing, observing systems, and transition of research innovations to operations). Well-defined metrics and timelines for evaluating success, with a strong project management focused on outcomes, are needed.

Regional pilot projects in areas where NOAA's current predictive skill is minimal are key to accelerating advancement of forecasting skill. Pilots provide opportunities to test tools such as statistical models or hybrid statistical-dynamical tools that can enhance information provided by NOAA's dynamical models.

The international Colorado River Basin has experienced prolonged drought conditions, for over 20 years, resulting in declining reservoir elevations in Lake Mead and Lake Powell. Water agencies in the seven Colorado River Basin States have been taking unprecedented steps to manage the risk of shortage, including executing historic drought contingency plans with the Department of the Interior in 2019. Drought risk management programs in the contingency plans cost money and/or water. Skillful seasonal precipitation forecasts would help support decisions to balance costs against risks of shortage.

In 2015 NOAA released its first-ever service assessment for drought, for the California drought which had then completed its third year. NOAA assessments evaluate its performance after significant hydrometeorological, oceanographic, or geologic events. The assessments are triggered by factors such as major economic impacts to a large area or population, or extensive national public interest impacts. Assessments evaluate the effectiveness of products and services made available to stakeholders, to help NOAA continuously improve the services it provides. The drought assessment's top finding given the input received from numerous stakeholders emphasized the need for an improved seasonal prediction capability focused on cool-season mountain precipitation, both in California and in the Colorado River Basin. "A majority of the stakeholders interviewed for this assessment noted one of the best services NOAA could provide is improved seasonal predictions with increased confidence and better interpretation."

NOAA's CPC seasonal precipitation products are national in scale and are not designed to provide regional forecast information—information which is most relevant to decision makers. For instance, State and Federal officials managing California's water supply have a major unmet need for skillful predictions targeted at cool-season snowpack for the Sierra Nevada Mountains.

Improving the skill of S2S precipitation forecasting to make it usable for water resources management is scientifically challenging. In 2016, the National Academy of Sciences released a report on a national research agenda for improving S2S forecasting. The report provided a vision for S2S forecasts that could be as widely used in the next decade as conventional weather forecasts are today. It identified key strategies and made 16 specific recommendations for a research agenda. It noted, "More skillful and useful S2S forecasts—developed through sustained engagement with users and advances in basic knowledge and technological capabilities—could radically improve the basis for decision making on S2S timescales. There are also emerging science and technical capabilities that make rapid advances in S2S forecasts more likely than envisioned even 5 years ago."

Preliminary experimental work being performed by NOAA's Earth Systems Research Laboratory (ESRL) under a contract with the California Department of Water Resources developed a preliminary statistical model for S2S precipitation using sea surface temperatures and sea level pressure. This work demonstrates a potential opportunity for improving S2S forecasting precipitation through NOAA investment in statistical modeling.

NOAA outlooks now rely heavily on the El Niño-Southern Oscillation (ENSO) as a source of predictability. NOAA's early winter forecast in 2014 called for a weak to moderate El Niño with above-normal precipitation for California. ENSO conditions were neutral and California had one of its driest years on record. In 2015, NOAA correctly predicted the onset of very strong El Niño conditions, but the expectation of a wet Southern California and dry Pacific Northwest was met with contin-

ued drought in Southern California and flooding in the Pacific Northwest, illustrating how much work remains to be done to improve seasonal forecasting.

NOAA's National Centers for Environmental Information (NCEI) tracks U.S. Billion-Dollar Weather and Climate Disasters (<https://www.ncdc.noaa.gov/billions>). The 2012 drought was the most extensive drought to affect the U.S. since the 1930s, with moderate to extreme drought conditions affecting more than half the country. Estimated losses totaled \$34.8 billion. Drought in the West and Plains States in 2013 caused an estimated \$11.7 billion in losses. In 2014 California suffered its worst drought of record, and together with other States, losses were estimated at \$4.4 billion. The western drought of 2015 cost \$5 billion and in 2016 a Southeast and Northeast drought cost \$3.8 billion. Similarly, drought costs across the Nation have been estimated at \$2.7 billion in 2017, \$3.1 billion in 2018, and \$4.5 billion in 2020. These numbers don't include related wildfire losses, or losses due to floods. This year the West is experiencing another drought, the costs of which will be significant.

Better S2S forecasts would help inform decision-making and help mitigate such losses. This \$15 million request for a pilot project to accelerate research and improve S2S predictive capabilities is a small investment, compared to the potential savings nationwide.

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#### PREPARED STATEMENT OF THE WESTERN STATES WATER COUNCIL

##### NASA'S APPLIED EARTH SCIENCE RESEARCH PROGRAMS

The Western States Water Council (WSWC) is a policy advisory body representing 18 States. Members are appointed by their respective governors. Since 1965, the WSWC has long been involved in western water conservation, development, protection, and management issues, as well as promoting development and advancement of earth science, particularly water-related data acquisition, management and dissemination.

The WSWC championed the placement of a thermal infrared (TIR) imager on Landsat 8 and the expedited construction and launch of Landsat 9 with TIR capabilities. We strongly support innovation to provide similar next generation National Land Imaging Program data—including thermal imaging capabilities—while exploring the potential for medium and longer-term advances in technology, design and future capabilities to meet existing and future uses. Landsat TIR data is used extensively by western States and others to measure and monitor agricultural and other outdoor water uses and needs. It is increasingly important for present and future management of our scarce water resources and is an excellent example of the application of basic science pioneered by the National Aeronautics and Space Administration (NASA).

In the West, the agricultural and water communities have benefited tremendously from the use of moderate resolution thermal satellite data to map out, measure and monitor consumptive water use. Agriculture is by far the largest consumer of water in the West, and better managing that use is an essential component of both water and food security, as well as sustainable economic development and environmental protection. Increasing demands for water related to growth and changing values are leading to more and more transfers of water from agriculture to other uses, with resulting challenges in maintaining viable rural agricultural communities. Many western States are using Landsat thermal data to protect water rights and manage water use.

NASA has identified the "water and energy cycle" and "water resources" as topics to support in the agency's research and applications programs respectively. The Council strongly supports and works cooperatively to advance linkages between NASA's capabilities and water managers' needs, working with NASA/JPL's Western Water Applications Office (WWAO). WWAO's mission is to "connect the drops" and improve how water is managed in the arid western U.S. by getting NASA science, data and technology into the hands of water managers and decision makers. Connection, data and innovation are at the heart of WWAO.

The Council urges the Congress to appropriate sufficient funds to support and enhance WWAO's and NASA's focus on research for water resources applications, as well as to promote long-term engagement with State and regional agencies in the western United States responsible for water management and water policy—so as to maximize benefits to the public from NASA's existing and future investments in Earth observations, Earth system models and systems engineering.

The WSWC also calls on the Congress to plan for and provide resources for long-term continuity of observations and the transition from research to operations

(R2O), such as the use of Landsat TIR sensor data. The Open Evapotranspiration (OpenET) software system and data platform is another example of the use of NASA TIRs data through an operational use partnership (<https://openetdata.org/>). OpenET is a collaboration involving scientists from Federal agencies and academic institutions using satellite and weather data to map consumptive water use/evapotranspiration (ET) at the individual field scale. Interferometric synthetic aperture radar (InSAR) is another tool that NASA has used to measure land subsidence due to groundwater extraction, and its use has been demonstrated as part of NASA's Airborne Snow Observatory (ASO) for estimating snowpack conditions. Additional airborne and spaceborne remote sensing research and observations have the potential to provide information on varied temporal and spatial scales that could with sustained engagement focus on the R2O transition and ultimately be useful for water resources planning, management and decision-making.

NASA's work with the California Department of Water Resources on applications for use of remote sensing information has demonstrated that the potential exists for repurposing data collected from certain present NASA missions for water management applications, and that additional potential exists for research applications with sensors planned in future Decadal Survey missions such as the NASA-ISRO Synthetic Aperture Radar (NISAR), which is designed to observe and take measurements of the planet's crust and disturbances, including subsidence due to groundwater pumping. The successful transfer of technology from the research domain to the applications domain is dependent, in part, on continuing communication between researchers and those responsible for resource management and policy decisions and a long-term commitment to maintaining such communication.

Much of the West is currently experiencing unprecedented drought conditions. Currently, nearly all of our 18 member States are suffering from severe to exceptional drought, with half afflicted by the latter, the driest condition represented on the U.S. Drought Monitor scale ([www.drought.gov](http://www.drought.gov)). Agricultural interests are hit hardest as crops, feed, and forage deteriorate and rise in cost, threatening farmers, ranchers, and dairies. In some cases, producers are culling herds. Municipal water shortages are also possible, particularly for rural communities. Dry, hot, and windy weather combined with dried out vegetation has wildfires on the rise. Western States are using NASA tools to monitor drought-related impacts and consumptive water uses and needs.

Thank you for the opportunity to express our support for various NASA programs and missions the application of which support western water management.

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#### PREPARED STATEMENT OF THE WILDLIFE CONSERVATION SOCIETY

##### 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 fiscal year 2022 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 Regional Ocean Data Portals within the Coastal Zone Management Grants and Services funding line.

WCS was founded with the help of Theodore Roosevelt in 1895 with the mission of saving wildlife and wild places worldwide. Today, WCS manages the largest network of urban wildlife parks in the United States. Visited by 4 million people annually, the network includes our flagship, the Bronx Zoo, as well as the New York Aquarium in Brooklyn. Globally, our goal is to conserve the world's most important wild places, focusing on 14 priority regions that are home to more than 50 percent 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 fiscal year 2022 Commerce, Justice, Science and Related Agencies appropriations bill to increase investments in the National Marine Sanctuaries Program, North Atlantic right whale conservation and regional ocean data portals.

*NOAA—National Marine Sanctuaries Program—\$84.503 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 14 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. It provides an opportunity for improved inter-agency coordination, as well as alignment, and synergy among existing and new laws, regulations, and mechanisms to enhance habitat protection. 30x30 can also provide a pathway to reconciliation of the issues of equity and justice that underlie conservation in this country by honoring and elevating the role of Indigenous Nations in any 30x30 strategy.

Although there are places that merit all protections that U.S. law can provide, working lands and busy waters also play a critical role in meeting the Nation’s 30x30 goals. As such, the National Marine Sanctuaries Program which balances conservation and sustainable use must be an integral part of the U.S. response. The program needs additional resources to support existing Sanctuaries as well as to initiate the public-facing, stakeholder-driven process to designate new Sanctuaries in areas that NOAA has determined are worthy of designation. While there is no Sanctuary in the New York Bight, 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 when a Sanctuary is designated. With increased resources from Congress, WCS looks forward to NOAA initiating the public-facing, stakeholder driven designation process for Hudson Canyon.

For these reasons, WCS supports the Biden-Harris Administration’s recommended investment of \$85.503m for the fiscal year 2022 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, \$20 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, 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.

Fewer than 360 North Atlantic right whales remain on Earth, with as few as 90 breeding-aged females. While the 17 newborn calves sighted this winter offer an emblem of hope, right whale deaths still outnumber births by a margin of three to two. We are facing an emergency situation: this species cannot recover without a signifi-

cant reduction to the high level of mortality they are currently experiencing, including from ship strikes in high trafficked areas such as New York and New Jersey waters. Scientists from the Wildlife Conservation Society, in collaboration with partners that include the Woods Hole Oceanographic Institution, monitor right whales and other marine mammals as they migrate through New York's busy waters. The New York Bight is used for shipping, fishing, and wind farm development, yet the impacts of these activities on whales is poorly understood. Eight million dollars out of \$20 million is needed to increase investments in research, monitoring and management related to vessel strikes 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—Coastal Zone Management Grants and Services, Regional Data Portals, \$10 Million:* The ocean is increasingly crowded and conflicts arising from current and emerging offshore ocean uses present unique management challenges. These challenges must be addressed regionally, including collaboration between regions, and holistically with States, Tribes, fishery management councils, Federal agencies, and other ocean users across all sectors, including industry and conservation partners. Regional Ocean Partnerships (ROPs), convened by coastal State governors, are already structured to maximize interagency collaboration on cross-jurisdictional ocean and coastal matters and many have been efficient models for convening all ocean users.

Ocean data portals developed by ROPs are designed to maximize interagency collaboration on cross-jurisdictional ocean and coastal matters while also providing an important tool for stakeholder engagement and public education. Both ROPs and the publicly accessible ocean data portals they manage serve a key coordinating function, working to enhance a common understanding among stakeholders and agencies about ocean resources and their use. This leads to improved management decisions that help cut costs, benefit our business ventures, boost our scientific understanding, and conserve ocean ecosystems. WCS relies on the Mid-Atlantic Regional Council on the Ocean (MARCO) data portal to inform our conservation work. We also use this unique tool to inspire and educate teachers and students about marine conservation.

WCS appreciates the opportunity to share its perspective and to make a case for increases in Federal investments in conservation in the fiscal year 2022 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 fiscal year 2022 Appropriations Act. WCS marine science and policy experts are available to the subcommittee should there be any follow up questions.

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