

COMMERCE, JUSTICE, SCIENCE, AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 2015

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 GEOSCIENCES INSTITUTE

Thank you for this opportunity to provide the American Geosciences Institute's perspective on fiscal year 2015 appropriations for geoscience programs within the subcommittee's jurisdiction.

The American Geosciences Institute (AGI) supports earth science research sustained by the National Science Foundation (NSF), the National Oceanic and Atmospheric Administration (NOAA), the National Institute of Standards and Technology (NIST), and the National Aeronautics and Space Administration (NASA). Frontier research on the Earth, energy, and the environment has fueled economic growth, mitigated losses, and sustained our quality of life. The subcommittee's leadership in supporting geoscience-based research is even more critical as our Nation competes with rapidly developing countries, such as China and India, for energy, mineral, air, and water resources. Our Nation needs skilled geoscientists to help explore, assess, and develop Earth's resources in a strategic, sustainable, and environmentally sound manner and to help understand, evaluate, and reduce our risks to hazards. AGI recognizes our Nation's financial challenges and also the necessity for steady and sustained growth in investment in science and technology for the future. AGI respectfully requests \$1.322 billion for the Geoscience Directorate at NSF and \$1.853 billion for NASA Earth Science programs to keep pace with inflation. AGI supports the President's request for \$5.497 billion for NOAA and \$900 million for NIST.

AGI is a nonprofit federation of about 50 geoscientific and professional societies representing more than 250,000 geologists, geophysicists, and other Earth scientists. Founded in 1948, AGI provides information services to geoscientists, serves as a voice for shared interests in our profession, plays a major role in strengthening geoscience education, and strives to increase public awareness of the vital role the geosciences play in society's use of resources, resilience to hazards, and the health of the environment.

National Science Foundation.—AGI supports a minimum increase of \$18 million over the President's request for the Geosciences Directorate to keep pace with inflation, and an overall budget of \$7.255 billion for NSF. NSF is vital national incubator for scientific breakthroughs that will fuel economic growth and for developing the educated workforce that is needed to drive innovation and global leadership in science, engineering, and technology. AGI believes that investment in NSF programs, where research is funded based on competitive scientific merit and peer review, will pay important dividends in our understanding of the world we inhabit and will play a critical role in maintaining U.S. dominance in science and technology long into the future.

NSF Geosciences Directorate.—AGI is very disappointed that the President's request for a 0.1 percent increase for the Geoscience Directorate (GEO) does not come

close to matching inflation, which averaged 1.5 percent in 2013, and thus presents an effective cut in funding for geoscience research and infrastructure. AGI recognizes the challenges faced by Congress in balancing the Nation's budget and respectfully asks the subcommittee to provide the Geosciences Directorate with a modest funding increase of 1.5 percent over fiscal year 2014 levels, which would do no more than match inflation and maintain current funding levels for the geosciences.

AGI asks the subcommittee to provide \$254 million for Atmospheric and Geospace Sciences, \$180 million for Earth Sciences, \$362 million for Ocean Sciences, \$85 million for Integrative and Collaborative Education and Research (ICER), and \$441 million for Polar Programs, for a total investment of \$1,322 million in NSF's Geoscience Directorate.

The Geosciences Directorate (GEO) is the principal source of Federal support for academic earth scientists and their students who are seeking to understand the Earth and the processes that sustain and transform life on this planet. The Geosciences Directorate provides about 65 percent of Federal funding for basic geoscience research at academic institutions. According to NSF data, the Directorate distributes about 1,700 awards annually involving about 14,700 people and supporting indispensable research infrastructure and instruments.

Understanding the Earth improves our ability to anticipate and mitigate the effects of natural hazards such as earthquakes, landslides, and tsunamis, to make long- and short-term weather forecasts, to locate and appropriately develop earth resources, to sustainably manage our environment, and to make well-informed decisions at all levels from the individual citizen to national and international policy makers.

NSF's Division of Polar Programs (PLR) funds basic research in the Arctic and Antarctic and manages all U.S. activities in Antarctica as a single, integrated program. The polar regions are the focus of intense scientific and political interest as new navigation routes are opening access to resources and presenting security challenges. NSF-funded research and infrastructure are helping the United States understand environmental conditions in extreme environments, develop polar technology, and construct data-driven strategic and security policies. AGI suggests a minimum of \$441 million for the Division of Polar Programs.

NSF funds facilities that enable researchers to access locations, data, and technologies that serve the overall research community. AGI strongly supports robust and steady funding for infrastructure and the operation and maintenance of major facilities, including the Academic Research Fleet, Geodetic and Seismological Facilities for the Advancement of Geosciences and EarthScope (GAGE and SAGE), Ocean Drilling Activities, the Ocean Observatories Initiative, and the National Center for Atmospheric Research (NCAR).

Directorate for Education and Human Resources.—NSF support for geoscience education must be maintained if we are to meet the demand for a skilled workforce and an informed citizenry prepared to make well-informed decisions about the management of our planet and its resources. Outreach and education are important at all levels from K–12 through graduate level and should include formal and informal outlets to facilitate lifelong learning. AGI strongly supports funding for geoscience education at all levels and particularly supports programs to diversify the geoscience student population and workforce. AGI urges Congress to fund programs in NSF's Directorate for Education and Human Resources, including NSF Scholarships in STEM, Graduate Research Fellowships, Climate Change Education, Research Experiences for Undergraduates, and Advancing Informal STEM Education.

National Oceanic and Atmospheric Administration.—AGI supports the President's request for \$5.497 billion for NOAA. We hope the subcommittee will continue to support the National Weather Service (NWS), Oceanic and Atmospheric Research (OAR), National Ocean Service (NOS), and the National Environment Satellite, Data and Information Service (NESDIS). These programs are critical for understanding and mitigating natural and human-induced hazards in the Earth system while sustaining our natural resources. Geoscientists rely on NOAA for much of the data and long-term monitoring that enable research and rapid response to events such as hurricanes, drought, marine oil spills, and a range of coastal phenomena.

National Institute of Standards and Technology.—AGI supports the President's request for \$900 million for the NIST. Basic research at NIST is conducted by earth scientists and geotechnical engineers and used by the public and private sectors on a daily basis. The research conducted and the information gained is essential for understanding natural hazards and for identifying the infrastructure needed to build resilient communities and stimulate economic growth. Advanced infrastructure research will help to reduce the estimated average of \$52 billion in annual losses caused by floods, fires, and earthquakes.

NIST is the lead agency for the National Earthquake Hazard Reduction Program (NEHRP), but has received only a small portion of authorized and essential funding in the past. AGI strongly supports the reauthorization of the National Earthquake Hazards Reduction Program (NEHRP) in this Congress. We hope the appropriations subcommittee will continue to support this effective and cohesive program, even if the authorizing legislation takes more time to complete. NEHRP is an excellent example of how to coordinate different entities for the safety and security of all. NEHRP develops effective practices and policies for earthquake loss reduction and accelerates their implementation; improves techniques for reducing earthquake vulnerabilities of facilities and systems; improves earthquake hazards identification and risk assessment methods and their use; and improves the understanding of earthquakes and their effects.

National Aeronautic and Space Administration.—AGI is disappointed that the President proposes a 3.1 percent cut to Earth Science functions at NASA. NASA needs to maintain its current fleet of Earth-observing satellites, launch the next tier, and accelerate development of the subsequent tier of missions. The observations and understanding about our dynamic Earth gained from these missions is critical to research and to life-sustaining functions like weather forecasting, emergency service response and planning, and tracking ash plumes or oil spills that disrupt the economy and the environment. We respectfully suggest that funding levels should at least match inflation and therefore we ask that \$1,853 million be appropriated for Earth Science Programs within the NASA's Science Mission Directorate.

AGI applauds NASA's successful launch of the Landsat 8 satellite in February, 2013, which will enable the continuation of a 40-year record of Earth observations in conjunctions with the U.S. Geological Survey (USGS). Geoscientists use Landsat data to monitor, predict, and help land managers to address drought, wildfires, changes in vegetation, and other changes to the Earth's surface. AGI strongly supports the NASA/USGS Sustainability Land Imaging Architecture Study Team which is examining options for continuing Landsat-compatible observations into the future and urges Congress to support and fund their efforts.

Thank you for the opportunity to present this testimony to the subcommittee. If you would like any additional information for the record, please contact Maeve Boland at 703-379-2480, ext. 228 voice, 703-379-7563 fax, mboland@agiweb.org, or 4220 King Street, Alexandria VA 22302-1502.

PREPARED STATEMENT OF THE AMERICAN INSTITUTE OF BIOLOGICAL SCIENCES

The American Institute of Biological Sciences (AIBS) appreciates the opportunity to provide testimony in support of fiscal year 2015 appropriations for the National Science Foundation (NSF). We encourage Congress to provide NSF with at least \$7.5 billion in fiscal year 2015.

The AIBS is a nonprofit scientific association dedicated to advancing biological research and education for the welfare of society. AIBS works to ensure that the public, legislators, funders, and the community of biologists have access to and use information that will guide them in making informed decisions about matters that require biological knowledge. Founded in 1947 as a part of the National Academy of Sciences, AIBS became an independent, member-governed organization in the 1950s. Today, AIBS has more than 140 member organizations and is headquartered in Reston, Virginia, with a Public Policy Office in Washington, DC.

NSF AND INNOVATION

The NSF is an important engine that helps power our Nation's economic growth. Through its competitive, peer-reviewed research grants, NSF supports the development of new knowledge that will help to solve the most challenging problems facing society, and will lead to new scientific discoveries, patents, and jobs. The agency's education and training programs are helping to ensure that the next generation has the scientific, technical, and mathematical skills employers are seeking. Investments in research equipment and facilities enable the country to continue to innovate and compete globally.

These efforts, however, require a sustained Federal investment. Unpredictable swings in Federal funding can disrupt research programs, create uncertainty in the research community, and stall the development of the next great idea.

The budget request for fiscal year 2015 will flat line investments in foundational research at a time when other nations are accelerating their commitments to science. The proposed \$1.5 million cut from the Research and Related Activities account may seem small, but coupled with an anticipated 1.7 percent increase in inflation, NSF research funding would decline by \$100 million next year.

The scientific community recognizes that current fiscal conditions have necessarily constrained Federal funding, but NSF is a sound investment that pays dividends. The use of peer-review to evaluate and select the best proposals means that NSF is funding the highest quality research.

BIOLOGICAL SCIENCES DIRECTORATE

The NSF is the primary Federal funding source for basic biological research at our Nation's universities and colleges. The NSF provides approximately 66 percent of extramural Federal support for non-medical, fundamental biological and environmental research at academic institutions.

A reduction of \$12.8 million is proposed in fiscal year 2015 from the Biological Sciences Directorate (BIO). This is a considerably larger cut than is proposed for any other research directorate. If enacted, the funding rate for biological and environmental research would drop to 18 percent.

The research supported by NSF is unique from the science funded by other Federal programs. Unlike most Federal agencies, which focus on applied research, NSF supports research that advances the frontiers of our knowledge about biodiversity, genetics, physiology, and ecosystems. Recent discoveries that stem from NSF-funded research include:

- Discovering that members of a particular kind of bacteria work together to find food and survive under harsh conditions. This discovery could lead to new antibiotics or development of new pest-resistant seeds.
- Developing a new technique to manipulate the genes of grasshoppers in order to prevent them from transforming into crop-destroying locusts.
- Studying the impacts of the death of lodgepole pine forests due to bark beetle infestations on the timing of snowmelt and water quality.
- Working to identify the pathway that leads to cells forming into an individual body, information that could lead to improved cancer treatments.

BIO funds research in the foundational disciplines within biology. In addition to supporting our understanding of how organisms and ecosystems function, BIO supports interdisciplinary research at the frontiers of science.

Equally important, BIO provides essential support for our Nation's place-based biological research, such as field stations and natural science collections. The Long-Term Ecological Research program supports fundamental ecological research over long time periods and large spatial scales, the results of which provide information necessary for the identification and resolution of environmental problems.

The fiscal year 2015 budget request would sustain an effort to digitize high priority specimens in U.S. natural science collections. This investment is helping to drive new fields of inquiry and helping scientists and the public gain access to rare and irreplaceable biological specimens and associated data. These efforts are stimulating the development of new computer hardware and software, digitization technologies, and database management tools.

The Dimensions of Biodiversity program supports cross-disciplinary research to describe and understand the scope and role of life on Earth. Despite centuries of discovery, most of our planet's biological diversity (species) is unknown. This lack of knowledge is particularly troubling given the rapid and permanent loss of global biodiversity. A better understanding of life on Earth will help us to make new bio-based discoveries in the realms of food, fiber, fuel, pharmaceuticals, and bio-inspired innovation. It will also increase our understanding of life on Earth and how biological systems and functions respond to environmental changes.

The Major Research Equipment and Facilities Construction account is funding the construction of the National Ecological Observatory Network (NEON). Once completed, NEON will provide the infrastructure necessary to collect data across the United States on the effects of climate change, land use change, water use, and invasive species on natural resources and biodiversity. This information will be valuable to scientists, resource managers, and government decision makers as they seek to better understand and manage natural systems.

STEM EDUCATION

NSF plays a central role in science, technology, engineering, and mathematics (STEM) education. Support for the scientific training of undergraduate and graduate students is critically important to our research enterprise. Students recruited into science through NSF programs and research experiences are our next generation of innovators and educators. In short, NSF grants are essential to the Nation's goal of sustaining our global leadership in science, technology, engineering and mathematics, and reigniting our economic engines.

NSF's education initiatives support STEM education innovation from elementary school through post-graduate. The Graduate Research Fellowship program is an important part of our national effort to recruit and retain the best and brightest STEM students. NSF proposes to increase both the number of new fellowships as well as the fellowship stipend in fiscal year 2015. The Faculty Early Career Development program (CAREER) supports young faculty who are dedicated to integrating research with teaching and learning.

The administration once again proposes major changes to STEM education programs. Although the plans have been scaled back since the fiscal year 2014 budget request, we are concerned that implementation of these changes will proceed before the full details are known. Given the considerable consequences for student education and training, we hope that Congress will provide careful consideration of the potential impacts to our Nation's pipeline of researchers and STEM-skilled workers.

CONCLUSION

Continued investments in the biological sciences are critical. Sustained support for NSF will help spur economic growth and innovation, and continue to build scientific capacity at a time when our Nation is at risk of being outpaced by our global competitors. Please support an investment of at least \$7.5 billion for NSF for fiscal year 2015.

Thank you for your thoughtful consideration of this request and for your prior efforts on behalf of science and the National Science Foundation.

PREPARED STATEMENT OF THE AMERICAN PHYSIOLOGICAL SOCIETY

The American Physiological Society (APS) thanks you for your sustained support of science at the National Science Foundation (NSF) and the National Aeronautics and Space Administration (NASA). The APS is a professional society, numbering more than 10,000 members, dedicated to fostering research and education as well as the dissemination of scientific knowledge concerning how the organs and systems of the body function. In this letter we offer our recommendations for fiscal year 2015 funding levels for these two agencies.

—The APS urges you to fund the fiscal year 2015 NSF budget at a net level of \$7.6 billion to prevent further erosion of program capacity.

—The APS urges you to restore cuts to NASA's life sciences research budgets and to increase funding for the Human Research Program.

NSF and NASA support scientific research and technology development programs that are critical to the future technological excellence and economic stability of the United States. Federal investment in research is critically important because breakthroughs in basic and translational research are the foundation for new technologies that help patients, fuel our economy, and provide jobs.

NSF FUNDS OUTSTANDING RESEARCH AND EDUCATION PROGRAMS

NSF provides support for approximately 20 percent of all federally funded basic science and is the major source of support for non-medical biology research, including integrative, comparative, and evolutionary biology, as well as interdisciplinary biological research. It has been shown time and time again that the knowledge gained through basic biological research is the foundation for more applied studies that sustain the health of animals, humans and ecosystems.

The majority of the NSF funding is awarded through competitive, merit-based peer review, ensuring that the best possible projects are supported. Reviewers and NSF officials consider both the intellectual merit of each research proposal, and also the broader impacts. The broader impact criteria are defined as the potential for research to benefit society and achieve specific outcomes. NSF has an exemplary record of accomplishment in terms of funding research that produces results with far-reaching potential. Since its inception in 1950, NSF has supported the work of 212 Nobel laureates.

Biological research is just one part of the NSF portfolio. The APS believes that each of the NSF directorates support research that is critical to NSF's mission "to promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense . . ." ¹ Collaboration between scientific disciplines is increasingly recognized as the best and most efficient way to advance science. This will only be possible with strong support for all disciplines of research.

¹ <http://www.nsf.gov>.

In addition to funding innovative research in labs around the country, the NSF education programs foster the next generation of scientists. The APS is proud to have partnered with NSF in programs to provide training opportunities and career development activities to enhance the participation of underrepresented minorities in science. We believe that NSF is uniquely suited to foster science education programs of the highest quality, and we recommend that Congress continue to provide Federal funds for science education through the NSF.

The APS joins the Federation of American Societies for Experimental Biology (FASEB) to recommend that the NSF be funded at a level of \$7.6 billion in fiscal year 2015 so that it can support a sustainable research program that follows a funding trajectory reflecting the level authorized in the America COMPETES Act.²

SUPPORT FOR LIFE SCIENCES RESEARCH SHOULD BE INCREASED AT NASA

NASA sponsors research across a broad range of the basic and applied life sciences, including gravitational biology, biomedical research and the Human Research Program (HRP). The gravitational biology and biomedical research programs explore fundamental scientific questions through research carried out both on Earth and aboard the International Space Station, which provides an environment for the conduct of experiments in space. The HRP at NASA conducts unique research and develops countermeasures with the goal of enabling safe and productive human space exploration.

During prolonged space flight, the physiological changes that occur due to microgravity, increased exposure to radiation, confined living quarters, and alterations in eating and sleeping patterns can lead to debilitating conditions and reduced ability to perform tasks. APS scientists are actively engaged in research that explores the physiological basis of these problems with the goal of contributing to the identification of therapeutic targets and development of countermeasures. The knowledge gained from this research is not only relevant to humans traveling in space, but is also directly applicable to human health on Earth. For example, some of the muscle and bone changes observed in astronauts after prolonged space flight are similar to those seen in patients confined to bed rest during periods of critical illness as well as during the process of aging.

NASA is the only agency whose mission addresses the biomedical challenges of human space exploration. Over the past several years, the amount of money available for conducting this kind of research at NASA has dwindled. The overall number of projects and investigators supported by NASA through the HRP, National Space Biomedical Research Institute and Exploration and Technology Development program has decreased markedly (<https://taskbook.nasaprs.com/Publication/>). In the past, appropriations legislation specified funding levels for biomedical research and gravitational biology, but recent internal reorganizations at NASA have made it difficult to understand how much money is being spent on these programs from year to year. The APS recommends that funding streams for these important fundamental research programs be clearly identified and tracked within the NASA budget. The APS also recommends restoration of cuts to peer-reviewed life sciences research.

As highlighted above, investment in the basic sciences is critical to our Nation's technological and economic future. The APS urges you to make every effort to provide these agencies with increased funding for fiscal year 2015.

PREPARED STATEMENT OF THE AMERICAN SOCIETY FOR MICROBIOLOGY

The American Society for Microbiology (ASM), the largest single life science Society with over 39,000 members, wishes to submit the following statement in support of increased funding for the National Science Foundation (NSF) in fiscal year 2015. The NSF is the only Federal agency that supports innovative basic research across all fields of science and engineering. For over six decades, 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. In fiscal year 2013, 81 percent of the NSF budget supported research and related activities at colleges, universities and academic consortia and NSF reviewed 49,000 grant proposals and made 10,844 new awards to 1,922 institutions in all states across the Nation.

An estimated 299,000 people were directly involved in NSF programs and activities in fiscal year 2013. NSF programs indirectly impact millions (e.g., K-12 students and teachers, general public, institutions like museums). NSF grants sup-

² www.faseb.org/fundingreport.

ported eight of the 13 Nobel Prize 2013 winners at some point in their research careers. NSF has now funded 212 Nobel laureates since the agency began, 41 of whom also had been NSF Graduate Research Fellows. Since 1952, the agency has funded nearly 47,800 graduate research fellows.

NSF support of multidisciplinary research and all levels of education is critical to improving the future of the Nation's science and engineering enterprise and our global competitive edge. NSF's National Science Board just released its latest biennial Science and Engineering Indicators report, a detailed analysis of the Nation's position in global science and technology. Since 2001, the share of the world's R&D performed in the United States has decreased from 37 percent to 30 percent, while that performed by Asian countries grew from 25 percent to 34 percent. It is critical to increase the NSF budget to help reverse this worrisome trend.

NSF BUILDS R&D INFRASTRUCTURE

Through competitive grants, contracts and fellowships, NSF builds partnerships among industry, academia and other R&D stakeholders which expands the Nation's technical workforce. The NSF supports multidisciplinary research, cutting edge facilities, and initiatives and consortia. Examples are the National Big Data R&D Initiative launched in 2012 and NSF's Ecology and Evolution of Infectious Diseases Initiative (EEID). In fiscal year 2013, the NSF invested more than \$17 million in 60 multidisciplinary projects to employ new computational analyses essential to data driven STEM breakthroughs. The effort was part of over \$75 million spent in fiscal year 2013 to advance software, networking, data sciences and workforce training to support all STEM disciplines, via NSF's Cyberinfrastructure Framework for 21st Century Science and Engineering.

Funding from NSF builds local R&D infrastructures through the long standing Experimental Program to Stimulate Competitive Research (EPSCoR) program. In mid-2013, four newly funded projects were in the EPSCoR portfolio: (1) a New England consortium focused on pathogenic bacteria in coastal regions, their environmental and economic impacts and decisionmaking through human interactions with natural systems; (2) a three State study of high elevation water resources, to create better computer models related to water quality; (3) a joint project in North and South Dakota to develop processing methods for converting biomass into renewable energy resources; and (4) a three State collaboration in New England placing a network of environmental sensors in each State, to collect data on carbon and nutrients in watersheds over time.

NSF partnerships with academia are vital to energizing the U.S. workforce in science, technology, engineering and mathematics (STEM). The NSF responds to wide spread concerns about future workforce shortages across STEM disciplines. An example of NSF's STEM education strategy are five STEM projects funded last September involving multiple institutions in five States, to increase STEM participation of women and girls, underrepresented minorities and underserved rural areas. The nearly \$4 million in EPSCoR grants will pilot new methods among students from middle school to early career levels.

Another example is the diverse 2013 class of NSF Graduate Research Fellows, 2,000 young researchers from 434 U.S. baccalaureate institutions, including 1,102 women, 390 from underrepresented minority groups, 51 with disabilities and 28 veterans. Forty percent indicated interdisciplinary fields of study. In mid-2013, NSF announced the first 53 recipients of the new Graduate Research Opportunities Worldwide (GROW) program, partnering with 12 countries to place NSF research fellows in institutions abroad.

NSF also collaborates with the private sector to boost R&D entrepreneurs in the United States, in part through the competitive Small Business Innovation Research (SBIR)/Small Business Technology Transfer program. In October, under an agreement between NSF and the Biotechnology Industry Organization, 10 NSF funded early stage biotech companies presented at the 12th annual BIO Investor Forum to begin raising funds in the private sector. The startups focus on drug discovery, diagnostics and other platform technologies.

NSF SUPPORTED MICROBIOLOGY RESEARCH

Within NSF, the Directorate for Biological Sciences (BIO) sustains a research portfolio encompassing the wide breadth of biology from molecules to ecosystems and the global biosphere. BIO divisions include those focused on environmental biology, systems biology or molecular biology. The Emerging Frontiers Division invests in higher risk, interdisciplinary activities that show promise of generating productive innovations. BIO also supports R&D infrastructures like the National Ecological Observatory Network (NEON), biological field stations and computerized databases

that include DNA sequences of microorganisms. In fiscal year 2013, the directorate was able to fund 21 percent of the 5,937 grant proposals submitted by researchers. Research reported in the past year illustrates the diversity of BIO's funding:

- Bacterial DNA is more likely to be naturally transferred to human tumor cells than to normal, healthy cells, suggesting a role for bacterial gene transfer in cancer and other diseases associated with mutations. Scientists had already shown that bacteria can transfer DNA to animal genomes through previous genomic sequencing studies.
- For the first time, the banded mongoose in Botswana was identified as carrying *Leptospira interrogans*, the bacterial cause of leptospirosis, which is the world's most common illness transmitted to humans by animals.
- Scientific analysis of the 2011 record breaking algae bloom in Lake Erie blamed a "perfect storm" of weather events and agricultural practices, predicting more huge blooms in the future.
- An unusual soil bacterium is being used in modeling and simulations by computational biologists to study how individual cells might have evolved into more complicated configurations. *Myxococcus xanthus* organizes itself into multicellular, three dimensional structures made up of thousands of cells to hunt other microbes and survive in harsh conditions.
- The redwoods of California are being threatened by the combined effects of forest fires and sudden oak death disease, linked in 2000 to the plant pathogen *Phytophthora ramorum*. Flames carried into the tree canopy by the dead oaks scorch the crowns of surrounding redwoods.

Last August, BIO funded U.S. and United Kingdom scientists in four projects that could revolutionize farming methods: (1) to design a synthetic biological module that will "fix" nitrogen inside plant cells, by reengineering nitrogen fixing bacteria to build an N-fixing unit that can be transferred; (2) to rediscover a bacterium found only once (in the 1990s in a German charcoal pit) that contains a unique enzyme allowing nitrogen fixing in oxygen rich environments normally inhibitory to nitrogen fixing bacteria; (3) to genetically alter nitrogen fixing bacteria and a grass species similar to more complex cereals such as maize, to ensure a lock and key interaction between plant and microbe and maximize the amount of usable nitrogen delivered to the plant; and (4) to optimize practical applications of nitrogen fixing blue green algae and genetically engineer plant cells to fix atmospheric nitrogen directly.

The NSF Directorate for Geosciences (GEO) also funds microbiology research through studies of Earth's environment and the myriad roles played by microorganisms. In January, the directorate awarded grants to four new critical zone observatories, which join six existing CZOs to study the zone where Earth's surface meets the atmosphere and living organisms. The CZOs are the first research network to holistically investigate this zone, so important to water quality, food supplies, soil health and carbon storage.

Both GEO and BIO contribute to NSF's Ecology and Evolution of Infectious Diseases program jointly sponsored with the National Institutes of Health. EEID supports the study of ecological and biological mechanisms of environmental change that shape emergence and transmission of infectious diseases. Projects help understand how large scale events like habitat destruction can alter microbial diseases in humans and other animals. In 2013, new EEID grant recipients included studies on foot and mouth disease virus, honeybee killing parasites, impacts of livestock production practices on emerging drug resistant staphylococci bacteria and transmission of Tasmanian devil facial tumor disease. Effects of climate change on the spread of infectious disease is another EEID focus area, generating reports last year that model disease outcomes based on climate variables to guide public health officials. In February, researchers reported field studies showing that environmental temperatures significantly influence whether or not *Wolbachia* bacteria will block the malaria pathogen from developing within carrier mosquitoes. The *Wolbachia* malaria interaction is considered a promising new tool for controlling malaria. Other EEID funded studies are investigating West Nile virus, Lyme disease and hantavirus in the context of climate change and other environmental factors.

There is no doubt that NSF contributes to the Nation's scientific strength and economic growth. The ASM urges Congress to increase funding for NSF in fiscal year 2015 to the highest level possible. The ASM also looks forward to continued future investment of NSF resources in programs related to microbiology since microbes are at the foundation of scientific discovery and other activities that are at the core of the NSF mission.

PREPARED STATEMENT OF THE AMERICAN SOCIETY OF AGRONOMY, THE CROP SCIENCE SOCIETY OF AMERICA, AND THE SOIL SCIENCE SOCIETY OF AMERICA

Dear Chairwoman Senator Mikulski, Ranking Member Senator Shelby and members of the subcommittee: The American Society of Agronomy (ASA), the Crop Science Society of America (CSSA), and the Soil Science Society of America (SSSA) urge the subcommittee to support \$7.5 billion for the National Science Foundation for the fiscal year 2015.

This funding level will put the premier Government-funding agency for scientific research back on track to address to continue valuable projects that promote transformational and multidisciplinary research, provide needed scientific infrastructure, and contribute to preparing the next generation science, technology, engineering, and mathematics workforce.

Specifically, we urge strong support for the following NSF programs:

Within the Biological Sciences Directorate,

- Division of Environmental Biology (DEB), which supports the *Long Term Ecological Research (LTER)* program.
- Division of Integrative Organismal Systems (IOS), which supports the *Plant Genome Research Program* and the *Basic Research to Enable Agricultural Development (BREAD)* program.

Within the Geological Sciences Directorate,

- Division of Earth Sciences (EAR), which supports the *Geobiology & Low-Temperature Geochemistry Program* and *Critical Zone Observatories*.

The American Society of Agronomy (ASA), Crop Science Society of America (CSSA), and Soil Science Society of America (SSSA), represent over 18,000 members in academia, industry, and government, 12,500 Certified Crop Advisers (CCA), and 781 Certified Professional Soil Scientist (CPSS), as the largest coalition of professionals dedicated to the agronomic, crop and soil science disciplines in the United States. We are dedicated to utilizing science to manage our agricultural system and sustainably produce food, fuel, feed, and fiber for a rapidly growing global population in the coming decades.

Agriculture and agriculture-related industries contributed \$742.6 billion to the U.S. gross domestic product (GDP) in 2011, a 4.8-percent share. In 2012, 16.5 million full- and part-time jobs were related to agriculture—about 9.2 percent of total U.S. employment. However, even though increased agricultural productivity, arising from innovation and changes in technology, is the main contributor to economic growth in U.S. agriculture not all people at all times have to access to enough food for an active and healthy life. The global number of food-insecure people is estimated at 707 million in 2013, up 3 million from 2012. By 2023, the number of food-insecure people is projected to increase nearly 23 percent to 868 million, slightly faster than population growth. The Nation's economic prosperity and security depend on our dedication to developing innovative, science-based solutions to meet our growing agricultural needs and managing efficient food systems.

BIOLOGICAL SCIENCES DIRECTORATE

Division Environmental Biology (DEB)

DEB emphasizes research on complex ecological and evolutionary dynamics to improve our ability to understand the reciprocal interactions between living systems and the environment, and inform essential considerations of environmental sustainability.

The *Long Term Ecological Research (LTER)* Network was created by the National Science Foundation (NSF) to conduct research on ecological issues that can last decades and span huge geographical areas. For more than three decades, the Network has generated rigorous, site-based scientific research that has led to important findings on regional and continental scales.

Among the major goals of long-term ecological research is to increase our understanding of a wide array of ecosystems at multiple geographical and time scales, giving society the knowledge and capability to address complex environmental challenges. Key research findings by LTER scientists provide valuable information for Federal agencies, land managers, and decision makers who want to develop responsible policies to deal with a rapidly changing world.

Integrative Organismal Systems (IOS)

In order to meet increasing demands and develop more robust crops, additional fundamental understanding regarding the basic biology of these crops is needed.

IOS maintains its commitment to support fundamental plant genome research through the *Plant Genome Research Program (PGRP)*.

PGRP supports genome-scale research to accelerate basic discoveries of relevance to basic plant biology as well as downstream applications of potential societal benefit such as crop improvement, development of new sources of bio-based energy, development of sources of novel bio-based materials, and plant adaptation to global climate change.

In addition, the Developing Country Collaborations in Plant Genome Research program links U.S. researchers with partners from developing countries to solve problems of mutual interest in agriculture and energy and the environment.

The PGRP's *Basic Research to Enable Agricultural Development (BREAD)* Program supports basic research on early-concept approaches and technologies for science-based solutions to problems of agriculture in developing countries.

GEOLOGICAL SCIENCES DIRECTORATE

Earth Sciences (EAR)

The Earth Sciences division supports the Surface Earth Processes section, which researches geomorphology and land use, hydrologic science, geobiology, geochemistry (particularly the Geobiology and Low-Temperature Geochemistry Program), and sedimentary geology and paleobiology—all crucial to the areas of agronomy, soil, and crops.

In addition, EAR supports EarthScope which focuses on studying the structure and tectonics of the North American continent and an Instrumentation and Facilities program that supports community-based, shared-use facilities, as well as an education program to attract and support students and young investigators to the field of Earth science.

ASA, CSSA, and SSSA also support strong funding for the Critical Zone Observatories that operate at the watershed scale and significantly advance our understanding of the integration and coupling of Earth surface processes as mediated by the presence and flux of fresh water.

We must close the innovation deficit if the United States is to remain the world's innovation leader in agriculture. China continues to exhibit the world's most dramatic R&D growth at 20.7 percent annually, compared to the United States at 4.4 percent growth over the same time period. By 2009, agriculture R&D fell to a historically low 0.035 percent share of the United States economy, a level far below the total U.S. R&D spending and that which is necessary to meet the critical challenges facing U.S. agriculture in the 21st century.

Support for NSF is essential to maintain the capacity of the United States to conduct both basic and applied agricultural research, to improve crop and livestock quality, and to deliver safe and nutritious food products while protecting and enhancing the Nation's environment and natural resource base.

Thank you for your consideration. For additional information or to learn more about the ASA, CSSA, and SSSA, please visit www.agronomy.org, www.crops.org, or www.soils.org.

PREPARED STATEMENT OF THE AMERICAN GEOPHYSICAL UNION—JOINT RESPONSE TO NOAA BUDGET BILL

Senator BARBARA MIKULSKI,
Chair, Subcommittee on Commerce, Justice, Science, and Related Agencies,
U.S. Senate Committee on Appropriations,
142 Dirksen Senate Office Building,
Washington, DC 20510.

Senator RICHARD SHELBY,
Ranking Member, Subcommittee on Commerce, Justice, Science, and Related Agencies,
U.S. Senate Committee on Appropriations,
125 Hart Senate Office Building,
Washington, DC 20510.

Re: Support funding for the National Oceanic and Atmospheric Administration at or above the President's fiscal year 2015 request of \$5.5 billion.

Dear Chairwoman Mikulski and Ranking Member Shelby: We write on behalf of millions of Americans who are strongly supportive of robust funding and smart investment in NOAA's ocean, coastal, and fisheries programs. We strongly support funding for the National Oceanic and Atmospheric Administration at or above the President's Request of \$5.5 billion in fiscal year 2015. In addition, we support bal-

anced investments across NOAA's dual atmospheric and oceanic missions—Americans shouldn't have to choose between weather satellites and ocean and coastal resources that support and protect our coastal economies and communities. We simply need both.

NOAA's mission to protect, restore and manage our ocean, coasts and Great Lakes is vitally important not only to sustain these resources but also to sustain our coastal economies. The *National Ocean Economics Program* has estimated that the U.S. ocean and coastal economy contributes more than \$282 billion annually to the Nation's GDP through fisheries and seafood production, tourism, recreation, transportation, and construction. Additionally, over 2.8 million jobs in the U.S. depend on the ocean and coasts. Adequate funding for NOAA is critically important to support a healthy and resilient ocean that can continue to strengthen our coastal economies and communities.

Resilience has emerged as the critical goal that unites all of NOAA's ocean and coastal programs. Man-made and natural ocean and coastal disasters over the last several years, from Department of Commerce declared fisheries disasters to the BP *Deepwater Horizon* oil disaster, remind us of the connection between the health of our ocean and coasts and the well-being of our coastal communities and economy. Resilience means more than just storm-ready; truly resilient communities are prepared to face changing ocean conditions, from acidification to sea level rise, changing economic conditions, from recession to emerging ocean uses, as well as major catastrophes, from Superstorm Sandy to marine debris clogging waterways. Investing in NOAA's programs will ensure we can respond to and mitigate the impacts and costs of future disasters by creating healthy and more resilient coastal ecosystems and communities.

For example:

- Coastal wetland buffer zones in the U.S. are estimated to provide \$23.2 billion per year in storm protection and a single acre of wetland can store 1 to 1.5 million gallons of flood water or storm surge.
- Healthy fisheries are needed to support an industry of more than 60,000 jobs and \$6.6 billion in GDP. Information provided by core data collection, catch monitoring and stock assessment programs within the NMFS is critical to ending overfishing.
- Ocean and coastal observations and monitoring supports severe storm tracking and weather forecasting systems, which greatly reduce the cost of natural disaster preparation, evacuation, and mitigation.

The President's Request seeks modest increases in ocean, coastal, and fishery programs, and we support these increases as an important step towards robust funding for NOAA's ocean mission. In fiscal year 2014, NOAA has finally been put back on a path towards robust and sustainable funding, the first step in bouncing back from significant cuts to critical programs from fiscal year 2011 to fiscal year 2013. Underfunding NOAA simply is not sustainable, we urge Congress to recognize the importance of our ocean, coasts, and Great Lakes by fully funding NOAA programs at or above \$5.5 billion in fiscal year 2015.

Signed,

ORGANIZATIONS & BUSINESSES

Advanced Aqua Dynamics, Inc.	Hawaii Institute of Marine Biology
Alliance for the Great Lakes	International Federation of Fly Fishers
American Geophysical Union	IOOS Association
American Rivers	Long Live the Kings
Center for Biological Diversity	Management Association for Private
Center for Coastal Studies	Photogrammetric Surveyors (MAPPS)
Chesapeake Communities	Marine Conservation Institute
Citizens Campaign for the Environment	National Audubon Society
Coastal Conservation League	National Estuarine Research Reserve
Coastal Research & Education Society of	Association
Long Island	National Marine Sanctuary Foundation
Coastal States Organization	National Society of Professional
Conservation Law Foundation	Surveyors (NSPS)
Consortium for Ocean Leadership	Natural Resources Defense Council
Earthjustice	Nature Abounds
Environmental Defense Fund	The Nature Conservancy
Green/Duwamish & Central Puget	Ocean Conservancy
Sound Watershed (Watershed	Ocean Conservation Research
Resource Inventory Area 9) Ecosystem	The Ocean Project
Forum	Oceana

Operation Splash	Save Our Shores
Project AWARE	Save Our Wild Salmon Coalition
Puget Sound Partnership	Scripps Institution of Oceanography
Puget Sound Salmon Recovery Council	Sierra Club
Reef Relief	Southeast Coastal Ocean Observing
Restore America's Estuaries	Regional Association (SECOORA)
Rhode Island Marine Trades Association	Surfrider Foundation

INDIVIDUALS

Carleton Ray, Research Professor, Dept. Environmental Sciences, University of Virginia	Jonathan Milne, M.Sc, Atlantic and Midwest Region Program Manager, LightHawk, Sidney, Maine
Dawn J. Wright, Chief Scientist, Esri, Redlands, California	Leesa Cobb, Executive Director, Port Orford Ocean Resource Team, Port Orford, Oregon
Dr. Alina M. Szmant, Professor of Marine Biology, Center for Marine Science, University of North Carolina, Wilmington	Michael Krivor, Maritime Project Manager, SEARCH—SEARCH2O, Pensacola, Florida
Dr. Rozalind Jester, Marine Science Faculty, Edison State College, Fort Myers, Florida	Mitchell A. Roffer, Ph.D., President, Roffer's Ocean Fishing Forecasting Service, Inc., West Melbourne, Florida
Elizabeth Rhodes, Professor of Hispanic Studies, Boston College	Sarah Towne, NOAA Fisheries West Coast Region and University of Washington Masters Candidate (School of Marine and Environmental Affairs)
Harald Duell, Larchmont, New York	Will McClintock, Ph.D., SeaSketch Director, Marine Science Institute, University of California Santa Barbara
Jennifer I. Barrett, Owner, Island Connect Consulting, LLC, Founder, Hawaii Nature Hui, Honolulu, Hawaii	Y. Peter Sheng, Ph.D., Professor and Director, Coastal and Oceanographic Engineering Program, University of Florida
Jerry McCormick-Ray, Senior Scientist, Dept. Environmental Sciences, University of Virginia	
John C. Ogden, Professor Emeritus, Integrative Biology, University of South Florida	

PREPARED STATEMENT OF THE ANIMAL WELFARE INSTITUTE

Chairman Mikulski, Ranking Member Shelby, and distinguished members of the subcommittee, thank you for accepting our testimony in support of fiscal year 2015 funding for activities under the Office of Justice Programs (OJP) and the office of Community Oriented Policing Services (COPS) of the U.S. Department of Justice (DOJ). We ask that no further cuts be made in appropriations for these programs and that, to the extent possible, funding be restored so that they are better able to serve their missions.

As noted on its Web site: "The Office of Justice Programs (OJP) provides innovative leadership to Federal, State, local, and tribal justice systems, by disseminating state-of-the art knowledge and practices across America, and providing grants for the implementation of these crime fighting strategies. . . . OJP works in partnership with the justice community to identify the most pressing crime-related challenges confronting the justice system and to provide information, training, coordination, and innovative strategies and approaches for addressing these challenges."

Elsewhere, the COPS website defines community policing as "a philosophy that promotes organizational strategies that support the systematic use of partnerships and problem-solving techniques to proactively address the immediate conditions that give rise to public safety issues such as crime, social disorder, and fear of crime." There is an emphasis on training and technical assistance; creative, innovative, and experimental community policing strategies; and best practices, among others efforts.

Nothing is more creative, innovative, or proactive, nor more open to dynamic partnerships, than addressing community safety through training, technical assistance, partnerships, and development of problem-solving strategies designed to improve the prevention, investigation, and prosecution of animal cruelty. Unfortunately, reduced funding has impaired the ability of these programs to meet the demand for training and assistance in this area.

Animal cruelty is both a crime (with all 50 States now recognizing certain acts as felonies) and a manifestation of social disorder. The connection between animal abuse and other forms of violence has been firmly established through both experi-

ence and science. “Animal abusers are five times more likely to commit crimes against people, four times more likely to commit property crimes, and three times more likely to have a record for drug or disorderly conduct offenses.”¹

One “gold standard” study² has identified animal abuse as one of four significant predictors for who is likely to become a batterer. Criminals and troubled youth have high rates of animal cruelty during their childhoods, perpetrators were often victims of child abuse themselves,³ and animal abusers often move on to other crimes.

Another research project, which is being overseen by an FBI special agent, involves “analyzing the criminal histories of offenders who were arrested for active animal cruelty, in order to further examine the potential link between animal cruelty and violence against persons.” According to an initial analysis published in a dissertation (Leavitt, 2011), the majority of the 66 offenders examined so far “had prior arrests for other crimes,” including interpersonal violence (59 percent), assault (39 percent), and assault of a spouse or intimate partner (38 percent); 17 percent had a history of sexual offenses. The publication of final results is expected by the end of the year.

All of this experience combined with the growing body of research makes a compelling case that addressing animal cruelty is a significant tool for enhancing public safety. For example, the Los Angeles Police Department’s Animal Cruelty Task Force attributes an increase in citizen-provided videos documenting animal cruelty to “a deep concern for public safety.” A press release (January 15, 2014) states that “[w]itnesses come to the realization that anyone that would commit such horrific acts of violence on defenseless animals could also do the same to humans.”

Nowhere is this clearer than in the well-documented relationship between animal cruelty and domestic violence, child abuse, and elder abuse. Up to 71 percent of victims entering domestic violence shelters have reported that their abusers threatened, injured, or killed the family pet; batterers do this to control, intimidate, and retaliate against their victims; they may be trying to coerce them into allowing sexual abuse or to force them into silence about abuse.⁴ This poses a significant public safety and public health problem. In one study, 48 percent of women responding reported they had delayed leaving an abusive situation out of fear for their pets. (Faver and Strand, 2003) Twenty-six States (this tally includes the District of Columbia and Puerto Rico) now specifically allow the inclusion of companion animals in domestic violence restraining orders.

Another connection that is all too common, and all too dangerous, exists among animal fighting, gangs, drugs, illegal guns, and other offenses. The Animal Legal and Historical Center at the Michigan State University College of Law describes dogfighting in these stark terms: “The notion that dogfighting is simply an animal welfare issue is clearly erroneous. Until the past decade, few law enforcement officials or government agencies understood the scope or gravity of dogfighting. As these departments have become more educated about the epidemic of dogfighting and its nexus with gang activity, drug distribution rings, and gambling networks, many have implemented well designed, sophisticated task forces. The magnitude of criminal activity concurrently taking place at the average dogfight is of such a scope as to warrant the involvement of a wide range of agencies, including local, regional, and Federal law enforcement agencies and their specialized divisions such as organized crime units, SWAT teams, and vice squads, as well as animal control agencies and child protective services.”

Animal fighting is barbaric and is a violent crime in the truest sense of the term. It causes immense suffering to countless numbers of innocent animals and its presence threatens the safety of the entire community. It is illegal under both State and Federal law, so it well serves the entire community for law enforcement to have the most powerful tools possible to eradicate it. In fact, as part of the new farm bill, Congress has added to these tools by closing a significant loophole in the law by making knowingly attending an animal fight punishable by fines and jail time and also making it a separate offense, with higher penalties, to knowingly bring a minor to such an event. This is a significant new tool. Animal fighting is fueled not just

¹Thompson, Daria, “The Link Between Animal Abuse and Other Violent Behavior,” in *Deputy and Court Officer*, 2013 Number 3, p.4.

²Walton-Moss, Benita, Jacquelyn Campbell, et al, “Risk Factors for Intimate partner Violence and Associated Injury Among Urban Women,” *Journal of Community Health*, vol. 30, No. 5, October 2005.

³“Woman’s Best Friend: Pet Abuse and the Role of Companion Animals in the Lives of Battered Women,” by Flynn (2000), as cited at www.ncadv.org.

⁴The study “I’ll only help you if you have two legs,” or Why human services professional should pay attention to cases involving cruelty to animals, (by Loar (1999), as cited on the website of the National Coalition Against Domestic Violence (www.ncadv.org)).

by those who train and fight the animals and finance the fights, but also by spectators. Spectators are not innocent bystanders; they are active participants in and enablers of these criminal enterprises—and they also provide “cover” during raids by allowing the organizers, trainers, etc., to “blend into the crowd” to escape arrest.

There is a need to respond proactively to animal cruelty at the very earliest signs and earliest ages, before it becomes a larger public safety issue. “A study conducted over a 10 year period found that children between the ages of 6–12 years old who were described as being cruel to animals were more than twice as likely as other children in the study to be reported to juvenile authorities for a violent offense.”⁵

The U.S. Department of Justice should be commended for taking note of these developments in what is commonly called “the link,” and then taking steps to respond. OJP showed great vision in recognizing that by identifying precursor crimes, such as animal cruelty and animal fighting, and ensuring proper adjudication of such cases, our criminal justice system can reduce the incidence of family and community violence and change the path of potential future violent offenders.

DOJ has given weight to the need to address animal cruelty crimes as part of an overall strategy for curbing community violence by funding programs that deal with this crime and by weaving the recognition of that connection into its own policies and operations. For instance, in 2009, what would become the Animal Cruelty Working Group had its first meeting. Then-Assistant Attorney General Laurie Robinson was aware of, and wanted to bring staff together to discuss, the link between animal abuse and interpersonal violence (IPV). She “wanted to make sure [they] were using the evidence on animal cruelty to inform how OJP programs were designed and implemented.”

It is especially noteworthy that DOJ, et al, included witnessing animal cruelty on their *Polyvictimization/Trauma Symptom Checklist*, which was developed to “allow lawyers and other advocates to focus on important information about (juvenile) clients’ past victimization history and help advocates better identify and advocate for appropriate placements, disposition plans, trial strategies, services, and treatment.”⁶ This recognizes the impact that witnessing or being forced to participate in animal abuse has on children and its relationship to later involvement with the criminal justice system. In fact, some States have even enacted or are considering provisions that enhance the penalty for animal cruelty when it is committed in front of a child.

In 2013, DOJ hosted a “listening session” on the topic of “the intersection between animal cruelty and public safety” among its own staff and judges, prosecutors, forensic scientists, and representatives from law enforcement, animal protection, domestic violence, child welfare, and veterinary organizations. At that meeting, which Associate Attorney-General Tony West attended, then-Acting Assistant Attorney-General Mary Lou Leary said, “The topic of animal cruelty may seem unimportant in the face of events like the Boston bombing, school shootings, and other recent tragedies, but we know there’s a history of animal cruelty in the backgrounds of many perpetrators of violent acts. Understanding this link between animal cruelty and interpersonal violence is critical to the Department.”

That the Department takes this seriously is evident. However, cuts in the OJP and COPS programs are hampering their ability to be the catalyst for innovative responses to animal cruelty and “the link” as envisioned in their missions and in the Department’s commitment to this issue. Prosecutors and other members of the law enforcement community are eager for new thinking and better tools for dealing with animal cruelty crimes in their communities. Funding is needed for training, technical assistance, communication and coordination, and dissemination of best practices.

We hope that Congress will take this important public safety need into consideration when determining funding for programs under BJA and COPS. Enabling DOJ to support initiatives addressing animal cruelty and its relationship to other crimes sends a very strong message to prosecutors, law enforcement, and, most importantly, the community at large, that crimes involving animals are to be taken seriously and pursued vigorously.

⁵Thompson, *Ibid.*, p.4.

⁶The Checklist is part of a tool (The Polyvictimization and Trauma Identification Checklist and Resource) developed by The SafeStart Center (a project of the U.S. Department of Justice’s Office of Juvenile Justice and Delinquency Programs), the American Bar Association’s Center on Children and the Law, and Child & Family Policy Associates. http://www.safestartcenter.org/pdf/Resource-Guide_Polyvictim.pdf.

PREPARED STATEMENT OF ASSOCIATED UNIVERSITIES, INCORPORATED

This written testimony is submitted on behalf of Associated Universities, Incorporated (AUI) to ask you to continue your support of the National Science Foundation (NSF) in fiscal year 2015 by providing NSF with \$7.5 billion. In particular, we urge you to provide strong support for the NSF Division of Astronomical Sciences and the National Radio Astronomy Observatory (NRAO).

My name is Ethan Schreier, President of AUI, a non-profit corporation that operates the National Radio Astronomy Observatory under a Cooperative Agreement with the National Science Foundation. NRAO is a federally Funded Research and Development Center (FFRDC) that enables forefront research into the Universe at radio wavelengths. Radio astronomy has opened new vistas into the Universe, uncovering the birthplaces of stars and planets, super-massive black holes, gravitational waves and the remnant heat of the Big Bang.

I would like to emphasize how much AUI appreciates your subcommittee's continued leadership on and recognition of the critical role of the NSF and its support for science and engineering in enabling a strong U.S. economy, workforce, and society.

Today, I submit this testimony to ask you to continue your support of NSF in fiscal year 2015 and beyond.

NSF funds basic research that spurs innovation and discovery in all fields of science and engineering. As a part of this work, NSF provides unique Federal support for ground-based astronomy that is answering fundamental questions about our Universe. These questions include how the Universe began, how cosmic structures form and evolve, whether habitable worlds exist around other stars, and what organic materials exist in space as the building blocks of life.

I join with the research and higher education community and request that you provide NSF with \$7.5 billion overall. I ask that you allocate an additional \$245 million above the budget request to Research and Related Activities (RRA), and within RRA, we encourage you to provide a proportional increase to the Division of Astronomical Sciences to \$249 million.

NSF provides critical funding to support astronomy facilities and the researchers in the United States that use them to answer these questions. In particular, NRAO currently operates four world-leading telescopes funded by NSF for use by the scientific community: the Jansky Very Large Array (VLA) in New Mexico, the most productive, ground-based telescope in history; the Robert C. Byrd Green Bank Telescope (GBT) in West Virginia, the world's largest, fully-steerable telescope; the Very Long Baseline Array (VLBA), the world's largest scientific instrument with 10 dishes spanning North America that enable the most precise angular measurements of any telescope; and the new international Atacama Large Millimeter/submillimeter Array (ALMA), the largest ground-based astronomy project ever conceived and built, for which AUI is the North American lead, overseeing NRAO's construction and operations for the North American science community. Each of these telescopes fills a unique and essential science role, and each is the best in the world in its category. NRAO's Headquarters, and the focus of its radio technology development, is in Virginia.

Certain physical phenomena are only observable by their radio signals. Just as visible light from space carries information about stars and the astronomical objects that are illuminated by them, radio waves are emitted by important celestial phenomena that are often invisible to our eyes, even with the best optical telescopes. For example, stars form from collapsing cold clouds of molecules and dust that are too cold and obscured to be observed by any other technique. The earliest stages of star formation, one of the most basic processes of astrophysics, are invisible even to the Hubble Space Telescope or the future James Webb Space Telescope and can only be studied using the techniques of radio astronomy. Radio astronomy also offers cost-effective methods to complement other techniques. For example, radio astronomers are using accurate timing of pulsars—fast-spinning, highly dense, collapsed (*neutron*) stars—to search for the gravitational waves predicted by Einstein's Theory of General Relativity. This technique, which uses NRAO's Green Bank Telescope among other facilities, is a complement to the Laser Interferometer Gravitational Wave Observatory (LIGO) and other gravitational wave detectors.

NRAO facilities provide transformational and unique scientific capabilities that enable the astronomy community to answer many fundamental questions about the Universe including those highlighted by the recent National Academy's Decadal Survey, *New Worlds New Horizons*, studying galaxies as they form and grow since the earliest times of the Universe, directly imaging planets in formation around nearby stars, and directly detecting gravitational waves from the merging of massive black holes.

We ask that you continue the fiscal year 2014 level for NRAO operations to support ongoing activities at U.S. NRAO facilities. Support for these facilities will sustain groundbreaking research capabilities as well as our very active science, technology, engineering, and mathematics (STEM) education and public outreach programs. We additionally hope you will support the President's budget request for the ALMA project, now nearing completion of construction, at \$40.17 million for fiscal year 2015. This represents a \$5.9 million increase to the AST budget as the ALMA project ramps up to full operations.

AUI also supports the important NSF initiative to fund midscale research infrastructure at \$29 million, an increase of \$8.25 million above the fiscal year 2014 enacted level. These funds would support scientific instrumentation that facilitate student training, bridging the gap between small laboratory-scale instrumentation and large multi-user facilities. This midscale program request would implement a priority identified by the National Academy's most recent decadal survey of astronomy and astrophysics.

We would like to conclude by thanking you again for your ongoing support of NSF that enables the research and education communities it supports, including thousands of astronomers, to undertake activities that contribute to the health, security, and economic strength of the U.S. NSF needs sustained annual funding 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 2015. I appreciate the opportunity to provide testimony to the Committee on behalf of AUI. I am happy to provide any additional information or assistance you may ask of us during the fiscal year 2015 appropriations process.

PREPARED STATEMENT OF THE ASSOCIATION OF PUBLIC AND LAND-GRANT
UNIVERSITIES' (APLU) BOARD ON OCEANS, ATMOSPHERE, AND CLIMATE (BOAC)

On behalf of the Association of Public and Land-grant Universities' Board on Oceans, Atmosphere, and Climate (BOAC), we thank you for the opportunity to provide recommendations for the proposed fiscal year 2015 budgets for the National Oceanic and Atmospheric Administration (NOAA), the National Aeronautic and Space Administration (NASA), and the National Science Foundation (NSF). BOAC represents over 300 scientists and administrators at APLU's 235 member universities and systems. *We support a budget of \$5.6 billion for NOAA, \$80 million for the NOAA's National Sea Grant College Program, \$5.25 billion for NASA's Science Directorate and \$7.5 billion for NSF.*

According to the National Climatic Data Center (NCDC), between 1980 and 2013, there were 151 weather/climate disasters that each exceeded \$1 billion in damages. Combined they totaled \$1 trillion in losses. The Federal Government spent nearly \$140 billion on disasters in 2012 alone. Additionally, the role of the Federal Government in covering many of these losses has grown tremendously over the last few decades. Erwann Michel-Kerwann, chairman of the OECD's Board on Financial Management of Catastrophes, noted that in 1989, Federal relief covered only 23 percent of total damage whereas Federal relief covered 69 percent of Hurricane Ike in 2008 and 75 percent of Hurricane Sandy in 2012.

To decrease future Federal expenditures and to make the Nation more prepared for natural disasters, Federal agencies are working with communities across the Nation to enhance their resilience. Community resilience is a measure of the ability of a community to prepare for, respond to, and fully bounce back from a variety of crises. Through research, Federal science agencies can play a valuable role in helping communities strengthen their resilience.

In 2005, the National Science and Technology Council's Subcommittee on Disaster Reduction provided a framework for sustained Federal investment in science and technology related to disaster reduction, regardless of the type of disaster. They call for:

- Providing hazard and disaster information where and when it is needed.
- Understanding the natural processes that produce hazards.
- Developing hazard mitigation strategies and technologies.
- Recognizing and reduce vulnerability of interdependent critical infrastructure.
- Assessing disaster resilience using standard methods.
- Promoting risk-wise behavior.

All of these actions require research, whether it be for the basics of understanding how and when natural processes become hazardous or for modeling potential flooding or for the social science to enhance communications, trust and understanding within communities to promote "risk-wise" behavior.

Below we comment on the needs of each agency and their collaborating science communities in making our Nation more resilient:

NOAA

NOAA conducts research into natural processes and provides information on when natural processes may be hazardous. To create resiliency for the Nation, researchers and forecasters need increased and sustained support of satellite and in situ environmental observing systems. As reported in several prior and recent National Research Council studies, (*Observing Weather and Climate from the Ground Up, a Nationwide Network of Networks*, NRC, 2009), the needs are particularly acute for urbanized areas as well as mountain, ocean and coastal regions.

While we recommend sustained support for NOAA's satellite programs, we point out that this support *should not be at the expense of NOAA's extramural funding* of research, education and outreach. Extramural funding is cost effective. Its highly competitive nature ensures up-to-date qualifications and cutting-edge approaches without the continuing costs of developing, maintaining and updating these skills in house. It provides essential training in research skills to provide the next generation of researchers. In 2004 the NOAA Science Advisory Board's Research Review Team report concluded:

"... Extramural research is critical to accomplishing NOAA's mission. NOAA benefits from extramural research in many ways, including: access to world class expertise not found in NOAA laboratories; connectivity with planning and conduct of global science; means to leverage external funding sources; facilitate multi-institution cooperation; access to vast and unique research facilities; and access to graduate and undergraduate students. Academic scientists also benefit from working with NOAA, in part by learning to make their research more directly relevant to management and policy. It is an important two-way street ... *NOAA cannot accomplish its goals without the extramural community, specifically the universities and institutions that represent the broad range of expertise and resources across the physical, biological, and social sciences (emphasis added)*. Moreover, there is the important issue of maintaining a scientific and technologically competent workforce in NOAA and the workforce is another "product" of the extramural research community ... Also it is important that during difficult budget periods that NOAA not disproportionately target the extramural research for budget cuts."

Sustained observations are vitally important to ensure coastal communities have the information necessary to increase overall resiliency. NOAA's Sustained Ocean Observations and Monitoring program funds global observing programs, including globally deployed floats, drifters, and fixed moorings to provide information essential for accurate forecasting of hurricanes, typhoons, atmospheric rivers and associated flooding, heat waves, and wildfires. Data and analyses of ocean and atmospheric conditions are increasingly used for drought early warning systems, enhanced tsunami warning systems, and storm surge monitoring. Ocean observations are also imperative for calibrating and validating satellite observations. Maintaining baseline ocean observations in support of weather and regional climate predictions, fisheries management and ecosystem studies, tide and current monitoring, and sea level change is essential. Maintaining continuity of long-term data sets is essential to ensure communities are able to respond and adapt to today's changing world.

NOAA's support of environmental research and education via programs such as the Oceanic and Atmospheric Research's Sea Grant and the Office of Ocean Exploration and Research programs are also critical to university research, education and outreach. Similarly, NOAA's role in understanding the oceans and coastal areas and oceanic resources through the National Centers for Coastal Ocean Science support and help maintain sustainable coastal economies.

In particular, we would like to point out the important role of the National Sea Grant College Program in increasing the resilience of the Nation's coastal communities. Sea Grant personnel excel at working with local communities to address their specific needs and prepare them for potential hazards. For example, Virginia Sea Grant provided training to emergency managers and weather service meteorologists in Rstofs, a flood forecasting system used extensively by the National Weather Service and emergency managers. In 2011, that training paid off when decision-makers, using this training, made a timely evacuation call of 200,000 residents during Hurricane Irene. Similarly, Virginia Sea Grant sponsored the development and dissemination of real-time tide monitoring technology (TideWatch). With information from TideWatch, marinas were able to properly prepare for the drastic tidal changes produced by storms Ida (2009) and Irene (2011) and avoid the damages they accrued during similar, earlier storm events. For the reasons listed above, we support funding of the National Sea Grant College Program at \$80 million.

Another critical pillar of NOAA's extramural research enterprise in atmospheric and ocean science, climate, weather, and marine ecosystems are its 16 Cooperative Institutes, involving 42 leading research universities and non-profit independent institutions located in 23 States and the District of Columbia. Established through open solicitations, competitive Cooperative Institute (CI) partnerships provide NOAA direct access to key innovations at the Nation's primary institutions of science, social-learning, and research development. Recent Cooperative Institute research has focused on forecasting energy demand scenarios, seasonal wildfires, and large storm events; assessing local impacts of projected sea-level rise; improving seasonal precipitation and drought predictions; and understanding atmospheric rivers and other causes of extreme flooding. This research is translated into information used by private businesses and public sector managers at all levels of government. CI program are predominantly funded by the Office of Oceanic and Atmospheric Research (OAR), through its "Laboratories and Cooperative Institutes" line, but are also administered and/or funded by other NOAA line offices including the National Marine Fisheries Service (NMFS) and the NOAA's Satellite and Information Service (NESDIS).

In addition, OAR's Regional Climate Data and Information line funds the Regional Integrated Sciences and Assessments (RISA) program, the National Integrated Drought Information System (NIDIS), and associated programs. The RISA program supports research teams in over 30 States—each affiliated with one or many universities—as they work with public and private user communities to build the Nation's capacity to prepare for and adapt to environmental variability and change. NIDIS provides dynamic and easily accessible drought information for the Nation.

NASA

Like NOAA, NASA is critical to community resilience, both for developing an understanding of the Earth and how it functions as well as collection of the data scientists use to help aid decision-makers.

In 2007, the National Academies issued the report, *"Earth and Science Applications from Space: National Imperatives for the Next Decade and Beyond."* The report found that between 2000 and 2009 funding for Earth Sciences (ES) had fallen substantially. ES research is absolutely critical to understanding climate change, such as the decline of Earth's ice sheets and the health of the global oceans. Past investments in NASA's science mission have funded university research that has resulted in the development of new instruments and technologies and in valuable advances in weather forecasting, climate projections and understanding of Earth ecosystems.

NASA is instrumental in deploying satellites used by NOAA and in cooperating with other countries. Furthermore, without the tools developed at NASA, oceanic, atmospheric, hydrologic and Earth-system scientists and the Nation would have only a fragmentary picture of the interconnected functioning of the planet's oceans, atmosphere and land. NASA plays a role in technology transfer from NOAA by testing new sensors. NASA is currently developing a sensor that will for the first time give scientists and resource planners a global picture of the world's terrestrial water supplies. Currently many lakes and rivers are not monitored and there is no centralized location for water resource information. The NASA data archive is an irreplaceable collection of environmental information that researchers depend upon. Furthermore, through its support for young scientists and graduate students, the NASA science mission supports innovation.

Finally, we support funding NASA to develop and implement a scatterometer mission with fast community access to those data, capability to distinguish between wind and rain and a higher orbit for coverage of Alaskan waters. The scatterometer has been a critical component of hurricane prediction.

NSF

Understanding natural processes and how or when they become hazardous is critical to forecasting those hazards. This requires basic research, which is why BOAC supports funding of NSF. NSF supplies almost two-thirds of all Federal funding for university-based, fundamental research in the geosciences. GEO-supported research increases our ability to understand, forecast, respond to and prepare for environmental events and changes. NSF's Water Sustainability and Climate program addresses the pressing challenge of providing adequate water quantity and quality in light of both burgeoning human needs and increasing climate variability and change. Through facilities such as the Oceans Observatory Initiative, the Integrated Ocean Drilling Program, and NCAR-Wyoming supercomputer, NSF provides the academic community with advanced capabilities that it would not be able to afford

if conducted through individual institutions. It does so without growing the needs for increased personnel, training and retooling in house at Federal laboratories and while training the next generation.

SUMMARY

Together, NOAA, NASA, and NSF provide critical Earth observations and research funding for scientists, engineers and mathematicians working to increase understanding of natural phenomena of economic and human significance. BOAC thanks the Committee for its continued support of these critical agencies.

PREPARED STATEMENT OF THE ASSOCIATION OF ZOOS AND AQUARIUMS

NOAA

Thank you Chairwoman Mikulski and Ranking Member Shelby for allowing me to submit testimony on behalf of the Nation's 213 U.S. accredited zoos and aquariums. Specifically, I want to express my support for the inclusion of at least \$3.981 million for the John H. Prescott Marine Mammal Rescue Assistance Grant Program, \$2,500,000 for the NOAA Ocean Education Grants Program, and \$12,000,000 for the Bay, Watershed, Education and Training Program in the fiscal year 2015 Commerce, Justice, Science, and Related Agencies appropriations bill. Additionally, I urge you to reject any proposal that eliminate valuable ocean education programs as part of a plan to restructure Federal Science, Technology, Engineering, and Math (STEM) programs.

Founded in 1924, the Association of Zoos and Aquariums (AZA) is a nonprofit 501(c)(3) organization dedicated to the advancement of zoos and aquariums in the areas of conservation, education, science, and recreation. AZA-accredited zoos and aquariums annually see more than 182 million visitors, collectively generate more than \$21 billion in annual economic activity, and support more than 204,000 jobs across the country. Over the last 5 years, AZA-accredited institutions supported more than 4,000 field conservation and research projects with \$160,000,000 annually in more than 100 countries. In the last 10 years, accredited zoos and aquariums formally trained more than 400,000 teachers, supporting science curricula with effective teaching materials and hands-on opportunities. School field trips annually connect more than 12,000,000 students with the natural world.

During the past 20 years AZA-accredited zoos and aquariums have rescued and rehabilitated more than 1,800 marine animals including stranded dolphins, whales, sea lions, seals, sea otters, sea turtles, and manatees. More than 1,750 (97 percent) of these animals have been successfully released back into their natural habitat. While the Nations' accredited zoos and aquariums support wildlife rehabilitation through their ongoing animal rescue programs, these institutions are sometimes involved in addressing natural and manmade disasters such as the 2010 Deepwater Horizon Gulf oil spill. For example, following the oil spill, accredited zoos and aquariums around the country offered assistance by pledging the services of 200 animal care professionals and donating supplies, vehicles, and other resources to assist in the wildlife rescue efforts.

The John H. Prescott Marine Mammal Rescue Assistance Grant Program provides grants or cooperative agreements to eligible stranding network participants for the recovery and treatment (i.e., rehabilitation) of stranded marine mammals; data collection from living or dead stranded marine mammals; and, facility upgrades, operation costs, and staffing needs directly related to the recovery and treatment of stranded marine mammals and collection of data from living or dead stranded marine mammals. Eligible applicants are currently active, authorized participants, including AZA-accredited zoos and aquariums, or researchers in the National Marine Mammal Stranding Network.

Without the Prescott grant program, NOAA would have to rely on private organizations as it coordinates the response to marine mammals in distress; determines disease, injury and potential cause(s) of death; and supports emergency response for marine mammals during oil spills, outbreaks of diseases, and unusual mortality events. Network partners may not have the funds or the ability to respond to some stranding events, leaving animals at risk for prolonged exposure and likely death. Without funding for this program the critical ability to monitor marine mammal health trends, collect scientific data, and perform analysis would also be diminished. Information about the causes of marine mammal strandings is useful to the public because marine mammals can serve as an indicator of ocean health, giving insight into larger environmental issues that also have implications for human health and welfare.

At the same time that AZA-accredited zoos and aquariums are working with Federal partners to conserve ocean wildlife, they also are providing essential learning opportunities, particularly about science, for schoolchildren in formal and informal settings. Increasing access to formal and informal science education opportunities has never been more important. Studies have shown that American schoolchildren are lagging behind their international peers in certain subjects including science and math.

The NOAA Ocean Education Grants Program and Bay, Watershed, Education and Training Program bring students closer to science by providing them with the opportunity to learn firsthand about our world's marine resources. Through these grant programs, aquariums work closely with Federal, State, and local partners on projects with long-lasting benefits not only for the students but their communities as well. For example, previous projects funded by NOAA Ocean Education Grants at AZA aquariums have focused on establishing a regional network of summer camp programs grounded in ocean science, enhancing teen conservation leadership programs, and conserving and managing coastal and marine resources to meet our Nation's economic, social and environmental needs. As schools face increased budgetary pressures, these types of education programs at aquariums will become even more important in ensuring that American schoolchildren receive the necessary foundation in science education that they will need to be competitive in the 21st century global economy.

AZA-accredited zoos and aquariums are essential partners at the Federal, State, and local levels to improve education for schoolchildren and ensure that current and future generations will be good stewards of the world's oceans. Therefore, I urge you to include at least \$3.981 million for the John H. Prescott Marine Mammal Rescue Assistance Grant Program, \$2,500,000 for the NOAA Ocean Education Grants Program, and \$12,000,000 for the Bay, Watershed, Education and Training Program in the fiscal year 2015 Commerce, Justice, Science, and Related Agencies appropriations bill.

Thank you.

PREPARED STATEMENT OF NATHAN M. BACHELER, FISHERIES BIOLOGIST, NOAA/
NATIONAL MARINE FISHERIES SERVICE

Dear Members of the Senate Subcommittee on Commerce, Justice and Science, and Related Agencies: Acting as a private citizen on my own time, I would like to submit testimony for the record to strongly urge the subcommittee to reject the proposal in the President's fiscal year 2015 budget to close the National Oceanic and Atmospheric Administration (NOAA) laboratory in Beaufort, North Carolina, and to instead fund this facility so that the crucial work being done there can continue on into the future. This laboratory is uniquely located to address key marine science issues throughout the east coast of the U.S., and its loss would represent a devastating blow to the fisheries interests in the region. The decision to try and close the Beaufort facility represents a narrow-minded approach to a temporary funding concern that is dwarfed in comparison by the potential damage done to the research conducted on the marine resources in the southeast.

The closure of the Beaufort lab would be a grave error because of the loss of high-quality science and scientists associated with the facility. Located at the intersection of two distinct marine environments, the NOAA laboratory in Beaufort is uniquely situated to study one of the most diverse ecosystems in the country. The lab is an international leader in studies of harmful algal blooms (HABs) and the invasion of lionfish into the waters of the Atlantic Ocean, both of which are currently having a significant impact on the fisheries resources of the United States. The National Marine Fisheries Service (NMFS) programs at the lab are responsible for the assessment of the major marine fisheries stocks in the southeast, including menhaden (the largest fishery along the Atlantic coast as well as in the Gulf of Mexico) and the commercially and recreationally important snapper and grouper fisheries. NMFS in Beaufort also provides the only up-to-date information on the currently-closed red snapper fishery along the southeast coast through its SouthEast Fishery-Independent Survey. All of these programs would suffer irreparable damage were the lab to close because NOAA would be unlikely to retain the world-class scientists performing this research in the event their Federal positions were transferred to other NOAA facilities in the southeast; the NOAA lab is part of a unique conglomeration of research facilities in the Beaufort area, and the majority of employees would very likely try and remain in the area at a different institution rather than relocate to a less desirable location. Thus, NOAA (and NMFS in particular) would be forced to rebuild these programs from scratch, programs that are required to meet congress-

sional mandates laid out in the Magnuson-Stevens Fishery Conservation and Management Act. Just as importantly for NMFS, the closure of the Beaufort facility would mean that the Fisheries Service would not have a presence along the coast between Sandy Hook, New Jersey and Miami, Florida—an extent that covers over two-thirds of the United States east coast. It is difficult for the agency to claim they are interested in conserving the marine resources of the southeast with such a large spatial gap in representation, especially compared to five NMFS research facilities in the Gulf of Mexico and another five in the northeast.

The financial reasons given by the leadership of the National Ocean Service (NOS) for closing the Beaufort facility have been misrepresented and overblown. In their justification for closing the lab, NOS cited only the NOS employees that would be impacted, grossly underestimating the total number of workers at the site. In addition to NOS, the lab also houses National Marine Fisheries Service (NMFS) and National Estuarine Research Reserve System (NERRS) programs; between the three groups there are 108 Federal, State, and contract employees at the facility, a much larger disruption of staff than initially claimed. Additionally, NOS cited a cost of future maintenance repairs to the facility that was outdated and did not take into account recent work that has been done to upgrade the laboratory and its infrastructure. Since 2006, approximately \$14 million in repairs and upgrades have been accomplished, including the replacement of multiple buildings. The closure of this facility, after so much has been invested in its improvement in recent years, seems like a clear waste of taxpayer money, especially given that a 2014 report showed that the facility is structurally sound.

In summary, the closing of the NOAA facility in Beaufort is bad policy—it is a squandering of taxpayer funds, it is a major detriment to the science being conducted in the southeast, and it makes it more difficult for NMFS to maintain the quality of the work it is federally mandated to achieve. The laboratory in Beaufort has been operating continually since 1899 and was sited here specifically because of its advantageous position so close to so many of our Nation's valuable marine resources; Congress owes it to our country to make sure the high-quality work done here continues on for the next 115 years.

PREPARED STATEMENT OF GEORGE BOEHLERT, REDMOND, OREGON

To whom it may concern,

I am writing concerning the proposed closure of the National Oceanic and Atmospheric Administration (NOAA) laboratory in Beaufort, North Carolina. I believe that closing this facility entirely is a mistake and have some recommendations for the subcommittee to consider.

First, I will provide some background on my credentials to comment. Although I retired in 2012, I have worked with a variety of National Marine Fisheries Service (NMFS) laboratories during my career, and have served as director of two. As a graduate student, I conducted my research at the NMFS Southwest Fisheries Science Center in La Jolla, California from 1972–77. I conducted postdoctoral research at the Northwest and Alaska Fisheries Science Center in Seattle from 1977–78. In academic positions from 1978–1983 at the College of William and Mary and at Oregon State University, I collaborated with NOAA/NMFS scientists at several labs, including the Beaufort Laboratory. In 1983 I took a position as division director at the NMFS Honolulu Laboratory, and served as director there in 1988–1993, and moved to Monterey, California in 1993 as director of the NMFS Pacific Fisheries Environmental Group. I left there in 2002 to return to Oregon, where I served as Professor and Director at Oregon State University's Hatfield Marine Science Center in Newport—a facility co-located with three different regional NOAA activities. I have served on external review panels of several NOAA labs and am highly familiar with the mission of the different organizations.

From my own perspective, the Beaufort Laboratory has a long history that has served NOAA and the central Atlantic Seaboard with distinction. As a relatively small lab for several decades, it addressed key issues of the National Marine Fisheries Service's mission, including fisheries management (menhaden, groundfish species, estuarine species), fundamental fisheries ecology, protected species (particularly sea turtles), and fisheries habitat (including toxic algal blooms). It conducted these tasks with distinction, with an enviable publication record as well as a record of solving fundamental fisheries problems in the region. I am familiar with these earlier endeavors, not only because I collaborated with scientists there, but also because I served as an external reviewer of some of their programs in the early to mid 1990s on behalf of the National Research Council. Beaufort was a perfect example of the value of the smaller regional laboratories, meeting the mission of the larg-

er NMFS and NOAA within the context of the Southeast Fisheries Science Center while collaborating with and augmenting regional State resource agencies.

Problems with smaller regional labs often arise when political or personal forces work to give them greater autonomy and higher budgets. In my opinion, this is the case with the Beaufort Laboratory and has played a role in making it a weaker laboratory. Roughly 10 years ago, NOAA decided to put the Beaufort Laboratory under a different line office—the National Ocean Service (NOS), expanding the mission significantly but keeping many NMFS employees on site. The broader mission requires more funds, more scientists with more expertise, more buildings, and an expanded budget. While the mission was more diverse, it was also more vague and perhaps less focused on the particular regional needs. I am not sure why a decision to close the laboratory was made this year, but it may be related to the loss of focus in mission and thus to questions about the value of the organization.

Finally, I do have some recommendations for the subcommittee. Rather than taking a meat axe approach and closing this laboratory entirely, I believe that an external review of the Beaufort Laboratory's mission and function is needed. Direction should be given for this review that will address key issues, including the following:

- Critical regional needs within NOAA's mission that can be addressed best by a regional lab as opposed to larger facilities located in different regions. This should have significant input from the regional coastal States and their resource agencies;
- Organizational structure of the laboratory within NOAA—given the critical needs identified above; for example, determining whether NOS is the right place, or if NMFS a better match for the regional needs; and
- Staff size, budgets, and physical facilities required to meet these needs.

Armed with the output of such a review, a values-based decision can be made that is beneficial to both NOAA and the regional States; it may well involve significant cuts and a smaller laboratory, but will be based on an appropriate and well-thought out approach. I continue to believe that small regional labs with a clear focus, embedded within the larger NOAA and line office structure, are of extremely high value.

Thank you for the opportunity to comment.

PREPARED STATEMENT OF THE BRENNAN CENTER FOR JUSTICE

Chairman Mikulski, Ranking Member Shelby, and distinguished members of the Senate Appropriations Subcommittee on Commerce, Justice and Science, thank you for the opportunity to submit written testimony before the committee to discuss fiscal year 2015 budget priorities. The testimony is offered to the subcommittee for use during its consideration of Department of Justice criminal justice funding.

The Brennan Center for Justice at New York University School of Law¹ is a non-partisan law and policy institute that seeks to improve the national systems of democracy and justice. The Brennan Center for Justice was created in 1995 by the clerks and family of the late Supreme Court Justice William J. Brennan, Jr. to improve our systems of justice and democracy. The Justice Program at the Brennan Center is dedicated to ensuring a rational, effective, and fair justice system. Our priority initiative is to reduce mass incarceration by reducing the criminal justice system's current size and severity; while still protecting public safety.

The Department of Justice (DOJ) administers dozens of criminal justice grants, which total over \$1 billion each year. In 2012, the Community Oriented Policing Services and Violence Against Women Act grants received more than \$1.45 billion. Most notably, the Edward J. Byrne Memorial Justice Assistance Grant (Byrne JAG), the largest nationwide criminal justice grant program administered by DOJ, receives between \$300 million to \$500 million each year. It retains an enormous influence on criminal justice policies and priorities. JAG dollars reach across the entire criminal justice system. They reach all States, territories, and thousands of localities, mainly flowing to law enforcement. These funds support local police departments, drug courts, prosecutor and public defender offices, courts, and more. While important, the structure was created more than 30 years ago, based on criteria and priorities at a time of rising and seemingly out of control crime. Decades after its inception, the criminal justice system that JAG dollars were created to support has spiraled into one that now supports the world's largest population of incarcerated people and all of the inherent problems that come with this distinction.

It is time for a change. A better approach, termed "Success-Oriented Funding" would use the power of the purse to steer the criminal justice system toward the

¹ This letter does not represent the opinions of NYU School of Law.

twin goals of reducing crime *and* reducing mass incarceration—goals research shows are not in conflict. The Brennan Center for Justice recently published a report highlighting a way to align fiscal and policy priorities.² Grounded in economic principles and built on discrete models in other policy areas, Success Oriented Funding ties Government dollars as closely as possible to whether agencies or programs meet specific, measureable goals. These goals would drive toward what policymakers and researchers increasingly see as a new, modern, and more effective justice system. The model imports private sector business principles and applies it to public dollars.

Economic theory indicates that actors provided with clear positive rewards will usually alter their behavior to match these incentives. Former Chairman of President George W. Bush’s Council of Economic Advisors and Harvard University Professor N. Gregory Mankiw articulates this fundamental tenet in “Principles of Economics”—one of the most widely-used introductory economics textbooks. He defines the discipline in this way: “People respond to incentives. The rest is commentary.”³ By setting clear goals for success or failure of government agencies and programs, Success-Oriented Funding would fund “success,” achieving results-driven government. This cost-effective framework ensures that the government is getting a good return on its investment. Broad goals for funding recipients include reducing recidivism and crime, or reducing unnecessary prison sentences and incarceration. Grant-specific goals would vary depending on the agency or program funded. For example, grants for police could focus on reducing violent crime or diverting drug addicted arrestees to treatment.

Illinois has seen great success with its investment and support of the Adult Redeploy Illinois program, which diverts non-violent offenders from prison into more effective community-based services. Adult Redeploy Illinois provides financial incentives to local jurisdictions that design evidence-based services to supervise and treat non-violent offenders in the community instead of sending them to State prisons. Since 2011, Adult Redeploy Illinois sites have diverted more than 1,000 non-violent offenders. These sites spent an average of \$4,400 per program participant, compared to the annual per capita incarceration cost of \$21,500 in State fiscal year 2011. This represents more than \$18.5 million in potential corrections savings.⁴ By investing in programs like Adult Redeploy Illinois, Congress can make inroads in achieving better taxpayer accountability while using funding to improve criminal justice outcomes.

Last month, President Obama introduced his fiscal year 2015 budget proposal for the Department of Justice, which requests \$27.4 billion for the Justice Department, of which \$173 million is set aside for targeted investments for criminal justice reform efforts. The budget also calls for an investment of \$173 million to support the Attorney General’s *Smart on Crime* initiative, which is intended to promote fundamental reforms to the criminal justice system that will ensure the fair enforcement of Federal laws, improve public safety, and reduce recidivism by successfully preparing inmates for their re-entry into society.

The President’s budget provides a needed boost to the types of competitive, evidence-based grant programs that make better use of taxpayer dollars. His budget also improves the Byrne JAG program, by calling for an additional \$45 million to be funded through competitive grants that are conditioned on potential Byrne JAG program recipients making a good case for how they will use the money. The budget also creates a \$15 million incentive grant program, essentially bonus money for which States and localities can compete.

By increasing funding for competitive, evidence-based programs, the administration is communicating its desire to move away from blindly funding legacy programs without strong records of success, and towards modern programs that work at reducing crime and incarceration and improving public safety.

The Brennan Center supports these efforts because they move budgeting and funding toward Success-Oriented Funding by holding recipients of Federal dollars accountable for their spending choices by implementing direct links between funding and proven results. This allows Congress to ensure the criminal justice system is producing results while not increasing unintended social costs. Success-Oriented funding principals improve the use of taxpayer money, promote accountability and reduce government waste.

² Chettiar, Inimai; Eisen, Lauren–Brooke, Fortier, Nicole; *Reforming Funding to Reduce Mass Incarceration*, Brennan Center for Justice, Nov. 2013. https://www.brennancenter.org/sites/default/files/publications/REFORM_FUND_MASS_INCARC_web_0.pdf.

³ N. Gregory Mankiw, *Principles of Economics* 7 (6th ed. 2012) (quoting Steven E. Landsburg, *The Armchair Economist* 3 (2012)).

⁴ http://www.icjia.org/public/redeploy/pdf/articles/Adult_Redeploy_Illinois_media_stories_011714.pdf.

Restructuring the way taxpayer dollars are sent to law enforcement and other criminal justice agencies nationwide can do a great deal to modernize our outdated criminal justice system. Funding these incentive based grants would mark an important shift in how the Federal Government spends dollars on criminal justice. Because these dollars travel across the country, changing incentives for these grants can create change that reverberates nationwide.

We encourage you to fully fund the Byrne Incentive grant program, the Byrne Innovation grant program, and the Byrne Competitive grant program.

Respectfully submitted,

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PREPARED STATEMENT ON THE BUREAU OF PRISONS BUDGET

ORGANIZATIONS SUBMITTING TESTIMONY

AFL-CIO	Justice Strategies
American Civil Liberties Union	Maryknoll Office for Global Concerns
American Gateways	National Advocacy Center of the Sisters
American Immigration Lawyers Association	of the Good Shepherd
Americans for Immigrant Justice	National African American Drug Policy
Asian Americans Advancing Justice-Chicago	Coalition, Inc.
Asian Americans Advancing Justice-Los Angeles	National Center for Transgender
Black Alliance for Just Immigration (BAJI)	Equality
Coalición de Derechos Humanos	National Immigrant Justice Center
Coalition for Humane Immigrant Rights of Los Angeles	National Immigration Forum
Conference of Major Superiors of Men	National Immigration Law Center
Detention Watch Network	National Immigration Project of the
DRUM—South Asian Organizing Center	NLG
Enlace	New Sanctuary Coalition
Families for Freedom	Picture Projects/360degrees.org
Friends Committee on National Legislation	Presbyterian Church (U.S.A.)
Georgia Detention Watch	Private Corrections Institute
Grassroots Leadership	Private Corrections Working Group
Human Rights Defense Center	Reformed Church of Highland Park
Illinois Coalition for Immigrant and Refugee Rights	(New Jersey)
In The Public Interest	Sisters of Mercy of the Americas—
International CURE	Institute Justice Team
Justice Policy Institute	Southern Center for Human Rights
	Texas Civil Rights Project
	The Sentencing Project
	Transgender Law Center
	United Methodist Church, General
	Board of Church and Society
	Wilco Justice Alliance (Williamson
	County, TX)

TESTIMONY ADDRESSED TO

The Honorable Barbara Mikulski, Chair	The Honorable Richard C. Shelby, Ranking Member
The Honorable Patrick J. Leahy	The Honorable Mitch McConnell
The Honorable Dianne Feinstein	The Honorable Lamar Alexander
The Honorable Jack Reed	The Honorable Susan Collins
The Honorable Mark Pryor	The Honorable Lisa Murkowski

The Honorable Mary L. Landrieu	The Honorable Lindsey Graham
The Honorable Jeanne Shaheen	The Honorable Mark Kirk
The Honorable Jeff Merkley	The Honorable John Boozman
The Honorable Chris Coons	

Subcommittee on Commerce, Justice, Science,
and Related Agencies
Senate Committee on Appropriations
SD-142, Dirksen Senate Office Building
Washington, DC 20515

Re: Do not appropriate funds for additional private prison contract beds in the Bureau of Prisons budget

Dear Chairwoman Mikulski, Ranking Member Shelby, and members of the subcommittee: We, the undersigned organizations working to ensure civil liberties and human rights in our communities, urge that you do not appropriate funding for any additional Bureau of Prison "Criminal Alien Requirement" (CAR) contract confinement beds beyond those that now exist.

CAR prisons use taxpayer funds to incarcerate non-violent, "low security" Federal immigrant prisoners, primarily prosecuted for immigration violations through the highly controversial program, "Operation Streamline" and related prosecution programs. These facilities are substandard, privately-owned, privately-operated segregated immigrant prisons. For the reasons set forth below, we call upon you to redirect funding from the wasteful prosecution and incarceration of low-level immigration violations and focus resources instead on correctional programs that will better prepare Federal prisoners for constructive lives when they are released from confinement.

The increasing incarceration of immigrants is the direct result of a prosecution program known as "Operation Streamline" and the sharp increase in felony prosecutions for border crossing. Nearly 90,000 people were convicted in Federal courts during fiscal year 2013 for crossing the border.¹ Prior to "Operation Streamline," which launched in 2005, the majority of immigrants apprehended after entering the United States without documentation were processed in the civil immigration system. Now, these migrants are charged with one of two Federal crimes—(1) unlawful entry to the U.S. (8 U.S.C. § 1325), usually prosecuted as a misdemeanor with defendants facing a sentence of up to 180 days; or (2) unlawful re-entry after deportation (8 U.S.C. § 1326), a felony charge carrying a Federal prison sentence of up to 20 years.

Once sentenced for § 1326 violations, immigrants are typically segregated from other Federal prisoners and sent to CAR facilities, dedicated private prisons for non-citizen immigrants in BOP custody, to serve their time. Unlike Federal prisons operated directly by the BOP, CAR prisons are operated under contract with multi-billion dollar for-profit prison companies, including Corrections Corporation of America (CCA) and the GEO Group. Also unlike BOP facilities, CAR facilities are governed by policies that BOP and its private prison contractors often withhold from the public as "trade secrets" instead of open and transparent to the public. CAR facilities are often located in remote parts of the country, where prisoners are far from lawyers, courts, advocates and family members. Finally, unlike the BOP, the corporations that operate CAR prisons have an incentive to ensure the immigrant prisoner population continues to increase, because every prison bed with a body in it means higher profits.²

Both Federal prosecutions for border crossing and CAR prisons are enormously expensive to maintain at a time when budgets are tight and Federal dollars are sparse. The Federal Government spent an estimated \$5.5 billion incarcerating border-crossers in the Federal prison system between 2005 and 2012, and the primary beneficiary of this massive cash flow is the private prison industry.³ Even as the American economy has faltered and businesses across the country have been forced into bankruptcy, the private prison industry is booming. Three companies—GEO Group, Corrections Corporation of America (CCA), and the Management Training

¹ Transactional Records Access Clearinghouse, Syracuse University, "Immigration Convictions for 2013," available at <http://tracfed.syr.edu/>.

² Justice Strategies, "Privately Operated Federal Prisons for Immigrants: Expensive, Unsafe, Unnecessary," September, 2012, available at <http://www.justicestrategies.org/publications/2012/privately-operated-federal-prisons-immigrants-expensive-unsafe-unnecessary>.

³ Grassroots Leadership, "Operation Streamline: Costs and Consequences," September 2012, available at http://grassrootsleadership.org/sites/default/files/uploads/GRL_Sept2012_Report-final.pdf.

Corporation (MTC)—monopolize Federal prison contracting. CAR contracts are very lucrative. The CAR contract issued to house up to 3,000 prisoners at the infamous Willacy County Processing Center, the “Tent City” located in Raymondville, Texas, was valued at \$532,318,723 over 10 years.⁴ MTC won the contract.

The number of undocumented immigrants entering the United States without inspection has been steadily declining for the last several years, largely due to economic conditions in the U.S. and countries of origin. Yet private prison corporations, motivated by their record profit margins, continue to benefit directly from the laws and policies that pull more and more immigrants into the Federal prison system, and from Federal contracts to build more prisons. Increasing funding for the unprecedented imprisonment of immigrants implicitly sanctions wasteful and abusive prosecution programs for border crossing that are driving the increase in the Federal prison population in the first place. It is up to policy makers like you to put a stop to the suffering of immigrant families and wasteful spending which benefits no one except the private prison operators.

For all of the above reasons, we ask that you do not appropriate funding for any additional Bureau of Prison “Criminal Alien Requirement” (CAR) contract confinement beds beyond those that now exist.

Thank you for your attention to this urgent matter. If you have any questions, please contact Alexis Mazón, Researcher with Justice Strategies at alexismazon@justicestrategies.net, (510) 725-4136, or Bob Libal, Executive Director of Grassroots Leadership at blibal@grassrootsleadership.org, (512) 971-0487.

PREPARED STATEMENT OF THE CALIFORNIA ASSOCIATION OF PSYCHIATRIC
TECHNICIANS

FEDERAL FUNDS USED TO SUE & SHUTTER FEDERALLY ACCREDITED CARE FACILITIES

On behalf of approximately 14,000 California Licensed Psychiatric Technicians representing the Nation’s gold standard in direct-care nursing services for people with developmental disabilities and mental illnesses, I am writing to respectfully request that the subcommittee, committee and Congress as a whole end the ability for the U.S. Department of Justice to use its office, powers and funding to discourage, downsize and close federally regulated and accredited congregate-care facilities.

OLMSTEAD RULING UPHOLDS AMERICANS’ RIGHTS AND CHOICES FOR CARE

In recent years, the national demand for closure of congregate-care facilities such as developmental centers and State hospitals has come perhaps most strongly—and, perhaps, most surprisingly—from the Federal Government: the very Federal Government that requires these facilities to meet its own regulatory standards.

To be federally certified through the U.S. Centers for Medicare and Medicaid Services, such congregate settings as developmental centers (ICF/MRs and ICF/DDs) must meet eight major criteria on management, client protections, facility staffing, active treatment, client behavior and facility practices, healthcare services, physical environment and dietetic services. To meet all of these major criteria, these accredited centers must comply with 378 specific Federal standards and elements. Failure to comply with any one of these hundreds of requirements or to swiftly correct any deficiencies means the loss of Federal certification as well as Federal Medicaid funding.

In its landmark 1999 Olmstead ruling on the use and choice of federally accredited congregate-care settings such as these, the U.S. Supreme Court ruled that Americans have the right to “community”-based housing and care, specifically when the “State’s treatment professionals [including Psychiatric Technicians and other members of treatment teams charged with following and implementing individuals’ program plans] have determined that community placement is appropriate, transfer is not opposed by the affected individual and the placement can be reasonably accommodated, taking into account the resources available to the State and the needs of others with mental disabilities.”

THE DOJ DELIBERATELY & DANGEROUSLY MISINTERPRETS OLMSTEAD

But the Federal U.S. Department of Justice—charged with upholding the Olmstead ruling through its Civil Rights Division and its powers under the Ameri-

⁴Jasen Asay, “Private Prison Company Lands Federal Contract,” Standard Examiner, June 8, 2011, available at <http://www.standard.net/topics/economy/2011/06/07/private-prison-company-lands-federal-contract>.

cans with Disabilities Act B has overstepped its mission and taken a dangerous carte blanche approach to enforcing Olmstead.

As currently and accurately stated and emphasized on the DOJ's own Olmstead section of its Web site, "The [U.S. Supreme] Court held that public entities must provide community based services to persons with disabilities when (1) such services are appropriate; (2) the affected persons do not oppose community based treatment; and (3) community based services can be reasonably accommodated, taking into account the resources available to the public entity and the needs of others who are receiving disability services from the entity."

Nevertheless, to date, the DOJ has filed more than 40 actions in more than 25 States during the past 5 years aimed at downsizing and closing federally regulated congregate-care facilities, regardless of the individual and unique wishes and needs of their residents and legal conservators. As part of a Federal push beginning in 2009, the DOJ has taken a stated and active position of "Community Integration for Everyone"—whether Americans and their families and legal conservators wish it or not B and whether or not this position violates Americans' rights and choices under Olmstead:

- In 2010's *United States v. Georgia*, DOJ did not consult families and legal guardians prior to entering into a settlement requiring closure of federally accredited congregate-care facilities and forcing all residents B regardless of their wishes, choices and needs guaranteed under Olmstead—into community-based care.
- In 2011's dismissal order for *United States v. Arkansas*, which ruled against the DOJ regarding Conway Human Development Center, U.S. District Judge J. Leon Holmes noted that "all or nearly all of those residents have parents or guardians who have the power to assert the legal rights of their children or wards. Those parents and guardians, so far as the record shows, oppose the claims of the United States. Thus, the United States is in the odd position of asserting that certain persons' rights have been and are being violated while those persons—through their parents and guardians—disagree."
- In 2012's *United States v. Virginia*, families, parents and legal guardians were not included in the exhaustive list of stakeholders interviewed by the DOJ prior to that State's settlement; families had to spend \$125,000 of their own money to be included in the settlement process and to include their on-record opposition to DOJ's statement that "the parties' . . . desire to phase out the residential Training Centers and transition all Virginians with ID/DD to community-based care is readily apparent."

STOP FUNDING DOJ ACTIONS TO RESTRICT FEDERALLY RECOGNIZED CHOICES

On behalf of CAPT's members—who are trained, licensed and pledged to uphold the choices and rights of Californians with developmental disabilities and mental illnesses, wherever they wish to live and receive services—I am respectfully requesting that the subcommittee end the use of Federal funding and staff of the U.S. Department of Justice to discourage, downsize and close federally regulated congregate-care facilities against the federally and legally protected wishes of residents and their families.

PREPARED STATEMENT OF THE CENTER FOR BIOLOGICAL DIVERSITY

Chairman Leahy, Ranking Member McConnell, and members of the subcommittee, thank you for the opportunity to submit written testimony. I am Brett Hartl, endangered species policy director at the Center for Biological Diversity. The Center is a non-profit environmental organization focused on the protection of native species and their habitats through science, policy and environmental law. The Center has more than 775,000 members and online activists dedicated to the protection and restoration of imperiled plants and wildlife, open space, air and water quality, and overall quality of life. We would like to submit testimony on the NOAA Fisheries Office of Protected Resources and the Enforcement and Observers budget for fiscal year 2015. The Office of Protected Resources is responsible for protecting 93 species under the Endangered Species Act. Enforcement and observers are critical to implement the protections of the Endangered Species Act as well as the Marine Mammal Protection Act.

The Endangered Species Act (ESA) is America's strongest environmental law. It has prevented the extinction of 99 percent of the 1,500 domestic species it protects. Were it not for the Act, scientists estimate that 227 of these plants and animals would have disappeared by 2006, and even more by 2012. The Act also has had considerable success moving species towards recovery. For example, the gray whale was

first protected in 1970. The eastern population, which migrates from Baja California to the Chukchi Sea each year, was recovered to its estimated pre-whaling population size in just 24 years. Similarly, after just 23 years of protection under the ESA, the eastern population of Steller sea lion was delisted in 2013, having suffered for nearly a century from poaching, irrational predator-control actions, and from the near collapse of its main food sources due to unsustainable fishing practices. The recoveries of these species show the value and effectiveness of the ESA's strong protection measures.

However, not all species that are protected by NOAA are improving. NOAA's 2012 recovery report to Congress indicated that approximately 16 threatened and endangered marine species are still declining towards extinction. And as the extinction crisis worsens due to threats including climate change, many other once-common species, such as the staghorn and elkhorn Corals that once were the dominant reef building corals of Florida, have experienced major population declines and now are being moved from threatened to endangered status. Scientists warn us that the world's coral reefs are in crisis and will be destroyed within decades unless we act now. That is why 66 additional corals found in U.S. waters await final rules before they will gain the safety net of the ESA.

Accordingly, we strongly support the administration's request for an additional \$4 million dollars to complete the listing process. This funding is desperately needed to give NOAA the tools it needs to start addressing the difficult threats that the world's coral reefs face. However, even with this additional funding, overall funding for protected resources is lagging and is not keeping up with the biological needs of protected species in the United States.

Marine biodiversity is at risk, along with the coastal communities that depend on the ocean—but there are solutions. Increasing the funds for the Protected Resources division of the NOAA Fisheries Service will ensure that declining, threatened, and endangered marine species will get the resources they need to recover to the point where they no longer need the protections of the Endangered Species Act.

ADDITIONAL FUNDING IS STILL NEEDED FOR RECOVERY

As scientists learn more about the oceans, it is becoming increasingly clear that the threats to marine biodiversity continue to grow. Unfortunately, funding resources to protect marine species is not keeping up with the biological needs of these species. Funding for Protected Resources peaked in 2010 at approximately \$204 million and has since declined approximately 9 percent. This decline occurred even though 20 additional species—such as the Puget Sound canary rockfish and Atlantic sturgeon—have been protected by NOAA under the ESA in the previous 4 years. As a result, the average funding per species has actually decreased 23 percent over the last 4 years.

This funding situation for threatened and endangered species will become even more difficult if additional resources are not allocated since an additional 80 species—including 66 coral species, the dwarf sawfish, and the scalloped hammerhead shark—have been proposed for listing and will likely receive protection under the ESA within the next year. An additional 34 species are currently candidate species that may eventually be protected under the ESA. If funding does not keep up with the growing threat to marine biodiversity, the recovery of threatened and endangered species will become more difficult to achieve.

OTHER PROTECTED SPECIES

As stated above, the Center supports the \$4 million budget increase for the “other protected species” category to address the listing of 66 coral species. We would also like to point out the possibility of reconsidering the relative allocations of the remaining five categories of funding for protected resources in future years. Specifically, the “Other Protected Species” category currently covers all non-salmonid marine fish, invertebrates, and plants. This category includes important animals such as the Nassau grouper, great hammerhead shark, queen conch, and the pinto abalone, and should not be overlooked for funding despite its broad characterization.

Last year in the Commerce-Justice-Science Committee Report, Congress allocated \$49 million to marine mammals, \$13 million to sea turtles, \$6 million to Atlantic salmon, and \$65 million to Pacific salmon. In contrast, \$7 million was allocated to “Other Protected Species,” which includes all other marine fish, invertebrates, and marine plants. In other words, 73 listed species received \$133 million in recovery funding, while 20 “other” species received just \$7 million in funding. If all of the species currently proposed for listing are ultimately protected under the ESA, the number of species in the “Other” category would increase from 20 species to 100 species, while there would be no change in the number of protected marine mam-

mals, sea turtles, or salmonids. Furthermore, if the species that NOAA currently identifies as candidates for listing are ultimately protected, the number of species in the “Other” category would increase further to 132 listed species. The number of protected marine mammals would increase from 28 listed species to 33 listed species and the number of protected sea turtles and salmonids would remain the same.

Simply put, in a few years time, the number of “Other” protected species may represent over 60 percent of the species under NOAA’s jurisdiction. If the current allocations are not eventually reconfigured, these species would receive less than 5 percent of the overall recovery budget. Such limited funding would likely be insufficient to protect these species, let alone put them on a path towards recover. Accordingly, the Center recommends that the committee requests that NOAA develop a plan on how they will allocate resources within Protected Resources over the next 2 years to address the increase in recovery needs for these “Other” species going forward.

Finally, we hope that the committee will recognize that funding for these new species should not come at the expense of those species that are currently protected. Cutting funding from species that are already protected by the ESA, especially those species that are still declining, is not a long term strategy for achieving recovery. Instead, additional funding should be allocated to meet the full scope and scale of the extinction crisis that is occurring in our world’s oceans. Four years after the worst oil spill in the United States’ history, scientists are just beginning to learn how severely the oil spill impacted the marine environment. Restoring ocean ecosystems, including endangered species, has proven to be more complex and costly than was once thought. Providing NOAA with the necessary funds to address its responsibilities under the ESA is an important step in protecting our ocean’s biological diversity.

MAINTAIN OR INCREASE FUNDING FOR STRANDED MARINE MAMMALS

NOAA requested a decrease of \$2,500,000 for the John H. Prescott Marine Mammal Rescue Assistance Grant Program and the Marine Mammal Protection Program. The President’s budget request did not include funding for the John H. Prescott Grant Program in fiscal year 2014, but Congress thankfully kept the program alive. Last year California, Florida and the Mid-Atlantic had unusual mortality events of California sea lions, manatees and bottlenose dolphins. With decreased Federal funding, State stranding networks struggle to respond to marine mammals washing ashore. Virginia reportedly had over 30 animals in 2 days stranded on its beaches over one weekend in the last year’s die-off and had a total of 346 dolphins die since July 1, 2013.

Scientific investigations to understand the causes of these events can help assess ocean health and protect humans. In 2010, nearly 40 percent of the Nation’s population lived in coastal areas. Ensuring that States have adequate resources to respond to and study marine mammal strandings will help keep marine mammals safe and our coasts clean.

INCREASE OBSERVER COVERAGE FOR FISHERIES

Observer coverage in fisheries is essential to ensure the best possible management of our fisheries. This program ensures that our fisheries are on a sustainable path for long term success and allows NOAA to prevent whales, sea turtles, and sharks from drowning in fishing gear.

This year’s budget should increase funding to collect accurate fisheries data, especially from the observer program. While NOAA’s request for an increase of \$4,000,000 for Electronic Monitoring and Reporting may pave the way for future innovation, NOAA also needs an increase now in the budget for Enforcement and Observers.

This funding is needed most importantly because several fisheries lack resources to ensure meaningful observer coverage to monitor bycatch of sea turtles, sharks, and marine mammals. For example in 2012, a longline fishing area NOAA once closed to longline fishing due to sea turtle take (the Northeast Distant area) had no observer coverage during the third and fourth quarters of the year, when sea turtle interactions are highest. Low observer coverage undermines confidence in management decisions and can result in severe emergency measures.

Starting in 2014 observers must report fishing and marine pollution violations. Additional funding will be needed to effectively implement the changes in policy and increase observer-related enforcement once observers report violations. Adequate observer program funding ensures a fair playing field for U.S. fishermen and keeps fishing sustainable.

Thank you for the opportunity to submit testimony.

PREPARED STATEMENT OF THE COASTAL STATES ORGANIZATION

The Coastal States Organization (CSO) is a nonpartisan, nonprofit organization in Washington, DC that represents the Governors of the 35 coastal States, territories and commonwealths and their issues relating to the sound management of coastal, Great Lakes, and ocean resources. CSO was established in 1972 and is recognized as the trusted representative of the collective interests of the coastal States on coastal and ocean management. For fiscal year 2015, CSO supports the following coastal programs and funding levels within the National Oceanic and Atmospheric Administration (NOAA):

Coastal Zone Management Grants Program (§§ 306/306A/309)	\$70 million
Regional Coastal Resilience Grants	\$10 million
Coastal Zone Management and Services	\$46.472 million
Coastal and Estuarine Land Conservation Program	\$5 million
National Estuarine Research Reserve System	\$22.9 million
Coral Reef Conservation Program	\$26.078 million

The U.S. economy is an ocean and coastal economy and this needs to be reflected in our Federal investment into ocean and coastal programs. While only accounting for 18 percent of the U.S. land area, coastal areas are home to 163 million people and almost 5 million businesses. Home to coastal and ocean dependent industries, including marine transportation, tourism, marine construction, aquaculture, ship and boat building, mineral extraction, and living marine resources, coastal counties contribute \$8.7 trillion to U.S. GDP and employ 67 million people. If these coastal counties were their own country, they would have the world's third largest economy, behind the European Union and the United States. Coasts and oceans are visited by nearly half of all Americans, adding to their health and quality of life. The non-market value of recreation alone is estimated at over \$89 billion. Every American, regardless of where they live, is fundamentally connected to U.S. coasts, oceans, and Great Lakes. These valuable resources are a critical framework for commerce, public recreation, energy, and environmental health and merit robust investment.

Today, our Nation's coasts are as vital for our future as they are vulnerable. As a result of their increasing recreational, residential, and economic appeal, there are more pressures on our coastal and ocean resources. This demand, combined with an increase in natural hazards such as sea level rise, extreme weather, and other flooding events, highlight the danger of losing these invaluable national assets. Despite the difficult budgetary times, adequate and sustained funding is needed to support the key programs that are on the front lines of this daily battle, which continually advance coastal and ocean science, research, and technology to manage our coastal and ocean resources for future generations.

Programs engaged in these important efforts and working to balance the protection of coastal and ocean resources with the sustainable development of the coasts include the Coastal Zone Management Program, Coastal and Estuarine Land Conservation Program, Regional Coastal Resiliency Grants, the Coral Reef Conservation Program, and National Estuarine Research Reserves. These programs reside within the National Oceanic and Atmospheric Administration (NOAA) and provide direct funding or services to the States, territories and regions to implement national coastal and ocean priorities at the State, local, and regional level. These types of partnership programs account for only a small portion of the total NOAA Federal budget but provide dramatic results in coastal communities. The funding for these programs is cost-effective, as these grants are matched by the States and used to leverage significantly more private and local investment in our Nation's coasts. Maintaining funding for these programs that provide on-the-ground services to our local communities and citizens is well worth the investment. In fact, the Federal Emergency Management Agency (FEMA) estimates that every \$1 invested in community resilience it will reduce disaster damages by \$4.

COASTAL ZONE MANAGEMENT PROGRAM (§§ 306/306a/309)

CSO recommends that these grants be funded at \$70 million.—This funding will be allocated among the 34 States and territories that have approved coastal zone management programs. Pursuant to the Coastal Zone Management Act (CZMA), States partner with NOAA to implement coastal zone management programs designed to balance the need to maintain productive coastal and ocean resources with the need for the sustainable development of coastal communities. States have the flexibility to develop programs, policies, and strategies targeted to their State priorities while concurrently advancing national goals. Under the CZMA program, the States receive grants from NOAA, which are then matched with State funding and

then often further leveraged with private and local funds. These grants have been used to support and enhance coastal economies by resolving conflicts between competing coastal uses, reducing environmental impacts of coastal development, and providing critical assistance to local communities in coastal planning and resource protection.

These State coastal zone management programs reflect a unique and successful Federal-State partnership. Coastal management has become a national priority, as they are critical to building coastal resilience against extreme weather events and educating and guiding communities to build their homes and businesses in ways that minimize the threat of loss. Events like Superstorm Sandy and Hurricane Katrina reinforced the importance of planning ahead. Coastal zone management programs ensure that the national interest in a resilient coast is incorporated in State actions, while respecting the sovereignty, different priorities, and geographic variations of our diverse States.

The CZMA State grants have essentially remained at an even funding level for a decade, resulting in decreased capacity in State coastal zone management programs and less funding available to communities. An increase to more than \$91 million would be necessary to reach actual level funding that accounts for inflation since 2001 and would provide an additional \$300,000—\$800,000 for each State and territory. However, CSO recognizes that the current fiscal climate makes such an increase challenging. By maintaining current funding levels, States and territories would receive between \$850,000 and just over \$2,300,000 to carry out their coastal management programs based on a formula that considers shoreline miles and coastal population. The following are a few examples of activities in Maryland and Alabama that CZM State grants have recently funded. These types of contributions, and more, can be found around the Nation.

Maryland

- Maryland's CZM Program worked with land conservation partners to preserve 4,468 acres of critical coastal habitat for storm protection, water-filtering benefits, fish nurseries, or recreation through acquisition and easements. Maryland completed projects that protected 4,980 linear feet of nearshore habitat from erosion while providing critical habitat through the implementation of shoreline management techniques such as living shorelines.
- Maryland's Coastal Zone Management Program has collected 1.05 tons of debris as a part of annual Maryland Coast Days and Assateague Coastal Clean-ups, created four new public water access (non-motorized) sites, and exposed over 21,000 students with the opportunity to participate in a classroom or outdoor experience.
- CZMA funding in Maryland assisted 5 coastal communities in reducing vulnerability to future storm events, shoreline change and sea level rise and incorporating those considerations into local plans, codes and ordinances. Additionally, CZMA funding assisted 6 communities that developed designs or plans to reduce polluted runoff through the Watershed Assistance Collaborative.

Alabama

- Last year, CZMA funding in Alabama supported the 26th Annual Alabama Coastal Clean-up with over 3,700 volunteers are removed 38,000 pound of marine debris.
- In fiscal year 2013, the Alabama Coastal Area Management Program provided funds for the public access improvements to City of Chickasaw, City of Foley and Dauphin Island Park and Beach Board; the Mobile Bay National Estuary Program to facilitate Phase II of the development of the Coastal Area and Marine Planning Program; the Dauphin Island Sea Lab to conduct Phase I of Coastal Habitat Restoration Project Monitoring; the City of Chickasaw to develop a comprehensive plan and to develop a Three Mile Creek Watershed Management Plan; the City of Fairhope to develop low impact development standards and ordinance; Town of Dauphin Island and the City of Gulf Shores; the City of Orange Beach, for local beach and dune protection program; and the sea turtle/share the beach program and the annual Alabama Coastal Birding Festival.

Several years ago, a grant cap of approximately \$2,000,000 per State was instituted to allow for funding to be spread more evenly across the States and territories, so as to prevent most of the funding from going entirely to the larger, more heavily populated States. Now, however, over half of the States have met the cap and no longer receive an increase in funding, despite increased overall funding for CZMA State grants since that cap was introduced. Since the cap was never intended to serve as a barrier to States receiving reasonable increases intended for all States,

CSO recommends that the subcommittee include language in the appropriations bill report that allows the cap to be exceeded when it is fair and consistent with the original purposes of the cap. To that end, CSO suggests language declaring that each State will receive no less than 1 percent and no more than 5 percent of the additional funds over and above previous appropriations. As was provided previously by the subcommittee, CSO also requests that language be included in the appropriations bill report that directs NOAA to refrain from charging administrative costs to these grants. This is to prevent any undue administrative fees from NOAA from being levied on grants intended for States.

COASTAL AND ESTUARINE LAND CONSERVATION PROGRAM

CSO requests the Coastal and Estuarine Land Conservation Program (CELCP) not be terminated, as has been previously proposed in the President's budget. Authorized by Congress in 2002, CELCP protects "those coastal and estuarine areas with significant conservation, recreation, ecological, historical, or aesthetic values, or that are threatened by conversion from their natural or recreational states to other uses." To date, Congress has appropriated over \$250 million for CELCP. This funding has allowed for the completion of over 175 conservation projects, with more in progress. CELCP projects in 28 of the Nation's 35 coastal States have already helped preserve more than 100,000 acres of the Nation's coastal assets. All Federal funding has been leveraged by at least an equal amount of State, local, and private investments, demonstrating the broad support for the program, the importance of coastal protection throughout the Nation, and the critical role that Federal funding plays in reaching the conservation goals of our coastal communities. CELCP is the only Federal program entirely dedicated to the conservation of these vital coastal areas.

The need for CELCP funding far exceeds federally appropriated funds in recent years. In the last two funding cycles (fiscal year 2012 and fiscal year 2014), NOAA, in partnership with the States, has identified, deemed eligible, and ranked over \$64.1 million in projects with willing sellers and State funding match available. Adequate and sustained funding is needed to meet the demand of the increasingly high-quality projects developed by the States and submitted to NOAA. The importance of natural barriers in preventing and reducing storm impacts was recognized in the wake of Superstorm Sandy, when these types of areas provided buffers and increased resilience in the face of storm surge. Therefore, we request your support for minimally restoring funding at the fiscal year 2012 enacted level for CELCP.

REGIONAL COASTAL RESILIENCY GRANTS

\$10 million in grants for Regional Coastal Resiliency Grants is needed to provide competitive funding to ensure our States and communities are prepared to face changing ocean conditions, from acidification to sea level rise, changing economic conditions, from recession to emerging ocean uses, as well as major catastrophes, from tsunamis to marine debris clogging waterways. Resilient communities invest proactively to ensure they avoid unnecessary costs—economic, social, and environmental—in the future. These grants will help States, local communities, and other stakeholders produce on-the-ground results that benefit both the economy and the environment, including cutting edge science and practical tools like maps and surveys. This request is an increase above the President's request of \$5,000,000 in order to fully establish this key competitive grant program that is designed to promote resilience and address shared risks of weather events and hazards on coastal communities and economies.

NATIONAL ESTUARINE RESEARCH RESERVE SYSTEM

The National Estuarine Research Reserve System (NERRS) partners with States and territories to ensure long-term education, stewardship, and research on estuarine habitats. Atlantic, Gulf, Pacific, Caribbean and Great Lakes reserves advance knowledge and stewardship of estuaries and serve as a scientific foundation for coastal management decisions. This unique site-based program around the Nation contributes to a systemic research, education and training on the Nation's estuaries.

CSO greatly appreciates the support the subcommittee has provided in the past. Its support has assisted these programs to work collaboratively to protect our coasts, support coastal economies, and sustain our local communities. Without these competitive grant funds and key NOAA programs, States will not have the resources to help address local and regional coastal resilience needs and priorities, and leverage the Federal Government's support and expertise. Thank you for taking our requests into consideration as you move forward in the fiscal year 2015 appropriations process.

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 2015 budget and has identified the following funding needs:

\$38.2 million for Salmon Management Activities (\$11 million above the request) of which:

- \$26.6 million for the Columbia River Mitchell Act hatchery program to implement reforms of which \$6.7 million (or 25 percent of the enacted amount) is directed to the tribes to enhance supplementation (natural stock recovery) programs; and

- \$11.6 million for the Pacific Salmon Treaty Program, of which \$9.76 million is for the implementation of the 2009–2018 Agreement, and previous base programs; and \$1,844,000 is for the Chinook Salmon Agreement Implementation.

\$90 million for the Pacific Coastal Salmon Recovery Fund (\$40 million above the request) to support on-the-ground salmon restoration activities.

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 Nez Perce Tribe. CRITFC provides coordination and technical assistance to the tribes in regional, national and international efforts to protect and restore the fisheries and fish habitat.

In 1855, the United States entered into treaties with the four tribes.¹ The tribes' ceded millions of acres of our homelands to the U.S. and the U.S. pledged to honor our ancestral rights, including the right to fish at all usual and accustomed places. Unfortunately, a long history of hydroelectric development, habitat destruction and over-fishing by non-Indians brought the salmon resource to the edge of extinction with 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. The terms of all three agreements run through 2017. 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 few. Continued Federal funding support is needed to accomplish the management objectives embodied in the agreements.

Columbia River (Mitchell Act) Hatchery Program.—Restoring Pacific salmon and providing for sustainable fisheries requires using the Columbia River Mitchell Act hatchery program to supplement naturally spawning stocks and populations. To accomplish this goal, \$26.6 million is requested for the tribal and State co-managers to jointly reform the Mitchell Act hatchery program. Of this amount, \$6.7 million, or 25 percent of enacted funding, will be made available to the Columbia River Treaty Tribes for supplementation (natural stock recovery) programs. The Mitchell Act program provides regional economic benefits. NOAA Fisheries estimates that the program generates about \$38 million in income and supports 870 jobs.

Since 1982, CRITFC has called for hatchery reform to meet recovery needs and meet mitigation obligations. In 1991, this subcommittee directed that "Mitchell Act hatcheries be operated in a manner so as to implement a program to release fish in the upper Columbia River basin above the Bonneville Dam to assist in the rebuilding of upriver naturally-spawning salmon runs."

¹Treaty with the Yakama Tribe, June 6, 1855, 12 Stat. 951; Treaty with the Tribes of Middle Oregon, June 25, 1855, 12 Stat. 963; Treaty with the Umatilla Tribe, June 9, 1855, 12 Stat. 945; Treaty with the Nez Perce Tribe, June 11, 1855, 12 Stat. 9.

Since 1991, we have made progress in increasing the upstream releases of salmon including Mitchell Act fish that have assisted the rebuilding and restoration of naturally-spawning upriver runs of chinook and coho. These efforts need to continue.

We now face the challenges of managing for salmon populations listed for protection under the ESA, while also meeting mitigation obligations. The Draft Environmental Impact Statement (DEIS) for operation of Columbia River basin hatcheries released by NOAA in 2010 illustrates the conundrum we face. While the DEIS, which assumes level funding for Mitchell Act hatcheries, points out the need for hatchery reform, the implementation scenarios for the proposed alternatives to the status quo all call for substantial reductions in hatchery releases. From the tribal perspective the proposed alternatives will not result in the delisting of salmon populations or meet mitigation obligations. Under the proposed alternatives the future is increased regulation under the ESA, resulting in more constrained fisheries along the west coast. The funding for the Mitchell Act program should be increased along with natural stock recovery program reform (supplementation) so that we can make progress towards ESA delisting. This would transition the Mitchell Act program to a much more effective mitigation program.

We support hatchery reform to aid in salmon recovery, while meeting mitigation obligations. The CRITFC tribes are leaders in designing and managing hatchery facilities to aid in salmon restoration and believe similar practices need to be implemented throughout the basin to reform current hatchery production efforts. Additional funding is necessary to reform Mitchell Act hatcheries to accomplish conservation and mitigation objectives. Years of inadequate funding have taken a toll resulting in deteriorating facilities that do not serve our objectives.

Evidence to Support Tribal Salmon Restoration Programs under the Mitchell Act.—The tribes' approach to salmon recovery is to put fish back in to the rivers and protect the watersheds where fish live. Scientific documentation of tribal supplementation success is available upon request. The evidence is seen by the increasing returns of salmon in the Columbia River Basin. Wild spring chinook salmon are returning in large numbers to the Umatilla, Yakima and Klickitat tributaries. Coho in the Clearwater River are now abundant after Snake River coho was once declared extinct. Fish are returning to the Columbia River Basin and it is built on more than 30 years of tribal projects.

Once considered for listing under the ESA, only 20,000 fall chinook returned to the Hanford Reach on the Columbia River in the early 1980's. This salmon run has been rebuilt through the implementation of the Vernita Bar agreement of the mid-1980s combined with a hatchery program that incorporated biologically appropriate salmon that spawn naturally upon their return to the spawning beds. Today, the Hanford Reach fall chinook run is one of the healthiest runs in the basin supporting fisheries in Alaska, Canada, and the mainstem Columbia River. In 2013, close to 700,000 Fall Chinook destined for the Hanford Reach entered the Columbia River, which was a record since the construction of Bonneville Dam. The predictions are for an even higher return this fall.

In the Snake River Basin, fall chinook has been brought back from the brink of extinction. Listed as threatened under the ESA, the estimated return of naturally-spawning Snake River fall chinook averaged 328 adults from 1986–1992. In 1994, fewer than 2,000 Snake River fall chinook returned to the Columbia River Basin. Thanks to the Nez Perce Tribe's modern supplementation program fall chinook are rebounding and the Snake River fall chinook is well on their way to recovery and ESA delisting. In 2013 about 56,000 fall chinook made it past Lower Granite Dam. Of those, approximately 21,000 were wild, twice the previous record for wild returns since the dam was constructed in 1975.

A Request for Review of Salmon Mass-Marking Programs.—CRITFC endeavors to secure a unified hatchery strategy among tribal, Federal and State co-managers. To that end, we seek to build hatchery programs using the best available science and supported by adequate, efficient budgets. A Congressional requirement, delivered through prior appropriations language, to visibly mark all salmon produced in federally funded hatcheries should be reconsidered. We have requested that Federal mass-marking requirements, and correlated funding, be reviewed for compatibility with our overall objective of ESA delisting and with prevailing laws and agreements: *U.S. v Oregon*, Pacific Salmon Treaty and the Columbia Basin Fish Accords.²

Salmon managers should be provided the latitude to make case-by-case decisions whether to mark fish and, if so, in the appropriate percentages.

²Letter from Bruce Jim, Chairman, Columbia River Inter-Tribal Fish Commission to U.S. House of Representatives Chairmen Frank Wolf, Mike Simpson and Doc Hastings, July 11, 2011.

Pacific Salmon Treaty Program.—CRITFC supports the U.S. Section recommendation of \$11.6 million for Pacific Salmon Treaty implementation. Of this amount, \$9.76 million is for the Pacific Salmon Treaty base program with Alaska, Oregon, Idaho, Washington, and NOAA to share as described in the U.S. Section of the Pacific Salmon Commission's Budget Justification. In addition, we support \$1.9 million as first provided in 1997 to carry out necessary research and management activities to implement the abundance based management approach of the Chinook Chapter to the Treaty. Costs of the programs conducted by State agencies to fulfill national commitments created by the treaty are substantially greater than the funding provided in the NOAA budget. State agencies supplement the Federal appropriation from other sources including: State and Federal grants, and the Pacific Coastal Salmon Recovery Fund, to the extent those sources are available.

Pacific Coastal Salmon Recovery Program (PCSRF)/Watershed Restoration.—Funding has been sought after by the State of Alaska, the Pacific Northwest States, and the treaty tribes since the renewal of the Pacific Salmon Treaty in 1995. This would serve critical unmet needs for the conservation and restoration of salmon stocks shared in these tribal, State, and international fisheries. The PCSRF program was developed in 2000 to contribute to the shared effort in accomplishing this goal. We recommend restoring the PCSRF fiscal year 2015 funding level to \$90 million. Long-term economic benefits can be achieved by making PCSRF investments on the ground to rebuild sustainable, harvestable salmon populations into the future.

The State and tribal co-managers have responded to concerns raised by Congress regarding accountability and performance standards to evaluate and monitor the success of this coast wide program. The co-managers have developed an extensive matrix of performance standards to address these concerns, which includes the use of monitoring protocols to systematically track current and future projects basin-wide. Tribally sponsored watershed projects are based on the best science, are competently implemented and 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.

In summary, the CRITFC and its four member tribes have developed the capacity and infrastructure to lead in restoring and rebuilding salmon populations of the Columbia Basin. Our collective efforts protect our treaty reserved fishing rights and we also partner with the non-Indian community to provide healthy, harvestable salmon populations for all citizens to enjoy. This is a time when increased effort and participation are demanded of all of us and we ask for your continued support of a coordinated, comprehensive effort to restore the shared salmon resource of the Columbia and Snake River Basins. We will be pleased to provide any additional information that this subcommittee may require.

PREPARED STATEMENT OF THE CONSORTIUM FOR OCEAN LEADERSHIP

On behalf of the Consortium for Ocean Leadership, I appreciate the opportunity to discuss the fiscal year 2015 Federal science budget for the National Science Foundation (NSF), the National Oceanic and Atmospheric Administration (NOAA) and the National Aeronautics and Space Administration (NASA). Ocean Leadership represents 90 of the Nation's leading oceanographic research and education institutions and also manages several ocean research and education programs in the areas of scientific ocean drilling, ocean observing, oil spills, and ocean partnerships. We respectfully request \$7.5 billion for the NSF; \$1.9 billion for Earth Sciences at NASA; and \$5.6 billion for NOAA.

As Congress prioritizes Federal investments in the face of constrained budgets, it is important to recognize and maintain support for basic research as a core Federal responsibility. Increasing this investment is a priority given the shift to a science and technology (S&T) based economy whose foundation is built on scientific advances, both within specific disciplines as well as across disciplines. The U.S. dominance in S&T is being challenged by accelerated investment by other nations, as evidenced by Battelle's recent research and development (R&D) Global Forecast, which states: "At the current rates of growth and investment, China's total funding of R&D is expected to surpass that of the U.S. by about 2022."¹

¹Battelle and R&D Magazine, December 2013. http://www.battelle.org/docs/tpp/2014_global_rd_funding_forecast.pdf?sfvrsn=4.

THE ROLE OF OCEAN SCIENCE

Recent hypotheses suggest that the extreme weather events we have had this past year may be attributable to a persistent shift in the jet stream due to a rapidly melting polar region as well as a warmer North Pacific Ocean. If this is the case, ice storms in Mobile, Alabama or monsoon-like rain events in Boulder, Colorado, may become more frequent, along with their significant economic costs. Unfortunately, as the demand for more and better data and information to understand ocean and atmospheric trends increases, we are instead losing our capabilities to collect data at sea and from space to build more capable and accurate long-term forecasts. For instance, the inability to service the buoys comprising the TAO Array (Tropical Atmosphere Ocean project in the equatorial Pacific) has resulted in a degradation of the data return rate to just 40 percent capacity from an optimally operating system.² This situation greatly reduces our ability to accurately forecast El Niño and La Niña strengths and thus risks proper preparation to deal with episodes of droughts and flooding.

Given that the ocean absorbs, stores and transfers most of the heat (and a high percentage of the carbon) on our planet, the ability to understand, forecast and prepare for extreme weather events requires investments in basic research to better understand air-ice-sea interactions as well as observations of the physical environment from space, land and sea. Without this basic knowledge and prediction capabilities on regional and seasonal scales, we are essentially flying blind in terms of managing resources (e.g. agriculture, fisheries, freshwater) and protecting public health. There are many major natural threats facing our Nation and significant challenges ahead in understanding, forecasting and mitigating them, all of which require significant financial resources. We believe that our appropriations requests would enable our Nation to maintain the assets and capabilities necessary to better understand the physical, chemical, geological and biological changes to the natural environment and use this information to help Congress, State and local governments, businesses and private individuals make informed and fiscally responsible economic and national security, public health and safety, and resource management decisions.

NSF BASIC RESEARCH

The National Science Foundation (NSF) is our top funding priority as it is the premier Federal agency tasked with supporting basic research, which underpins all future scientific advances. As you know, NSF is the only Federal agency with the mission of supporting basic research, and has been a primary force in providing support for discoveries that have driven our Nation's economy through innovation. Historically, Congress has appropriated top line numbers for the agency and has refrained from directing the course of the agency's research agenda or setting science or infrastructure priorities for the agency. We hope that this policy will continue so the Foundation can continue to make decisions based on the highest quality peer reviewed science, rather than politics.

Given the tremendous recent impact that natural hazards have had on our Nation's economy and public welfare, we believe that investing in the geosciences is critical to advance our knowledge of the physical world, while social and behavioral sciences can improve our ability to understand and communicate key scientific findings and risks to the public and policymakers, who must deal with a rapidly changing planet. We hope that NSF can continue to fund the best minds in the Nation through competitive research grants, while mission agencies such as NOAA and NASA can support applied research and observational requirements to ensure our Nation has the intellectual capacity to develop and deal with the next generation of challenges. Thus, we request that Congress appropriate \$140 million in additional funding for the "Research and Related Accounts" to at least match anticipated inflationary costs, but preferably above this level to maintain a positive trajectory enhancing NSF capacity to support its research mission.

NOAA RESEARCH AND OBSERVATIONS

The National Oceanic and Atmospheric Administration (NOAA) requires timely, accurate, and sensitive observations of the planet to meet its many missions and mandates. Given the austere budget environment, we believe that NOAA can better accomplish its scientific requirements in a more effective way through partnerships

²El Niño monitoring system in failure mode, U.S. budget woes cripple a key mooring array in the tropical Pacific Ocean. Jeff Tollefson, Nature News, January 23, 2014. <http://www.nature.com/news/el-niño-monitoring-system-in-failure-mode-1.14582>.

with the extramural academic and industrial communities, rather than relying solely on their own internal scientific capability. The majority of scientific research expertise in areas such as climate, ocean acidification, ocean exploration, instrument development, data dissemination and fisheries management resides in the academic and industrial sectors. A greater commitment to extramural competitive peer-review grant opportunities to answer the key questions necessary to assess trends, make forecasts, and manage resources in a changing environment would improve efficiency and extend NOAA's access to the best minds in the Nation.

We remain concerned about the Nation's earth observing satellite programs and the ability to maintain continuity of long-term data sets. We encourage NOAA to follow the NESDIS Independent Review Team's (IRT) recommendations for procurement models for missions beyond J2 that will not only reduce costs but also mitigate against data gaps. Implementing all the missions as an integrated program could save the agency tens of millions of dollars. These savings could help address other needs, such as recapitalization of the oceanographic fleet to help service the TAO Array, or supporting a more robust ocean exploration program. Ultimately, we need the polar observing system to be more resilient and more capable, which requires a more integrated approach to weather and climate research, monitoring and modeling. Moving NOAA's climate sensors to NASA without the resources to support their construction and operation defeats this purpose. Consequently, we hope you will continue your close oversight of the Federal Earth observing programs to help ensure that satellite missions can be cost-efficient, reliable, and effective.

Of course, the ocean also impacts life beyond weather, climate and extreme events. The *Deepwater Horizon* oil spill was a tragedy with loss of life, economic impacts and long-term ecological implications for the Gulf region. The fact that it took so long to identify and track the location of the massive subsurface oil plume in the water column or forecast its trajectory highlights the significant shortcomings of the existing ocean and coastal observing systems. Consequently, we need to make sure that we are better prepared for the next spill, especially given offshore oil exploration in the Arctic and now proposed for the Atlantic coast. Ideally, there should be significant coordination between NOAA and the National Academies of Sciences (NAS) with regards to the use of criminal and civil settlement funds and fines. We have a unique opportunity to build a sustainable ocean and coastal observing system that will better enable the Gulf region to identify and prepare for future problems, such as oil spills, red tides, and hypoxic events, while also better managing their marine living resources. I hope this opportunity is not lost given the significant funds that will flow into the region.

We are disheartened by the administration's extremely low funding request for NOAA's Education programs, including the elimination of the competitive program, which in the past has supported successful initiatives such as the National Ocean Sciences Bowl (NOSB). For the last 16 years, NOSB has exposed 26,000 students to a field of study not commonly offered in high school, which enhances student understanding of all major areas of science, technology, engineering and mathematics. We greatly appreciate your historical support for education programs at the mission agencies, and we hope that the administration will take a more transparent and deliberative planned approach to improving our Nation's STEM education programs in the future.

NASA EARTH SCIENCE RESEARCH AND MISSIONS

We are very concerned with the administration's proposal to cut Earth Science funding at the National Aeronautics and Space Administration's (NASA), particularly at a time when NASA is supporting several new Earth observing missions as well as providing unprecedented access to their archives of Earth data. NASA has been responsive to the 2007 "Decadal Survey," but a flat budget, as well as increased mission responsibilities, has delayed many critical missions. While we support NASA taking on additional responsibilities for developing climate sensors from NOAA, we believe that this obligation should be accompanied with adequate financial resources. NASA has shown itself to be an effective partner with other agencies, such as with the USGS and their Landsat-8 mission, and with NOAA and the NPP-Suomi satellite. Moreover, its Venture class missions are providing flight opportunities for the next generation of scientists and engineers. We also support two NASA satellite missions, Surface Water Ocean Topography (SWOT) and Pre-Aerosol, Clouds, and ocean Ecosystem (PACE), which are particularly important to the oceans community and are tentatively scheduled for launch by 2020. NASA supports the only truly global view of the Earth, so it is critical to support its Earth science missions and research at a time when we see such unprecedented change to the physical environment of our planet.

Madame Chair and members of the subcommittee, I greatly appreciate the opportunity to share our recommendations, and I encourage you to continue your long-standing bipartisan support for science funding in the fiscal year 2015 budget and into the future.

Below is a list of the institutions that are represented by the Consortium for Ocean Leadership.

<i>Alabama</i>	<i>Hawaii</i>
Dauphin Island Sea Lab	University of Hawaii
<i>Alaska</i>	<i>Illinois</i>
University of Alaska Fairbanks	John G. Shedd Aquarium
Alaska Ocean Observing System	<i>Louisiana</i>
North Pacific Research Board	Louisiana Universities Marine Consortium
<i>California</i>	Louisiana State University
Bodega Marine Lab	<i>Maine</i>
Monterey Bay Aquarium Research Institute	Bigelow Laboratory for Ocean Sciences
Moss Landing Marine Laboratory	University of Maine
Naval Postgraduate School	The IOOS Association
Stanford University	<i>Maryland</i>
University of California, Santa Barbara	University of Maryland Center for Environmental Science
University of California, Santa Cruz	Johns Hopkins University
University of California, San Diego	Marine Technology Society
(Scripps Institution of Oceanography)	National Aquarium
University of Southern California	<i>Massachusetts</i>
Aquarium of the Pacific	Massachusetts Institute of Technology
Hubbs-SeaWorld Research Institute	University of Massachusetts, Dartmouth
Romberg Tiburon Center for Environmental Studies	University of Massachusetts, Lowell
Esri	Woods Hole Oceanographic Institution
L-3 MariPro, Inc.	Battelle
Liquid Robotics, Inc.	<i>Michigan</i>
Teledyne RD Instruments	University of Michigan
<i>Colorado</i>	<i>Mississippi</i>
Cooperative Institute for Research in Environmental Sciences	Mississippi State University
<i>Connecticut</i>	University of Mississippi
University of Connecticut	University of Southern Mississippi
Mystic Aquarium & Institute for Exploration	<i>Nebraska</i>
<i>Delaware</i>	University of Nebraska, Lincoln
University of Delaware	<i>New Hampshire</i>
Mid-Atlantic Regional Association	University of New Hampshire
Coastal Ocean Observing System	<i>New Jersey</i>
<i>Florida</i>	Rutgers University
Florida State University	<i>New York</i>
Harbor Branch Oceanographic Institute at FAU	Columbia University (LDEO)
University of Florida	Stony Brook University
University of Miami	<i>North Carolina</i>
University of South Florida	Duke University Marine Laboratory
Earth2Ocean, Inc.	East Carolina University
Florida Institute of Oceanography	University of North Carolina, Chapel Hill
Nova Southeastern University	University of North Carolina, Wilmington
<i>Georgia</i>	North Carolina State University
Skidaway Institute of Oceanography of the University of Georgia	
Savannah State University	

<i>Oregon</i>	CARIS, USA
Oregon State University	SAIC
<i>Pennsylvania</i>	<i>Washington</i>
Pennsylvania State University	University of Washington
<i>Rhode Island</i>	Sea-Bird Scientific
University of Rhode Island	<i>Washington, DC</i>
<i>South Carolina</i>	Southeastern Universities Research Association
Belle W. Baruch Institute for Marine and Coastal Sciences	<i>Wisconsin</i>
South Carolina Sea Grant Consortium	University of Wisconsin-Milwaukee
<i>Texas</i>	Great Lakes WATER Institute
Harte Research Institute	<i>Australia</i>
Texas A&M University	Institute for Marine and Antarctic Studies (IMAS) at the University of Tasmania
University of Texas, Austin	
Fugro	
Sonardyne, Inc.	<i>Bermuda</i>
<i>Virginia</i>	Bermuda Institute of Ocean Sciences (BIOS)
College of William and Mary (VIMS)	<i>Canada</i>
Old Dominion University	Dalhousie University
CNA	University of Victoria
Institute for Global Environmental Strategies	
U.S. Arctic Research Commission	

PREPARED STATEMENT OF THE CONSORTIUM OF SOCIAL SCIENCE ASSOCIATIONS

On behalf of the Consortium of Social Science Associations (COSSA), I am pleased to offer this written testimony to the Senate Appropriations Subcommittee on Commerce, Justice, Science and Related Agencies for inclusion in the official committee record. For fiscal year 2015, COSSA urges the subcommittee to appropriate \$7.5 billion for the National Science Foundation (NSF), \$47.5 million for the National Institute of Justice (NIJ), \$55.4 million for the Bureau of Justice Statistics (BJS), and \$107 million for the Bureau of Economic Analysis (BEA).

COSSA is proud to serve as a united voice for the social and behavioral sciences, bridging the academic research community with Federal policymakers. Its membership consists of more than 100 professional associations, scientific societies, universities, and research centers and institutes, representing thousands of scientists working in industry, government, and academia.

NATIONAL SCIENCE FOUNDATION

First, I wish to thank the subcommittee for its longstanding support for Federal science agencies. Despite the tough, ongoing fiscal challenges, the subcommittee has remained vigilant in its efforts to ensure adequate funding for basic research, particularly at the National Science Foundation. Thank you.

COSSA joins the broader scientific community and the 21 Senators who signed the April 11 letter to the subcommittee in support of \$7.5 billion for NSF in fiscal year 2015, an increase of 4.6 percent. This amount would return NSF to its fiscal year 2010 funding level when adjusting for inflation and would allow the agency to recover some of the purchasing power lost in recent years due to sequestration and caps on discretionary spending. The amount would also attempt to put NSF back on track with the vision of the America COMPETES Reauthorization Act of 2010, which authorized NSF at \$7.4 billion in fiscal year 2011, \$7.8 billion in fiscal year 2012, and \$8.3 billion in fiscal year 2013. If the U.S. is to maintain its scientific competitiveness on the global stage, we as a nation must continue to prioritize investments in science and technology and not abandon the aspirations set forth in the original America COMPETES Act of 2007 and its reauthorization in 2011.

The U.S. scientific enterprise must remain insulated from political and ideological pressure if we are to encourage the most innovative science. As you move through the appropriations process this year, COSSA urges you to discourage and object to amendments that would defund or otherwise compromise specific research areas or

programs at NSF, as we saw with the political science amendment in fiscal year 2013. At a time when we should be investing in our knowledge economy and doing all we can to encourage a diverse scientific workforce, such efforts would instead have a chilling effect, discouraging the next generation of researchers to embark on science careers.

Unfortunately, some recent efforts in the House seek to further set back the U.S. scientific enterprise. COSSA is deeply concerned about the impacts the Frontiers in Innovation, Research, Science and Technology Act (H.R. 4186), or FIRST Act, would have on NSF, the scientific community overall, and American innovation and intellectual competitiveness. Not only does the FIRST Act lack vision for the U.S. scientific enterprise by authorizing levels for NSF that would cut funding to the agency in terms of real dollars, it would also degrade NSF's gold-standard merit review process by seeking to micromanage the agency's award-making process. Regrettably, the legislation serves as a soapbox for lawmakers wishing to hurl ideological attacks on specific research areas, such as social and behavioral science or climate science. The inclusion of specific authorization levels for NSF's individual science directorates would set a dangerous precedent by allowing Congress to legislate what qualifies as meritorious science, as opposed to continuing to rely on a process that has served this Nation well; that is, entrusting qualified experts to make such determinations. It would also place scientific disciplines (i.e. biology, engineering, chemistry, social science, etc.) in direct competition with one another for scarce resources, thereby discouraging interdisciplinary science, which is becoming increasingly necessary for answering complex societal challenges.

Equally distressing are the attempts to single out the Social, Behavioral and Economic Sciences (SBE) Directorate. The shortsightedness of critics of social and behavioral science research is disappointing. Publicly holding up individual research grants for ridicule based solely on their titles—research projects that a distinguished panel of scientific peers has determined meritorious—misleads the American public by asserting that taxpayer funding is being wasted without fully understanding the projects, their intent, and the benefit to society and/or the progress of science.

While we understand that the FIRST Act is an authorization bill and currently has no legal bearing on the fiscal year 2015 appropriations process, we are nonetheless concerned by these efforts in the House and any impact they might have on Senators looking to further target social and behavioral science funding at NSF. COSSA is hopeful that the Senate will reject the FIRST Act should it pass the House this year, and object to additional efforts to defund or devalue these NSF programs that have proven their value to the U.S. economy, national security, and the health of our citizens.

As the Senate negotiates the CJS Appropriations bill this year, please consider the value of the social and behavioral sciences in helping to answer questions of national importance, such as how to convince a community in the path of a tornado to seek cover, or statistical analyses that help local governments understand crime patterns, among others. Without this science, and without an understanding of the fundamental nature of who we are, policy-making on major national issues will not be based on evidence and billions of dollars will be wasted.

Below are just a few examples¹ of impactful social and behavioral science:

- Research supported by NSF has provided the Federal Communications Commission (FCC) with its current system for apportioning the airwaves via a fruitful, practical application of game theory and experimental economics. Since their inception in 1994, FCC “spectrum auctions” have netted over \$60 billion in revenue for the Federal Government. The U.S. system of partitioning airwaves is now emulated in several other countries around the world, resulting in total worldwide revenues in excess of \$200 billion.
- Researchers at Indiana University, Drexel University, and Arizona State University developed spatial models to help manage the location of sex offenders. Their research addressed concerns regarding the impact of sex offender residency laws on a community, considering important factors such as whether residency restrictions lead to high concentrations of offenders in specific areas, distribute the risk across a community equitably, and keep sex offenders from living near minors. Improving the development and evaluation of sex offender residency policies in advance of any legislation allows public officials the opportunity to consider the resulting distribution of offenders in terms of local residents, better meeting the needs of communities.

¹Bringing People Into Focus: How Social, Behavioral and Economic Research Addresses National Challenges, National Science Foundation (NSF 13–62).

—Researchers at Washington University in St. Louis investigated emotion recognition using nonverbal cues such as facial expressions, vocal tones, and body language. Based on this research, the Army Research Institute now incorporates education on nonverbal communication into soldier training, thereby assisting troops in understanding cross-cultural, nonverbal communication with non-English speaking citizens with whom they interact overseas. Thus, this research has the potential to provide human solutions in military situations. It has been demonstrated that enhancing troops' interpersonal skills can enable them to anticipate and diffuse conflict, as well as facilitate cooperation, negotiation and compromise.

NATIONAL INSTITUTE OF JUSTICE AND BUREAU OF JUSTICE STATISTICS
U.S. DEPARTMENT OF JUSTICE

COSSA urges the subcommittee to appropriate \$47.5 million for the National Institute of Justice (NIJ) and \$55.4 million for the Bureau of Justice Statistics (BJS) within the U.S. Department of Justice (DOJ). These levels are equal to the President's fiscal year 2015 budget request. Taken together—roughly \$100 million—this modest investment represents the only source of Federal research dollars committed to enhancing our understanding of crime and the criminal justice system.

As the research arm of DOJ, NIJ plays a critical role in helping us understand and implement science-based strategies for crime prevention and control. The President seeks additional investment for the Comprehensive School Safety Initiative in fiscal year 2015 as part of the Opportunity, Growth, and Security Initiative; the initiative received \$75 million in fiscal year 2014. COSSA urges the subcommittee to continue its support for this critical activity, the research from which will help ensure that policies and investments made at U.S. schools to address the safety of students, teachers and administrators will be evidence-based.

BJS' national data collections play an important role in providing statistical evidence needed for criminal justice policy decision makers. In particular, these programs provide the critical data infrastructure supporting the administration's commitment to focus on data-driven, evidence- and information-based, "smart on crime" approaches. COSSA supports the request for an additional \$1 million for the National Survey of Public Defenders and an additional \$1.5 million for the National Public Defenders Reporting Program. Further, we endorse the administration's efforts to "explore the feasibility of statistical collections in important topical priority areas, including: recidivism and reentry, prosecution and adjudication, criminal justice data improvements and victimization statistics."

Increased investment in criminal justice science is needed to ensure future policies and decisions are evidence-based and to contain escalating costs associated with public safety. COSSA applauds NIJ's increased efforts to disseminate research results to practitioners, putting it in the hands of those who need it.

BUREAU OF ECONOMIC ANALYSIS
DEPARTMENT OF COMMERCE

COSSA urges the subcommittee to appropriate \$107 million for the Bureau of Economic Analysis (BEA) within the U.S. Department of Commerce. This is equal to the amount included in the fiscal year 2015 budget request. BEA plays a critical role in helping the Nation understand our economy through the National Income and Product Accounts, which provides economic data at the national as well as industry levels.

Further, BEA proposes a new \$1.9 billion initiative in fiscal year 2015, "Big Data for Small Business." This would allow BEA to create a new Small Business Gross Domestic Product to track the health of the U.S. small business sector, thereby addressing the need for more public data relating to small businesses. COSSA supports this activity.

Thank you for the opportunity to express these views on behalf of the social and behavioral science community. Please do not hesitate to contact me should you require additional information.

PREPARED STATEMENT OF FORD "BUD" CROSS, PH.D. NATIONAL OCEANOGRAPHIC AND ATMOSPHERIC ADMINISTRATION (NOAA) (RETIRED)

This testimony addresses the portion of the National Oceanic and Atmospheric Administration's (NOAA's) fiscal year 2015 Budget that proposes to close their research laboratory in Beaufort, North Carolina, where I served as Laboratory Director from 1985–2000.

The purpose of this testimony is to enter my strong objection to the proposed closure of NOAA's Beaufort Laboratory, North Carolina by NOAA's National Ocean Service (NOS). Having worked at the Lab for 33 years that included serving as Laboratory Director for 15 years, I would like to provide you with my assessment of the validity of the NOAA justification for closing the Beaufort Laboratory. (I still interact with Lab staff and visit the lab frequently.)

NOAA's Beaufort Laboratory is part of the NOS National Centers for Coastal Ocean Science (NCCOS) and the Lab's official name is the National Center for Fisheries and Habitat Research. In addition to NOS (42), staff from the National Marine Fisheries Service (NMFS) (51), and the State of North Carolina (8) share the Beaufort facility. NCCOS also has research Centers or Laboratories in Charleston, S.C., Oxford, Maryland, Kasitsna Bay, Alaska, and two Centers at NOAA Headquarters in Silver Spring, Maryland. In recent years, NOAA has tried unsuccessfully to close two other NOS laboratories, Oxford, MD, and Kasitsna Bay, Alaska.

NOS claims that about \$58 million is needed to upgrade the Beaufort facility. This estimate is based on an outdated (2010), and somewhat inaccurate, facilities assessment report that resulted from a site visit in 2009. Since 2000, about \$14.5 million has been spent to upgrade many structural deficiencies, and two new buildings were constructed (\$8 million). Also, almost \$1 million of Hurricane Sandy funds currently are being used to further upgrade the facility for storm protection, and the State of North Carolina is spending about \$500,000 for storm water improvements as well. That's over \$23 million in upgrades in less than 15 years.

Why were these upgrades not taken into account when the fiscal year 2015 budget was submitted? In my opinion, the argument that the Beaufort facility is in poor shape and an unsafe work environment is not accurate. The figure of \$58 million to repair the facility does not take recent upgrades into account, and does not reflect a more recent informal inspection of the Lab where "no structural issues" were found. Thus, the Beaufort facility is not in a rundown condition, nor is it an unsafe place to work. A visit to the facility will bear these points out. Most of funds currently being identified as needed to repair the facility were actually identified to replace older buildings with state-of-the-art facilities in order to allow the Beaufort Lab to take full advantage of its location.

IMPACT ON NCCOS PROGRAMS

If the Laboratory is closed, the impact on the NCCOS research there will be significant, as much of it must be conducted in a laboratory and field setting. Priority research in the following areas would be disrupted or eliminated: harmful algal blooms, coastal toxic metal pollution, sea level rise, invasive species (lionfish), mapping of seagrass beds, and coastal planning for sustainable marine aquaculture. (Yet, NOS/NCCOS is requesting an additional \$4 million in fiscal year 2015 for similar work.) Several of the NCCOS scientists at Beaufort have received national and international awards for research, and one received the NOAA Lifetime Scientific Achievement Award. Virtually all of this research is conducted cooperatively with universities, State agencies, other Federal agencies, or other NOAA programs. Again, much of this research cannot be conducted away from the coast.

Is this research of low priority to NOAA/NOS/NCCOS?

IMPACT ON NMFS PROGRAMS

Since 1899, when the Beaufort Laboratory was created by Congress, until 2000, the Laboratory belonged to the National Marine Fisheries Service, or its precursor agencies. In the late 1990's, the Administrator of NOAA directed the Assistant Administrator (AA) for NOS to develop a research capability within NOS. To satisfy that request, five field laboratories were transferred in 2000 from NMFS to NOS, including Beaufort. However, NMFS fisheries and protected species research remained at the Lab. Their contribution to O&M costs is based on the ratio of NOS to NMFS staff. The NMFS fisheries and protected species research would be highly impacted if the Lab closed. Much of this research is used by fisheries and protected species managers, and primarily requires the coastal Lab.

FISHERIES STOCK ASSESSMENTS

The primary fisheries research at the Beaufort Lab deals with stock assessments of more than 100 species of reef fish (mainly snappers and groupers) that exist between Cape Hatteras and the Florida Keys. The Lab monitors the catch of about 100 head boats along the southeast Atlantic coast. They then combine these data with estimates of the commercial catch and other recreational catch to produce an estimate of the total fishing effort on the populations of reef fish. These data are then coupled with economic information to estimate the economic effect of various

management scenarios. This information is then provided to the South Atlantic Fisheries Management Council who has the responsibility to manage fisheries in the exclusive economic zone (EEZ).

The South Atlantic Fishery Management Council depends on the Beaufort Laboratory for providing the science upon which these management recommendations are based for the reef fish fishery. Attempts to transfer this staff to another location will fracture it, disrupt the flow of information to the South Atlantic Council, and result in an unnecessary expenditure of relocation funds.

MENHADEN

The Beaufort Laboratory is the only entity that monitors the catch of the Atlantic menhaden fishery (since 1955), and the Gulf of Mexico menhaden fishery (since 1964). Stock assessments are made periodically, and the information is provided to the Atlantic States Marine Fishery Commission and the Gulf States Marine Fisheries Commission for management purposes. Similar to reef fish, the unnecessary disruption of this research will be costly. It could result in the loss of the longest and most continuous data bases in the U.S., and essential management information to the Commissions would be delayed at best.

PROTECTED SPECIES

The unique geological location of the NOAA's Beaufort Laboratory lends itself to one of the best locations along the Atlantic coast to conduct research on marine mammals and sea turtles. This is due to the unique mix of estuarine habitats that exists in coastal North Carolina and the opportunity to interact directly with commercial fishermen. The objectives of this research are to better understand the direct and indirect effects of fisheries, climate change, and other environmental factors in support of the conservation and recovery of these species as mandated by Federal law. This research cannot be done effectively from a non-coastal location or out of North Carolina.

NOAA SENTINEL SITE COOPERATIVE ([HTTP://OCEANSERVICE.NOAA.GOV/SENTINELSITES/NORTH-CAROLINA.HTLM](http://oceanservice.noaa.gov/sentinel/sites/north-carolina.html)) ([HTTP://OCEANSERVICE.NOAA.GOV/SENTINELSITES/](http://oceanservice.noaa.gov/sentinel/sites/))

NOAA's Beaufort Laboratory is one of only five such sites that NOAA has established in the United States. These sites were established to leverage existing research and monitoring resources to ensure resilient communities and coastal ecosystems in the face of changing environmental conditions. The focus of the North Carolina site is sea level change and coastal inundation adaptation and planning. About 20 partners (Federal, State, and other organizations) are involved in this effort in which the NOAA Lab is a key player. For more information on this Program, see the links given above. Why would NOAA pull the Beaufort Lab out of one of only five sentinel sites in the Nation?

NORTH CAROLINA MARINE SCIENCE AND EDUCATION PARTNERSHIP ([WWW.NCMSEP.COM](http://www.ncmsep.com))

The central portion of the North Carolina coast has been a focus of marine research for well over 100 years. After the establishment of the Beaufort Lab in 1899, the Duke Marine Laboratory and the University of North Carolina's Institute were established in the late 1940's and the North Carolina State University Marine Lab (CMAST) was established in the 1990's, all within five miles of each other. This concentration of labs has resulted in a center of expertise in coastal North Carolina of international and national significance. In 2002, the Carteret County Economic Development Council convened a meeting of the leaders of marine institutions and organizations and community leaders in the county. From that meeting, the North Carolina Marine Science and Education Partnership (MSEP) was formed. Currently, there are 18 organizations that comprise MSEP, including the Carteret Country Public School System. Members of MSEP meet regularly to discuss ways to better cooperate on research, education, and outreach projects. For example, MSEP developed and is running a Coastal Marine Science Competition for 13-18 year old students in the multi-County region (<https://www.sites.google.com/site/msepcompetition/>). For NOAA to eliminate the Beaufort Laboratory from such an organization so closely tied to their overall missions is puzzling at best.

SUMMARY

1. In my opinion, the justification for closing NOAA's Beaufort Laboratory is weak. The facility report is not up to date, and not entirely accurate. The \$58 million price tag includes replacing the two story research building that would be beneficial but the laboratory is operational and safe without it. Also, NOAA

- has constructed a new maintenance building and a \$7 million building to house administrative staff, the library and the NEERS staff, and has spent an additional \$14 million in facility upgrades, since 2000. I strongly urge that a site visit be made so Congress can be assured that the Lab is functional and safe.
2. The closing of the Lab will destroy critical masses in habitat, fisheries, and protected species research. NOAA argues that the scientists and support staff will be moved to other locations, but there is no plan. Those scientists and staff who chose not to move will be rified. There is no way NOAA can successfully move any part of the staff in its entirety to maintain any semblance of a critical mass in any one of the three research areas. The result will be a major disruption of research that is of high priority to NOAA, and again, not for a valid reason.
 3. NOAA prides itself in its capacity to reach out and interact with constituents and partners. The Beaufort Laboratory is the epitome of those relationships. A high percentage of the research conducted there is with collaborators. Graduate students and post-doctoral students from various universities, sponsored by Lab staff, conduct their research at the Laboratory. As described above, the Lab is an integral part of the North Carolina Marine Science and Educational Partnership and NOAA Sentinel Site project. Is it in the best interests of NOAA to walk away from these relationships?

RECOMMENDATIONS

I would like to make the following three recommendations to the subcommittee:

1. For reasons given above, please do not close NOAA's Beaufort Laboratory. The level of unnecessary disruption to research, partnerships, and personal lives is far too great for the questionable justification given.
2. If the Laboratory remains in NOS, it should have its own line item in the NOS/NCCOS budget. This will prevent NOS/NCCOS from continually bleeding the Lab of money and positions.
3. And my most preferred recommendation is to move the Beaufort Laboratory back to the National Marine Fisheries Service, where it spent its first 100 years. I cannot believe that NMFS agreed up front to this proposed closure. The impact to their programs is too great. It would be interesting to know if a paper trail exists between NOS and NMFS on this matter.

PREPARED STATEMENT OF MICHELLE DUVAL, MOREHEAD CITY, NORTH CAROLINA

As a resident of Carteret County and a fisheries management professional engaged at both the State and Federal levels, I want to express my opposition to the proposed closure of the National Oceanic and Atmospheric Administration (NOAA) Beaufort Lab. The lab has a rich history of conducting a wide variety marine science research. There are significant collaborations that occur between the Beaufort Lab and academic institutions in the area that inform the science used for management. Closure of the Beaufort Lab would eliminate those collaborations, simply due to the fact that those researchers will not be in close proximity to one another. Having received my doctorate in 1997 from the Duke Marine Lab, which shares Pivers Island with the NOAA Beaufort Lab, I have witnessed these collaborations firsthand. However, I wanted to express a few very specific concerns regarding fisheries science and long term fiscal impacts of the lab closure that merit consideration. (Please note that I am not an employee of the Beaufort Lab).

1. *Impacts to fishery-independent surveys.*—Most of the federally-managed fish species in the southeast are considered “data poor” when compared to other regions, particularly the snapper grouper complex. Information collected through fishery-independent surveys (i.e., surveys that do not rely on commercial and recreational catches) is critical to filling in knowledge gaps regarding species distribution, abundance, longevity and reproduction—essential elements for a stock assessment. There is only one fishery-independent survey for snapper grouper species in the southeast, and its geographic range has always been limited by available resources. Only since 2010 have the necessary staff resources been allocated to the Beaufort Lab to expand the northern range of this survey from just south of Cape Lookout, North Carolina north to Cape Hatteras, North Carolina (as well as add a video monitoring component to the survey). Closing the lab and relocating the staff would set this program back substantially through survey interruption and re-hiring of staff with the appropriate skills to replace those unable to relocate.

2. *Impacts to fisheries stock assessments.*—It has taken 10 years to build the necessary analytical capacity at the Beaufort Lab to conduct much-needed stock assessments for commercially and recreationally important fishes in the southeast. These scientists work together as a team in completing assessments; they also work side by side with the survey scientists mentioned above, as well as the scientists who process the biological samples collected to provide information critical for the assessments. The ability for the assessment team to interact directly with the other teams of scientists collecting the data is invaluable. Closing the Beaufort Lab and relocating personnel would have significant negative impacts on the efficiency and productivity of the process, at a time when the demands have never been greater. It will not be possible to relocate all personnel to a single location, and the fact is that not all personnel will be able to relocate due to spousal commitments, childcare obligations, etc. The existing team of assessment scientists are nationally and internationally respected and not easily replaced. Loss of specialized skill sets that have taken years to acquire is a very real risk.
3. *Downstream fiscal impacts.*—Closure of the lab and relocation of staff will have significant downstream fiscal impacts that do not appear to have been taken into consideration. The development of stock assessments in the southeast is a very collaborative process, involving the assessment team, other State and Federal agency scientists, and fishermen coming together in person to review and discuss data being considered for an assessment. Moving the staff from the Beaufort Lab to other locations (such as the NOAA lab in Pascagoula) will incur additional travel costs in the form of bringing those staff back into the region for stock assessments, (or transporting all other participants to where the assessment team is located). Similarly, there will be additional travel costs to bring fishery independent survey staff back to cruise deployment locations; this would likely reduce the magnitude of future sampling efforts at a time when they need to be expanded, both spatially and temporally.

With regard to local impacts, even if all existing staff were able and willing to relocate (which is unlikely, as noted above), the cost of relocation and potentially buying those staff out of existing homes is not trivial. The economy and current real estate market simply cannot absorb such an influx of houses. At the local level, these NOAA employees are important, year-round contributors to an economy that is seasonally dependent on tourism.

Finally, NOAA's proposal to close the lab would leave a notable absence in geographic coverage between Sandy Hook, New Jersey and Miami, Florida along the Atlantic coast. This is at odds with the NOAA presence along the Gulf of Mexico, with labs located in Panama City, Florida; Pascagoula, Mississippi; Stennis, Mississippi; Lafayette, Louisiana; and Galveston, Texas. This coverage along the Gulf coast represents a much larger investment of resources over a shorter stretch of coastline. Given the Beaufort Lab's location near the intersection of two major biological and oceanographic convergence zones, it seems the agency should be investing more in this facility rather than less, particularly in light of NOAA's commitment to determining the impacts of climate change on fisheries resources. In closing, the \$54 million figure being cited as the cost of maintaining the Beaufort Lab appears excessive considering the condition of the facilities. While I appreciate the administration's desire to reduce its overall footprint, an updated maintenance estimate and comparison to similar NOAA facilities should be considered.

I very much appreciate the opportunity to comment on such an important issue.

PREPARED STATEMENT OF THE ENTOMOLOGICAL SOCIETY OF AMERICA

The Entomological Society of America (ESA) respectfully submits this statement for the official record in support of funding for the National Science Foundation (NSF). ESA requests a robust fiscal year 2015 appropriation of \$7.5 billion for NSF, including strong support for the Directorate for Biological Sciences (BIO).

Advances in basic biological sciences, including entomology, provide the fundamental knowledge that is the basis for overall scientific progress and the development of new technologies and strategies that address societal challenges related to economic growth, security, and human health and well-being. Entomologists' basic research on insect anatomy, classification, and genetics improves our understanding of evolution and biodiversity. Better knowledge of insect behavior and the dynamics of insect populations is an important component to the study of ecosystems and the environment. Additionally, insects play a critical role in our ability to explore the underpinnings of biological processes at the cellular and molecular level. Insects in-

cluding *Drosophila* flies have long served as model systems for animals that scientists use to study biochemistry, microbiology, molecular biology, and toxicology, among other subjects. In many cases, insects are ideal for use in laboratory experimentation because they are inexpensive, easy to handle, have relatively short life spans, and do not require special facilities required to maintain vertebrate animals.

NSF is the only Federal agency that supports basic research across all scientific and engineering disciplines, except for the medical sciences. In fiscal year 2013, the foundation supported an estimated 299,000 researchers, scientific trainees, teachers, and students, primarily through competitive grants to nearly 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, ensuring our Nation will remain globally competitive in the future. For example, the NSF Graduate Research Fellowship Program selects and supports science and engineering graduate students demonstrating exceptional potential to succeed in science, technology, engineering, and mathematics (STEM) careers.

Through activities of its BIO Directorate, NSF advances the forefront 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 research resources, including important biological collections and biological field stations. NSF BIO is also the Nation's primary funder of fundamental research on biodiversity and environmental biology.

For example, NSF-funded researchers have recently examined the wide-ranging effects of an ongoing bark beetle invasion which threatens the destruction of millions of acres of forests in the Western United States.¹ The death of pine trees caused by bark beetles has severe implications for the forest's canopy and water systems, and creates conditions that favor devastating forest fires. The study has provided new insights into how invasive insect species that damage or destroy plants can affect entire ecosystems at the watershed scale.

Another NSF-funded researcher² is studying a phenomenon that allows a locust to change its color depending on how densely populated an area is with other locusts; this trait is believed to cause locust swarms, which can be very destructive to agriculture. Migratory locust swarms, one of the biblical plagues, continue to contribute to famine in Africa. The current research is examining how the locusts change their appearance, and whether these genetic traits can be manipulated to maintain an appearance that is not conducive to forming swarms. The results of this study could provide a new way to control locusts without relying on chemical pesticides, which can have negative effects on the surrounding ecosystem.

One example of how NSF's support for basic research using insects contributes to our understanding of human and animal biology is a recent NSF-funded study on the behaviors of *Drosophila* vinegar flies,³ which has advanced scientists' knowledge about neurobiology of insects, animals, and humans. The results of the research may also help inform the field of robotics; scientists believe that modeling the functions of the insect brain can help develop algorithms able to control robotic systems. Other NSF-funded research on *Drosophila* genetics⁴ is helping scientists understand gene mutations in humans, as humans and these tiny flies share conserved genetic similarities.

Given NSF's critical role in supporting fundamental research and education across science and engineering disciplines, ESA supports an overall fiscal year 2015 NSF budget of \$7.5 billion. Within this budget, 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 our understanding of 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. Founded in 1889, ESA has nearly 7,000 members affiliated with educational institutions, health agencies, private industry, and government. Members are researchers, teachers, extension service personnel, administrators,

¹ Mikkelsen, KM, et al. "Bark beetle infestation impacts on nutrient cycling, water quality and interdependent hydrological effects." *Biogeochemistry* (2013).

² CAREER: "Evolution of locust swarms and phenotypic plasticity in grasshoppers." NSF Award Abstract #1253493.

³ van Breugel, F, et al. "Plume-tracking behavior of flying *Drosophila* emerges from a set of distinct sensory-motor reflexes." *Current Biology* (2014).

⁴ CAREER: "Investigating the evolution of gene regulation at *Drosophila* Hox genes." NSF Award Abstract #0845103.

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. For more information about the Entomological Society of America, please see <http://www.entsoc.org/>.

PREPARED STATEMENT OF THE FEDERATION OF AMERICAN SOCIETIES FOR
EXPERIMENTAL BIOLOGY

The Federation of American Societies for Experimental Biology (FASEB) respectfully requests a fiscal year 2015 appropriation of a minimum of \$7.6 billion for the National Science Foundation (NSF). This demonstrates commitment to the critical mission of the agency and is an important first step in returning to a model of sustainable growth.

FASEB, a federation of 26 scientific societies, represents more than 120,000 life scientists and engineers, making it the largest coalition of biomedical research associations in the United States. Our mission is to advance health and welfare by promoting progress and education in biological and biomedical sciences.

Progress in science and technology is becoming increasingly interdisciplinary, as discoveries in one field fuel progress in another. NSF is the only Federal research agency dedicated to advancing all fields of fundamental science and engineering. As a result, the broad research portfolio of NSF is critical for our Nation's capacity for innovation and essential for our prosperity, quality of life, and national security.

The NSF Graduate Research Fellowship Program awards approximately 2,500 3-year fellowships annually to outstanding graduate students pursuing advanced degrees in science, technology, engineering, or mathematics. These fellowships support the education and training of the next generation of researchers, ensuring a robust and competitive workforce. NSF graduate research fellows have become leaders in the scientific community.

Of the U.S. Nobel Laureates in the sciences, 200 received NSF funding over the course of their careers, including the 2013 prize winners in physiology or medicine, chemistry, and economics.

Recent examples of NSF-funded research include:

- Harnessing More Solar Energy.*—Researchers have developed a new material for solar panels that is cheaper, more efficient, and can harness energy from visible and infrared light, unlike previous materials that could only use ultraviolet light. The new material, developed by NSF-funded researchers, increases efficiency by absorbing and converting six times the energy of its predecessors. Researchers are currently scaling up the prototype to a full size solar panel for implementation on the national power grid.
- New Microscope Detects the Movement of Atoms.*—NSF-funded researchers have developed a new electron microscope that can detect the movement of atoms and molecules. The cutting-edge technology allows users to observe the fundamental transformations of matter: chemical reactions and the electric charges of interacting atoms. The new microscope has immediate applications in the clean energy industry, development of nanotechnology, and countless other scientific endeavors.
- Preventing Post-operative Infections.*—Infection at the surgical site is one of the most common types of post-operative complications, which lengthens hospital stays and increases healthcare costs. Scientists with NSF support have developed a new antibiotic coating for surgical sutures. Lab tests have shown that the new coating is 1,000 times more effective at preventing infection than previous coatings, and even prevents the spread of staphylococcus aureus, the variety of "staph" that frequently causes virulent post-surgical infections.
- New Storm Radar Saves Lives.*—Researchers supported by NSF are building an advanced radar network to detect severe storms earlier. Using novel algorithms, the network can generate information faster and with more geographic specificity, enabling first responders to take action before a storm hits. Researchers are currently testing the system in southwestern Oklahoma and Dallas/Ft. Worth, Texas. Once it is broadly implemented, the system will reduce injuries, enable first responders to be more effective, and save lives.
- Preserving Bat Colonies to Protect the Ecosystem.*—Agricultural pests cost the U.S. farm industry over \$1 billion per year in lost crop yield and additional cost of pesticide use. NSF-funded researchers studied bat colonies in the cotton and corn growing region of southern Texas and found that bats are valuable to farmers because they consume insects that destroy crops, reducing the need to use pesticides. Protecting bat colonies in crop-growing regions will both decrease

pesticide cost to farmers and reduce the presence of chemicals on food people eat.

MAINTAINING GLOBAL LEADERSHIP

Scientific and technological advances keep our Nation internationally competitive by spurring the innovations that fuel economic growth. NSF's broad portfolio of fundamental research expands the frontiers of knowledge, opening the way to these innovations. Through its education initiatives, NSF ensures that the U.S. will continue to have an unrivaled scientific and engineering workforce.

NSF-funded research leads to major scientific breakthroughs, many of which provide the basic knowledge that stimulates innovation in the private sector. We must build on prior NSF investment and provide an adequate funding level to advance discovery, educate the next generation of scientists and engineers, and retain our position as the global leader in innovation. In fiscal year 2015, FASEB recommends a minimum of \$7.6 billion for the NSF. This is the level that the America COMPETES Act authorized for the agency for 2011 and is an important first step in returning to a model of sustainable growth.

Thank you for the opportunity to offer FASEB's support and recommendations for the NSF.

PREPARED STATEMENT OF JOHN FIEBERG, PH.D., ASSISTANT PROFESSOR OF QUANTITATIVE ECOLOGY, DEPARTMENT OF FISHERIES, WILDLIFE, CONSERVATION BIOLOGY, UNIVERSITY OF MINNESOTA

Dear Members of the Senate Appropriations Subcommittee of Commerce, Justice, Science, and Related Agencies: I recently became aware of the National Oceanic and Atmospheric Administration's (NOAA's) National Ocean Service's (NOS) request to close the Beaufort Laboratory. Having collaborated with scientists at the Beaufort lab, I am well aware of the many ways the laboratory's staff contribute to NOAA's mission: they provide state-of-the-art fishery stock assessments that help to determine how many fish can be sustainably caught in the southeast United States, they conduct fishery-independent surveys to collect the data necessary for conducting informative stock assessments, and they conduct cutting edge research aimed at improving the way we "do" science in support of fisheries management. In short, closing the Beaufort lab would be a significant loss, not only for the 100–110 staff employed by the lab, but also the fishing and marine science communities that benefit from their work. Thus, I am writing to request that NOAA's Beaufort Laboratory closure proposed in the 2015 President's Budget Request be removed from the NOS budget.

The recommendation to close the laboratory was largely driven by financial considerations related to the long-term cost of maintaining the infrastructure at the laboratory. Unfortunately, this decision was based on inaccurate, outdated information that overstated the costs of maintaining the NOAA Beaufort Laboratory. Several recent investments in new construction and renovations, totaling approximately \$14 million dollars, were not properly considered when making the recommendation. Recent facility improvements include:

- 2006: Administration Building replaced (with North Carolina NERRs)
- 2007: Bridge replaced—cost shared with Duke University
- 2008: Maintenance Building replaced
- 2009: Air conditioning/Air handler replacement and mold abatement
- 2009: Sample Storage/Chemical Storage/Haz-Mat buildings consolidated and replaced
- 2014: Seawall repair, electrical upgrade and State of North Carolina funded storm water control

In addition, the NOS request underestimated the staff that would be impacted by the closure by not including the more than 40 National Marine Fisheries Service staff and staff members of the North Carolina National Estuarine Research Reserve co-located at the facility.

It is surprising that the request for closure comes at a time when the National Ocean Service is requesting an increase of \$4 million in funding for another center to support Ecological Forecasting of Harmful Algal Blooms (HAB), Hypoxia, pathogens and Species Distributions (see budget summary, page 8, paragraph 1). The Beaufort Laboratory has both the expertise and facilities required to address these issues. Researchers and research teams at the Beaufort Laboratory have repeatedly been recognized for their work. Further, the laboratory's excellent research capabilities and reputation also attract support, both from other branches of NOAA and

from other organizations which have recognized potential benefits of the Laboratory's studies, and long have augmented the support provided by NOAA.

In summary, the closing of the Beaufort Laboratory does not make economic sense, given the recent investments in facility infrastructure and the need to address emerging marine issues identified by the National Ocean Service. More importantly, closing the laboratory would have significant negative consequences for the 100–110 staff employed by the lab and also the large fishing and marine science communities that rely on the outstanding quality of work of the lab and its members.

PREPARED STATEMENT OF DR. JANELLE FLEMING OF SEAHORSE COASTAL
CONSULTING, LLC AND DISCOVERY DIVING CO., INC.

In Re: Potential closing of Beaufort, North Carolina laboratory of NOAA, National Marine Fisheries Service, Southeast Fisheries Science Center.

Dear Committee on Appropriations Senators,

This letter is not a formal testimony, but rather a comment on how this laboratory has guided some of my research as a student and as an independent consultant and how essential the lab is to the functioning of the local economy and research. You may or may not be aware of the fact that President Obama has targeted the closing of the Beaufort National Oceanic and Atmospheric Administration (NOAA) lab as part of the 2014–2015 budget proposal. This is the only Federal lab between Miami, Florida and Sandy Hook, New Jersey. This lab houses over 150 scientists, technicians, and office personnel that conduct important research locally as well as nationally and internationally.

In terms of ecology and physical oceanography, North Carolina is in a unique position because it maintains both tropical and temperate characteristics. During the summer, the Gulf Stream pushes up from Florida and winds bring it close to shore, bringing it with tropical species of algae and animals (fish, mammals, etc). During the winter, the Greenland current pushes down from the North Atlantic and brings the temperate species into the area. The capes also allow for a tremendous amount of recirculation within the area and these different species have learned to adapt to the changing currents found of the North Carolina coast. All this is to say that North Carolina is uniquely situated to study fisheries issues, sediment transport issues, wind energy issues, and sea level rise issues, just to name a few. The NOAA lab has been essential in understanding the scientific root cause of some of the major questions about physical circulation and its role governing the ecology of the area.

As a graduate student, I had the fortune of working with some of the NOAA scientists on my Ph.D. project. Their advice in terms of data collection and analysis, were pivotal in determining some of the causes of wind-driven circulation in the Neuse River Estuary and how that might lead to fish kills. As the scientists were down the street, I could call them, make an appointment and meet with them that day. Nowhere else in the world, do you get that type of interaction. In Beaufort, we are able to do this because of the logistics.

As an independent consultant, I was able to work with Dr. Pat Tester on Harmful Algal Blooms, both in North Carolina, South Carolina, Georgia and Florida, but also in Belize. Innovative measurement and monitoring techniques have been developed at the Beaufort NOAA lab in conjunction with the local universities in the area, Duke University, North Carolina State University, and University of North Carolina-Chapel Hill.

Finally, I have been collaborating with Dr. James Morris on the Lionfish invasive species epidemic that is affect the local fisheries in North Carolina as well as Florida and the Caribbean. We have just recently started an experimental project that seeks to develop a commercial fishery for the lionfish. Being able to communicate with the researchers face to face has lead to several advancements in our experimental techniques and furthered the studies.

In closing, when you look at this item in the President's budget proposal, I would like you to think of three things:

1. What would the removal of a vibrant research organization do on the "brain drain" within a local community, rich with university collaboration?
2. Does it make sense to centralize and reduce the number of laboratories that cover the coast, given that each region has their own specific characteristics?
3. If the laboratory is closed, more money and time would be lost in transitioning those full time Government employees to a different laboratory and the research that they are currently working on would be delayed 2–3 years.

Please reconsider this budget as the Beaufort NOAA lab affects approximately \$58 million into the local economy and aids in fisheries independent research such as advanced procedures in stock assessment, fisheries oceanographic research, and oceanic observations.

Thank you,

PREPARED STATEMENT OF THE GEOLOGICAL SOCIETY OF AMERICA

SUMMARY

The Geological Society of America (GSA) supports strong and sustained investments in earth science research and education at the National Science Foundation (NSF) and National Aeronautics and Space Administration (NASA). We believe investment in these agencies is necessary for America's future economic and science and technology leadership, both through discoveries that are made and the talent developed through their programs. In addition, this research addresses such critical societal issues as energy and mineral resources, water availability and quality, climate change, waste management, and natural hazards. The United States faces a looming shortage of qualified workers in these areas that are critical for national security. We are very concerned that cuts in earth science funding will cause students and young professionals to leave the field, potentially leading to a lost generation of professionals in areas that are already facing worker shortages and inhibit potential economic growth. GSA urges Congress to provide the National Science Foundation at least \$7.5 billion in fiscal year 2015.

ABOUT THE GEOLOGICAL SOCIETY OF AMERICA

The Geological Society of America, founded in 1888, is a scientific society with over 26,000 members from academia, government, and industry in all 50 States and 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.

As the National Science Board's recent 2014 Science & Engineering Indicators reports, America's share of the world's R&D fell from 37 percent to 30 percent from 2001 and 2012. As other nations have been increasing their support for long-term, high-risk research, we have been allowing ours to stagnate or decline. We must reverse that trend and tackle our mounting innovation deficit if we want to retain our global economic leadership.

NATIONAL SCIENCE FOUNDATION

The Geological Society of America (GSA) urges Congress to provide the National Science Foundation (NSF) at least \$7.5 billion in fiscal year 2015. GSA greatly appreciates your efforts to increase the NSF budget in recent years. Although NSF was able to regain some of its loss from sequestration in fiscal year 2014, GSA remains concerned about the impact of flat and declining research budgets on our Nation's future innovations and innovators. We feel that allowing NSF's budget to catch up with research inflation costs over the past few years is the first step to putting NSF back on the path necessary to maintain and regain America's future economic and science and technology leadership. We are concerned about the cuts to the Research and Related Activities Account and flat funding (0.1 percent increase) in geoscience research in the request, but appreciate that \$552 million was proposed to allow growth in the agency in the Opportunity, Growth, and Security Initiative.

The Earth sciences are critical components of the overall science and technology enterprise and NSF investment and should be increased. NSF's Directorate for Geosciences supports approximately 65 percent of all basic university research in the geosciences: the largest Federal support for Earth science research essential for developing policies regarding land, mineral, energy, public safety and water resources at all levels of government. This Directorate regularly receives a large number of exciting research proposals that are highly rated for both their scientific merit and their broader impacts; the funding rate for research grants dropped to 23 percent last year, leaving many meritorious projects unfunded.

Increased investments in NSF's earth science portfolio are necessary to address such issues as natural hazards, energy, water resources, climate change, and education. Specific needs include:

- Natural hazards remain a major cause of fatalities and economic losses worldwide. Several areas in the United States are vulnerable to damages from earthquakes, tsunamis, volcanoes, and landslides—as evidenced by the recent land-

slide in Washington. NSF research that improves our understanding of these geologic hazards will allow for better planning and mitigation in these areas that will reduce future losses. We urge Congress to support NSF investments in fundamental earth science research that underpin basic understanding and innovations in natural hazards monitoring and warning systems.

- Mineral resources are essential to modern civilization, and a thorough understanding of their distribution, consequences of their use, and the potential effects of mineral supply disruption is important for sound public policy. The Division of Earth Sciences supports proposals for research geared toward improving the understanding of 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 for future exploration. In particular, GSA encourages support for research on critical minerals, for which our Nation is dependent upon foreign sources.
- The devastating droughts in California highlight our dependence on water. NSF's research addresses major gaps in our understanding of water availability, quality, and dynamics, and the impact of both a changing and variable climate, and human activity, on the water system. Increased public investment is needed to improve the scientific understanding of water resources, including improved representation of geological, biological, and ecological systems, for informed decisionmaking.
- Forecasting the outcomes of human interactions with Earth's natural systems, including climate change, is limited by an incomplete understanding of geologic and environmental processes. Improved understanding of these processes in Earth's deep-time history can increase confidence in the ability to predict future states and enhance the prospects for mitigating or reversing adverse impacts to the planet and its inhabitants.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

GSA supports earth science and planetary exploration research at NASA and is concerned about cuts in the fiscal year 2015 request, although increases are proposed in the Opportunity, Growth, and Security Initiative. This research is important to understand the evolution of Earth; to deepen and expand human understanding of our place in the universe; to reinforce science, technology, engineering and math (STEM) education and effective training of the next generation of scientists; to increase U.S. competitiveness in science and technology development; and to enhance the quality of life through technological innovation. In addition, the discoveries and technologies of these programs form the basis of many industries and partnerships that drive economic growth.

Planetary missions at NASA are designed to collect data to better understand the history and workings of the entire solar system, to gain insight into the formation and evolution of Earth and the other planets, to understand how life began on Earth, and to determine whether extraterrestrial habitable environments and life forms exist (or ever did exist) elsewhere in the solar system or beyond. To support these missions, 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. Geochemical studies include investigations of extraterrestrial materials now on Earth, including lunar samples, tens of thousands of meteorites, cosmic dust particles, and, most recently, particles returned from comets and asteroids.

Exploration of other planets in the solar system requires major national and international initiatives, significant funding levels, and long timelines for mission planning and collaborative research. For scientists, the funding cycle is much shorter than typical mission cycles, and in particular, graduate student and career-development timelines are much shorter than mission timeframes. Therefore, the growth and continued development of a robust workforce capable of conducting complex space missions and analyzing the scientific data returned from such missions does not depend on individual missions as much as it depends upon a consistent, sustained program that educates and develops planetary scientists.

GSA supports NASA earth observing systems, including Landsat, and their research into our planet. By providing adequate resources to maintain current and develop next-generation satellites, the Nation will continue to have access to data that is used by diverse stakeholders ranging from farmers to water managers to make critical decisions.

SUPPORT NEEDED TO EDUCATE FUTURE INNOVATIONS AND INNOVATORS

Research in Earth science and geoscience education is fundamental to training the next generation of Earth science professionals. The United States faces a looming shortage of qualified workers in these areas that are critical for national security. We are very concerned that cuts in earth science funding will cause students and young professionals to leave the field, potentially leading to a lost generation of professionals in areas that are already facing worker shortages.

A 2013 report by the National Research Council, "Emerging Workforce Trends in the Energy and Mining Industries: A Call to Action," found, "Energy and mineral resources are essential for the Nation's fundamental functions, its economy, and its security . . . In mining (nonfuel and coal) a personnel crisis for professionals and workers is pending and it already exists for faculty."

Another recent study, "Status of the Geoscience Workforce 2011," by the American Geosciences Institute found: "The supply of newly trained geoscientists falls short of geoscience workforce demand and replacement needs. . . . aggregate job projections are expected to increase by 35 percent between 2008 and 2018. . . . The majority of geoscientists in the workforce are within 15 years of retirement age. By 2030, the unmet demand for geoscientists in the petroleum industry will be approximately 13,000 workers for the conservative demand industry estimate."

Increased NSF and NASA investments in earth science education at all levels to meet these needs and develop an informed electorate. Knowledge of the earth sciences is essential to science literacy and to meeting the environmental and resource challenges of the twenty-first century. NSF's Education and Human Resources Directorate researches and improves the way we teach science and provide research and fellowship opportunities for students to encourage them to continue in the sciences. Similarly, NASA's educational programs have inspired and led many into science careers.

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

PREPARED STATEMENT OF JOHN J. GOVONI, PH.D., ECOLOGICAL CONSULTANT

In the President's Budget request for 2015, the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), proposes to close the NOAA Laboratory located in Beaufort, North Carolina (reference the President's fiscal year 2015 Budget for NOS, Coastal Science, Assessment, Response and Restoration: NOAA Blue Book, page 8). The reasons given are cost savings by closing an aged facility. The request does not, however, cite dollar amounts that would be incurred with closure, and ignores the \$14 million dollars recently invested in infrastructure replacements and refurbishments at the Beaufort Laboratory. The United States Government can ill-afford to close the Beaufort Laboratory, as proposed in the President's fiscal year 2015 budget request.

The Beaufort Laboratory located in Beaufort, North Carolina, was formerly named the U.S. Fisheries Commission Laboratory at Beaufort and the Beaufort Laboratory of the NOAA—National Marine Fisheries Service (NMFS), and is now formally named the NOAA, NOS, Center for Coastal Fisheries and Habitat Research (CCFHR). It is the second oldest Federal marine research Laboratory in the U.S. For the past 115 years, the Beaufort Laboratory has served the Nation by providing timely and much needed research products used to guide the effective management of the Nation's natural resources. The Beaufort Laboratory has gained prominent recognition, reputation, and credibility both nationally and internationally. It is the only Federal, coastal ocean, research laboratory between New Jersey and Miami, Florida.

The Beaufort Laboratory operates research programs within three different NOAA components: NOS, NMFS, and the National Estuarine Research Reserve System (NERRS). No consideration of NMFS or NERRS operations, given the proposed closure, is reflected in the President's budget request for NOS fiscal year 2015. If enacted, the closure proposed to begin as early as October 2014, will have severe impacts on the multiple programs of NMFS, NOS, and NERRS.

Curiously, in the same budget proposal, NOAA requests an increase of \$4 million to support ecological forecasting. With this increase, NOAA and NOS' National Centers for Coastal Ocean Science (NCCOS) will develop and implement ecological forecasts for harmful algal blooms (HABs), hypoxia, marine pathogens, and marine species distributions. Ironically, at the same time it is proposing to close the Beaufort

Laboratory; the Beaufort Laboratory has well-established expertise and facilities required to address many of those very same issues, and is currently doing so. Closure of the Beaufort Laboratory would be operationally and fiscally irresponsible.

The laboratory currently employs nationally and internationally known scientists, who are providing essential and necessary support for the resolution of other national issues (NOS). These issues include: the impacts of invasive species on marine ecological communities; ecological forecasting of the condition of habitats and ecosystems that support many commercially and recreationally exploited species; harmful algal blooms that can and do impact human health; and aquaculture planning and sustainability for the Atlantic and Pacific coasts, Gulf of Mexico, Caribbean (U.S. possessions), and the Hawaiian archipelago. The Beaufort Laboratory also supports efforts at recovery from oil spills, coral reefs, and sea-grass beds, and the restoration of the Nation's shorelines and marshes. The Beaufort Laboratory's excellent research capabilities and reputation have attracted, and continue to attract, support from other branches of NOAA, from other Federal Organizations, and from non-governmental organizations (NGO's) that have long recognized the benefits provided by the Beaufort Laboratory. This inter-agency cooperation, and the efficiency that this cooperation provides, would be lost with closure.

The Beaufort Laboratory (NMFS) conducts fish stock assessments for the South Atlantic Fishery Management Council, the Caribbean Fisheries Management Council, the Gulf States Marine Fisheries Council, and the Atlantic States Marine Fisheries Commission. These are all organizations mandated by Federal Law. The support of management councils and Commissions provided by the Beaufort Laboratory would be lost with the closure of the Beaufort Laboratory. Closure is thus organizationally irresponsible.

The Beaufort Laboratory currently employs 71 Federal employees and 33.5 contractors. Some of the Federal employees could be relocated, but contract employees would lose their jobs. Further, the cost of relocating permanent Federal employees is not accounted for in the President's budget request. Eight North Carolina State employees work at the Rachel Carson National Estuarine Research Reserve (a reserve within the NERRS System) headquartered at the Beaufort Laboratory. The impacts to the employees, their families, and the local community have not been evaluated in the proposed budget request. Thus, closure would be an embarrassment to a Government committed to increasing job opportunities and supporting economic recovery.

The President's budget for fiscal year 2015 cites the age of the Beaufort Laboratory and the need for infrastructure repairs and improvements that exceed agency budget resources. Considerable tax dollars have been invested in renovating the Beaufort Laboratory; dollars invested toward this end since 2006 currently approach \$14 million. A new administration building, that serves not only NOS and NMFS operations at the Beaufort Laboratory, but also the North Carolina, Department of the Environment and Natural Resources, Division of Coastal Management and the Rachael Carson, has been constructed, and has been in operation for 10 years. A new Bridge that accesses Pivers Island—both the Beaufort Laboratory and the Duke University Marine Laboratory—has been constructed and is in operation. A new Maintenance Facility has been constructed. A new scientific collection storage building has been constructed. Storm-water drainage systems have been constructed. The seawall that surrounds the Federal half of Pivers Island is currently being renovated. Yet, the two extant, old structures that remain have been renovated and are fully functional and operable. Further, the Beaufort Laboratory contains a large and diverse array of valuable scientific equipment that cannot be maintained or effectively used with the loss of support staff. The large Government investment in facilities and equipment would be wasted should the Beaufort Laboratory close. Closure would be fiscally irresponsible.

With the President's fiscal year 2015 budget request, NOAA proposes to shift the funding to the Washington, District of Columbia area, which is among the most expensive locations nationally: this is not cost effective! The cost of providing laboratory and office space at Beaufort is cheaper than most other coastal areas of the United States. In addition, the District of Columbia area has no access to the marine environments represented at Beaufort, and District of Columbia does not have the laboratory space and equipment to replace what would be lost with the closure of the Beaufort Laboratory.

Since taking over the Beaufort Laboratory from the NMFS in 1998–99, NOS has withdrawn support and drained resources. There has been an approximate 45 percent reduction in NOS staff over the past 9 years and a concomitant approximate 35 percent reduction in funding. This steady withdrawal of support is inexplicable, counter-productive to NOAA's mission, and unwarranted.

I urge this subcommittee to oppose the proposed closure of the Beaufort Laboratory when Congress considers the 2015 Appropriations Bill. I urge this subcommittee to encourage Congress to inform NOAA that requests for closure of the Beaufort Laboratory will not be entertained in the future, and that Congress should direct NOAA to restore the Beaufort Laboratory staffing, operational support, and research funding. I urge the U.S. Congress to restore budget line-item appropriations for the Beaufort Laboratory.

PREPARED STATEMENT OF THE GREAT LAKES INDIAN FISH AND WILDLIFE
COMMISSION (GLIFWC)

AGENCY INVOLVED

Department of Justice.

PROGRAM INVOLVED

COPS Tribal Resources Grant Program (TRGP) Hiring and Equipment/Training Program under the Coordinated Tribal Assistance Solicitation (CTAS).

SUMMARY OF GLIFWC'S FISCAL YEAR 2015 TESTIMONY

GLIFWC appreciates the increase of \$3.5 million proposed by the Administration for the Tribal Resources Grant Program (TRGP), providing a total of \$20 million for this critical program. The TRGP has enabled GLIFWC to solidify its communications, training, and equipment requirements, essential to ensuring the safety of GLIFWC officers and their role in the proper functioning of interjurisdictional emergency mutual assistance networks in the treaty ceded territories. GLIFWC also supports the administration's recommendation to dedicate \$15 million in COPS Hiring funds for hiring new law enforcement officers in tribal communities. This program currently allows GLIFWC to maintain one additional Conservation Enforcement Officer as well as to provide vital training and equipment for all its Officers.

CEDED TERRITORY TREATY RIGHTS AND GLIFWC'S ROLE

GLIFWC was established in 1984 as a "tribal organization" within the meaning of the Indian Self-Determination Act (PL 93-638). It exercises authority delegated by its member tribes to implement Federal court orders and various interjurisdictional agreements related to their treaty rights. GLIFWC assists its member tribes in:

- securing and implementing treaty guaranteed rights to hunt, fish, and gather in Chippewa treaty ceded territories; and
- cooperatively managing, restoring and protecting ceded territory natural resources and their habitats.

For over 25 years, Congress and various administrations have funded GLIFWC through the BIA, the Department of Justice and other agencies to meet specific Federal obligations under: (a) a number of U.S./Chippewa treaties; (b) the Federal trust responsibility; (c) the Indian Self-Determination Act, the Clean Water Act, and other legislation; and (d) various court decisions, including a 1999 U.S. Supreme Court case, that affirm the treaty rights of GLIFWC's member tribes. Under the direction of its member tribes, GLIFWC operates a ceded territory hunting, fishing, and gathering rights protection/implementation program through its staff of biologists, scientists, technicians, conservation enforcement officers, and public information specialists.

COMMUNITY-BASED POLICING

GLIFWC's officers carry out their duties through a community-based policing program. The underlying premise is that effective detection and deterrence of illegal activities, as well as education of the regulated constituents, are best accomplished if the officers work within the tribal communities they primarily serve. The officers are based in reservation communities of the following member tribes: in Wisconsin—Bad River, Lac Courte Oreilles, Lac du Flambeau, Red Cliff, Sokaogon Chippewa (Mole Lake) and St. Croix; in Minnesota—Mille Lacs; and in Michigan—Bay Mills, Keweenaw Bay and Lac Vieux Desert. To develop mutual trust between GLIFWC officers and tribal communities, officers provide outdoor skills workshops and safety classes (hunter, boater, snowmobile, ATV) to 300 tribal youth in grades 4-8 annually. GLIFWC's officers also actively participate in summer and winter youth outdoor activity camps, kids fishing events, workshops on canoe safety and rice stick carving, and seminars on trapping and archery/bow safety. GLIFWC offi-

cers also work to support drug and alcohol prevention efforts in the Lac du Flambeau school system by sponsoring a snowshoe making workshop for tribal youth.

GLIFWC's member tribes realize it is critical to build relationships between tribal youth and law enforcement officers as a means of combatting gang recruitment and drug/alcohol abuse in reservation communities. GLIFWC is taking a pro-active approach to support these efforts and obtained fiscal year 2013 Department of Justice (DOJ) funding to hire a Youth Outreach Officer. Over the next 3 years, this Officer will work to improve and expand youth outdoor recreation activities in partnership with the other GLIFWC officers. The program's goal is to build and expand these relationships to help prevent violations of tribal off-reservation codes, improve public safety and promote an outdoor lifestyle as an alternative to a lifestyle characterized by youth gangs¹ and substance abuse.²

INTERACTION WITH LAW ENFORCEMENT AGENCIES

GLIFWC's officers are integral members of regional emergency services networks in Minnesota, Michigan and Wisconsin. They not only enforce the tribes' conservation codes, but are fully certified officers who work cooperatively with surrounding authorities when they detect violations of State or Federal criminal and conservation laws. These partnerships evolved from the inter-governmental cooperation required to combat the violence experienced during the early implementation of treaty rights in Wisconsin. As time passed, GLIFWC's professional officers continued to provide a bridge between local law enforcement and many rural Indian communities.

GLIFWC remains at this forefront, using DOJ funding to develop interjurisdictional legal training attended by GLIFWC officers, tribal police and conservation officers, tribal judges, tribal and county prosecutors, and State and Federal agency law enforcement staff. DOJ funding has also enabled GLIFWC to certify its officers as medical emergency first responders trained in the use of defibrillators, and to train them in search and rescue, particularly in cold water rescue techniques. When a crime is in progress or emergencies occur, local, State, and Federal law enforcement agencies look to GLIFWC's officers as part of the mutual assistance networks. In fact, the role of GLIFWC's officers in these networks was further legitimized in 2007 by the passage of Wisconsin Act 27, which affords GLIFWC wardens the same statutory safeguards and protections that are afforded to their Department of Natural Resources (DNR) counterparts. GLIFWC wardens will now have access to the criminal history database and other information to identify whom they are encountering in the field so that they can determine whether they are about to face a fugitive or some other dangerous individual.

DOJ has acknowledged that, "[t]he officer-to-population ratio still remains lower on Indian reservations than in other jurisdictions across the country. . . . tribal law enforcement has a unique challenge of patrolling large areas of sparsely populated land" (DOJ 2014 Budget Summary—Public Safety in Indian Country). GLIFWC's participation in mutual assistance networks located throughout a 60,000 square mile region directly addresses this problem in an effective and cost efficient manner.

GLIFWC PROGRAMS FUNDED BY DOJ

GLIFWC recognizes that adequate communications, training, and equipment are essential both for the safety of its officers and for the role that GLIFWC's officers play in the mutual assistance networks in the ceded territories. GLIFWC's COPS grants have provided a critical foundation for achieving these goals. Significant accomplishments with Tribal Resources Grant Program funds include: (1) assisting the Apostle Island National Lakeshore in protecting 138,000 recent ice caves visitors on Lake Superior; (2) working in partnership with the United States Forest Service to combat illegal marijuana grow sites on public lands; and (3) participating in drug sweeps held on the Lac du Flambeau and the Menominee reservations that required large numbers of law enforcement officers to coordinate arrests simultaneously.

¹ The American Indian and Alaska Native (AI/AN) youth population is more affected by gang involvement than any other racial population. 15 percent of AI/AN youth are involved with gangs compared to 8 percent of Latino youth and 6 percent of African American youth nationally. (National Council on Crime and Delinquency: Glesmann, C., Krisberg, B.A., & Marchionna, S., 2009).

² 22.9 percent of American Indian and Alaska Native (AI/AN) youth aged 12 and older report alcohol use, 18.4 percent report binge drinking and 16.0 percent report substance dependence or abuse. In the same group, 35.8 percent report tobacco use and 12.5 percent report illicit drug use. (2010 National Survey on Drug Use and Health: Summary of National Findings).

Increased Versatility and Improving Public Safety.—Bayfield County is the third largest county in Wisconsin, covering 2,042 square miles, yet it possesses a population of only 15,014 residents.³ This vast, rural county is located on the shores of Lake Superior and contains the Apostle Island National Lakeshore, which typically hosts 150,000 visitors throughout an entire year.

In 2014, the cold winter and multi-media technology resulted in a dramatic increase in visitors to the ice caves at the Lakeshore. Suddenly, law enforcement needed to provide safety for the 138,000 unexpected visitors who walked over a mile onto Lake Superior to view the ice caves. The National Park Service and local law enforcement quickly became overwhelmed with the large volume of visitors and requested GLIFWC assistance. GLIFWC responded with certified law enforcement officers trained in emergency ice rescue and wilderness first aid. Officers were also equipped with snowmobiles for patrol and emergency response. GLIFWC's incident command center trailer was used to provide a base for enforcement activities at the site and a 20-foot airboat was on standby to respond to medical emergencies. It was the COPS Tribal Resources Grant Program that provided training for GLIFWC officers and funding to purchase the snowmobiles, the incident command center trailer, and the 20-foot airboat.

Partnerships combat illegal marijuana grow sites on public lands.—With Federal, State and local law enforcement partners, GLIFWC officers have provided assistance in efforts to intervene in cannabis cultivation operations. Over the past 3 years, GLIFWC wardens have participated in three raids of such operations located on public land within treaty ceded territories, including: (1) an interagency cannabis arrest of 5 individuals in Ashland county and the destruction of 9,400 plants in 2011; (2) an interagency cannabis arrest of 6 individuals in Langlade County and the destruction of 9,000 plants in 2012; and (3) joint grid patrols with the assistance of National Guard helicopters that identified 2 grow sites in 2013. In 2013, GLIFWC officers also participated in closing down an outdoor cannabis cultivation operation on the Menominee Reservation, resulting in the destruction of 1000 plants and 2 arrests. GLIFWC has used DOJ COPS funding to provide equipment and tactical training to its wardens to enhance their effectiveness in these rural and heavily-wooded environments.

Operation Pandora.—In 2011, GLIFWC officers utilized the COPS Tribal Resources Grant Program to participate in training with the North-Central Drug Enforcement Group to expand professional relationships and establish a foundation for cooperative initiatives to protect officers and improve community safety. In 2013, GLIFWC officers applied their training and participated in Operation Pandora, a multi-agency effort that brought together 11 law enforcement agencies from seven counties. Approximately 40 officers and agents participated in early morning raids at local residences on the Lac du Flambeau Reservation, serving seven search warrants from an ongoing investigation into synthetic and prescription drug trafficking on the reservation. The operation resulted in 35 arrests.

Looking to the Future.—In 2014, GLIFWC applied to the DOJ TRGP program for \$301,071 to: (1) continue participation in the North-Central Drug Enforcement Group and train GLIFWC officers to identify and safely control those suspected of using synthetic drugs; (2) purchase Tasers to improve officer safety; (3) provide training to maintain law enforcement, first aid, and emergency rescue certifications; (4) support interagency efforts to control illegal cannabis cultivation operations on public lands within the 1836, 1837 and 1842 Chippewa ceded territories with training in human tracking skills and the purchase of night vision equipment; and (5) provide officers with trucks, boats and ATV's to improve and increase community policing efforts through safety programs. TRGP resources will allow GLIFWC conservation officers to conduct essential cooperative conservation, law enforcement, outreach, and emergency response activities. We ask Congress to support the DOJ COPS TRGP program at no less than its proposed fiscal year 2015 level.

PREPARED STATEMENT OF JONATHAN HANSEN, MADISON, WISCONSIN

To whom it may concern,

I am writing to discuss the proposed closure of the National Oceanic and Atmospheric Administration (NOAA) Beaufort Laboratory located in Beaufort, North Carolina. The lab is part of the Department of Commerce, National Oceanic and Atmospheric Administration and houses employees of the National Marine Fisheries Service (NMFS), National Ocean Service (NOS), and National Estuarine Research Reserve (NERR).

³2010 census.

I urge the proposed closure of NOAA's Beaufort Laboratory be removed from the NOS budget. Currently, the lab houses 108 employees from NMFS, NOS, and NERR. The costs associated with upkeep and maintenance of the lab were inaccurate and outdated in the NOAA explanation of budgetary items. There were mistakes in the number of employees at the facility and incorrect calculations used to detail the budget item. In the past several years, several activities have been completed to keep the facility in good working condition including the replacement of the administration building and maintenance building, replacement of the bridge to the facility, seawall repair, improvements to the air conditioning, and other improvements, which totaled approximately \$14 million. Finally, an updated engineering report (2014) documents that the facility is NOT structurally unsound.

Closing the Beaufort Lab would be a tragedy. The Beaufort Lab is a stalwart of fisheries and oceanic science that has produced many well known scientists. The Beaufort Lab has a good reputation for advancing science in population dynamics and stock assessments; Gulf and Atlantic menhaden biology, movement, and assessments; harmful algal blooms; hypoxia; pathogens; and snapper and grouper species. NOAA has repeatedly recognized individual researchers, research teams, and the Laboratory as a whole for the outstanding quality of scientific work completed. Several of the area fisheries labs have located in Beaufort due to the NOAA lab including Duke Marine Lab, North Carolina Division of Marine Fisheries, the Center for Marine Sciences and Technology (CMAST), and the Institute of Marine Science. The NOAA Beaufort Laboratory is the center of productive fisheries science informing fisheries management for the Atlantic and Gulf coasts and is currently the only NMFS lab between Sandy Hook, New Jersey, and Miami, Florida.

Specific items of note from each line office include:

NMFS

Stock Assessment Science

—The NOAA Beaufort Laboratory provides the stock assessment science that determines how many fish can be caught in the southeast United States.

The stock assessment science of the NOAA Beaufort Laboratory focuses on marine fish populations that are ecologically and economically vital to the region and Nation, including snapper-grouper and pelagic species managed by the South Atlantic Fishery Management Council, Atlantic menhaden managed by the Atlantic States Marine Fisheries Commission, and Gulf menhaden managed by the Gulf States Marine Fisheries Commission. Commercial landings from the South Atlantic have been valued at \$176.5 million, supporting a centuries-old cultural way of life, and salt-water recreational fishing in this region tops the Nation for its economic impact on sales and jobs (East Florida and North Carolina generate \$5.3 billion and 47,000 jobs). Atlantic menhaden support the largest fishery on the U.S. east coast, and Gulf menhaden support the largest fishery in the Gulf of Mexico, with a combined value of \$127.7 million.

Fishery-Independent Surveys

—Fishery-independent surveys collect data on fish populations for stock assessments and research, using standardized sampling gears and methodologies.

The Southeast Fishery-Independent Survey (SEFIS), run out of the NOAA Beaufort lab, collects annual information on the abundance, distribution, sizes, and ages of economically-important reef fish species like groupers and snappers on the U.S. East Coast between North Carolina and Florida. Using fish traps and underwater video, SEFIS determines whether reef fish species are increasing or decreasing in abundance so fish stocks can be managed with much greater certainty. The SEFIS staff has developed a close working relationship with fishermen in the Carolinas due to their co location in Beaufort, North Carolina. NOAA's Beaufort Lab is ideally situated, centered in the middle of substantial commercial and recreational fishing industries and a thriving marine science community. If the SEFIS staff was forced to move out of their survey region, ties with the fishing industry and the marine science community would be effectively severed, ultimately resulting in a significant disconnect between the National Marine Fisheries Service and the communities to which they serve.

NERR

Impacts of Closure to the Reserve-Strategic Location and Facility for the Reserve:

—North Carolina Coastal Reserve and National Estuarine Research Reserve staff (7) are currently located at the NOAA Beaufort Lab, which serves as the headquarters office for the program.

- In 2002, Congress provided NOAA with “. . . \$5,000,000 for the Beaufort Laboratory for necessary repairs to existing facilities and to construct a joint laboratory, dock, and other facilities in collaboration with the Rachel Carson National Estuarine Research Reserve.” (Public Law 107–77, See S. Rept. 107–42, p. 106–108.) \$1.32 million was invested in NOAA (\$1.28 million) and State funds (\$42,046) for the construction of a joint building at the NOAA Beaufort Lab to serve the Reserve’s mission.
- The joint building was completed in 2007 and was constructed specifically with the Reserve’s education programs in mind: the auditorium regularly hosts coastal training program workshops and the teaching classroom hosts school groups, teacher workshops, field trips, and lectures to support K–12 Estuarine Education Program activities.
- The NOAA Beaufort Lab is a 5-minute boat ride from the Rachel Carson component of the Reserve; this close proximity is essential for conducting Reserve activities efficiently to conduct mission-critical programming including educational programs, water quality and habitat monitoring and research programs, and stewardship of the site including species monitoring, debris clean-ups, feral horse management, and access point maintenance.

Reserve Activities at the NOAA Beaufort Lab, 2008–2013

Education

K–12 field trips

- 177 educational programs
- 4947 participants

Teacher workshops

- 28 teacher workshops
- 412 participants

Summer camps

- 109 camp sessions
- 921 participants

Summer public field trips

- 96 field trips
- 1123 participants

Stewardship

Volunteer service at the Rachel Carson Reserve

- 1170 volunteers
- 2873 volunteer hours

Site management

- The NOAA Beaufort Lab provides an ideal base from which to manage the Rachel Carson Reserve due to its close proximity to the Reserve site, location on calm inland waters, and boat launching facilities. Additionally, many NOAA staff conduct or have conducted research at the Rachel Carson Reserve and are able to provide professional perspectives that are valuable to Reserve research and management.

Research

Research permits

- 31 research permits issued for research conducted at the Rachel Carson Reserve

Water quality monitoring

- Water quality inventory and monitoring stations at Middle Marsh and Shackleford Banks, in partnership with the National Park Service

Coastal Training Program

Coastal Training Program workshops

- 31 workshops
- 1076 participants

NOS

NOAA’s HAB program was initiated at the Beaufort Laboratory from the work conducted in North Carolina in 1987 during the “red tide” that affected the central coast for more than 6 months. The Beaufort Lab continues to provide essential research and field data that inform Ecological Forecasting of HABs in Alaska, North Carolina, Florida, Guantanamo Bay, Cuba, Bay of Fundy, Gulf of Maine, Gulf of Mexico, and the Caribbean. Additionally, Beaufort Laboratory staff were recognized

for conducting award winning science in elucidating the life history of *Pfiesteria*, a HAB species that inhabits estuaries and river systems up and down the eastern seaboard. The threat of *Pfiesteria* caused economic damages of ~\$35 million a month to the seafood industry following publicity of local fish kills. Beaufort laboratory staff provided expertise and knowledge to local and State resource managers and University partners to educate the public about the real facts concerning *Pfiesteria* and the safety of their seafood. Beaufort staff have continued to provide their expertise and knowledge to the North Carolina River Keeper Alliance and North Carolina Department of Natural Resources, Division of Water Quality when fish kill events have occurred in local estuaries. This has helped to alleviate public anxiety regarding seafood safety.

In conclusion, closure of the NOAA Beaufort Laboratory would be a poor choice scientifically, economically, and would leave a large part of the east coast without the science that they deserve. The numbers used to estimate the costs of maintaining the facility in good working order were incorrectly estimated and inaccurate numbers of current employees were provided for the budget. In addition, the Federal Government has invested in this laboratory over the long-term, and to close it now would be a gross misuse of Government resources.

PREPARED STATEMENT OF CRAIG A. HARMS, D.V.M., PH.D.; DIPLOMATE, AMERICAN COLLEGE OF ZOOLOGICAL MEDICINE; ASSOCIATE PROFESSOR, DEPARTMENT OF CLINICAL SCIENCES, COLLEGE OF VETERINARY MEDICINE AND CENTER FOR MARINE SCIENCES AND TECHNOLOGY

Dear Senate Subcommittee on Commerce, Justice, Science, and Related Agencies: In reference to the proposed closure of the National Oceanic Atmospheric Administration (NOAA) Laboratory in Beaufort, North Carolina, I urge you to ensure that does not occur. Closure of the NOAA Beaufort Laboratory would be a considerable blow to the marine sciences and education hub of Carteret County. With its over 100 years of history, the NOAA Laboratory has been a catalyst for attracting excellent scientists and other marine science laboratories, and conducting important research on harmful algal toxins, invasive species, protected species, and stock assessments critical to fishery management decisions. The close aggregation of a slew of top flight marine laboratory and education facilities in Carteret County (including the NOAA Beaufort Laboratory, Duke Marine Laboratory, University of North Carolina (UNC) Institute of Marine Sciences, North Carolina State University (NCSU) Center for Marine Sciences and Technology, North Carolina Aquarium at Pine Knoll Shores, North Carolina Maritime Museum, North Carolina Division of Marine Fisheries, Carteret Community College Aquaculture Program, North Carolina SeaGrant) at the convergence of major marine life zones, is a tremendous asset. As determined by a recent American Association for the Advancement of Science (AAAS) study of the University of North Carolina System marine laboratories in North Carolina, the programs of these multiple facilities are not duplicative, but rather are synergistic. The loss of the NOAA Laboratory would weaken all aspects of scientific productivity, marine education, and the economic driver of marine sciences community.

I moved to Morehead City in 2000 to take up a position at the NCSU Center for Marine Sciences and Technology (CMAST) as soon as it opened. As the only full time faculty member from the College of Veterinary Medicine based at CMAST, people wondered just what a veterinarian would be doing at a marine laboratory. There has been no shortage of veterinary applications to marine science to keep me busy. Much of my work has been shaped by collaborations with scientists at the NOAA Beaufort Laboratory, particularly at the outset working with scientists in the protected species division of the National Marine Fisheries Service (NMFS) on sea turtles and marine mammals, but extending to work on invasive lionfish and development of mariculture. Collaborating with the NOAA Beaufort Laboratory has led to far flung collaborations including participating in the sea turtle rescue response to the *Deepwater Horizon* oil spill, follow-up monitoring of dolphin health in the Gulf of Mexico, and work with the International Whaling Commission improving humane responses to large whale live stranding events, among others.

There are things that a Federal facility can do that academic and nonprofit institutions are less well equipped to handle. An example was a mass stranding of pilot whales on the Outer Banks in January 2005. Having the direct links in Washington both within NOAA and with other relevant Federal agencies was essential for timely information exchange as the response and investigation transpired. The area academic and State agencies could not have managed that response nearly so well without those links.

Commercial fishermen with whom I served on the Sea Turtle Advisory Committee of the North Carolina Marine Fisheries Commission have similarly expressed concern about the possible closure of the NOAA Beaufort Laboratory. As much as they bristle at the regulatory arm of NOAA, they appreciate good science on fisheries stocks for framing the debates on management decisions. Because of the productive collaborations NOAA scientist have formed with commercial fishermen over the years, on both commercial fisheries species and protected species research, fishers know that NOAA Beaufort Laboratory scientists will produce good science with unbiased results, to the extent their resources allow. A recent intent to sue by commercial fishing groups against the North Carolina Division of Marine Fisheries (DMF), North Carolina Wildlife Resources Commission (WRC), and NOAA, seeks to require carrying out a stock assessment for sea turtles in North Carolina. The eventual outcome of that legal action is of course an open question, but if an effective and valid stock assessment of sea turtles is to be carried out, it would be nearly impossible without the people, expertise, and facilities currently in place at the NOAA Beaufort Laboratory, and trying to create that capacity from scratch would be prohibitive.

With offshore energy exploration and development proposed off of the North Carolina coast, both fossil fuels and wind, having a Federal marine science laboratory on site will be vital to monitor effects and to facilitate responses to adverse events if necessary. This is not the time to close down a venerable and vital marine science research facility in this area of critical biogeographic and economic importance.

PREPARED STATEMENT OF PATRICIA HARMS, MOREHEAD CITY, NORTH CAROLINA

The Subcommittee on Commerce, Justice, Science, and Related Agencies:

The Atlantic ocean off our East Coast is an irreplaceable treasure which requires our attention and care. The closure of the National Oceanic and Atmospheric Administration (NOAA) laboratory in Beaufort, North Carolina would be a tragic loss to the vital research it contributes on coastal and ocean issues. Please take this proposed closure out of the National Ocean Service (NOS) budget.

I cannot believe siphoning off projects to non-agency scientists could have the value we have right here, right now. Do look at the quality research that has come from the Beaufort NOAA Laboratory. This lab is in an excellent location, the only lab between New Jersey and Florida, collaborating with Duke University, North Carolina State, and University of North Carolina marine scientists. All of whom have facilities in Beaufort and Morehead City. They do work together which multiplies their value. With concerns over climate change and sea level rise, it would seem of even more importance to support NOAA in its present location. Hurricanes and weather related issues are also of great concern to our maritime and coastal areas. A number of ventures proposed off our coast such as sonic testing, oil exploration, and wind turbines will require monitoring of their effects on the ocean and its inhabitants. I would expect NOAA to be necessary to these and other possible changes in the ocean and in the estuaries.

It is true that we have tourism and beaches, but marine science is of great importance to our economy as well. Residents and tourists are very attuned to the work of marine scientists in the area. Volunteers walk the beaches to spot sea turtle nest sites, our citizens know that their observations of the ocean and sea life are important. We also have the Aquarium in Pine Knoll Shores, a renowned Maritime Museum in Beaufort, the Rachel Carson Reserve, and the Beasley Sea Turtle Hospital nearby, which relies on NOAA and other marine science institutions here. Both commercial and recreational fishermen also depend on NOAA. It has been averred that maintaining the lab would require too much in infrastructure costs, but according to more recent appraisals this is not the case. There is an 2014 engineering report listing improvements that have been made. The loss of the NOAA lab in Beaufort would be a serious blow to the area and to the country.

The NOAA lab in Beaufort should be supported and expanded, not removed.

PREPARED STATEMENT OF HOWARD F. HORTON, PH.D., PROFESSOR EMERITUS OF FISHERIES, OREGON STATE UNIVERSITY

Dear Senators:

This letter is to urge you to remove the closure of the Beaufort Laboratory in North Carolina from National Oceanic and Atmospheric Administration (NOAA's) National Ocean Service's budget request. I have had a long association with colleagues in the Beaufort Laboratory and consider their work to be essential to pro-

tecting and enhancing our marine species and their environment in coastal areas nationwide.

In particular, their pioneering work in developing methods to detect the presence of and to assess the impacts of toxic marine algae is vital to the production of our marine fauna and for the safety of human and other affected birds, fish and animals. This important research has application throughout the northern and southern hemispheres and is not duplicated elsewhere. To stop this activity would be a major setback to our knowledge and management of toxic marine algae.

In addition, the location of the laboratory fosters valuable research on sustainable fisheries; conservation of sea turtles, dolphins, seagrass estuaries, and offshore reefs; invasive species; and changes in climate and sea levels. These studies facilities and support research affecting not just North Carolina, but the East and West Coasts of the U.S. including Alaska.

Furthermore, the laboratory provides employment for approximately 108 scientists and staff to conduct this much needed research and their presence contributes over \$58 million to the local economy.

From the standpoint of its unique location, the cadre of excellent scientists producing much needed cutting edge science, and their contribution toward conserving our natural marine resources, I urge you to help support existence of this valuable research facility and its associated personnel.

PREPARED STATEMENT OF DR. DONALD E. HOSS, BEAUFORT, NORTH CAROLINA

Dear subcommittee members: My name is Don Hoss and I am writing this letter to strongly oppose the request by National Oceanic and Atmospheric Administration (NOAA)/National Ocean Service (NOS) to close the NOAA NOS/National Marine Fisheries Service (NMFS) laboratory in Beaufort, North Carolina (NOAA fiscal year budget summary, page 8, paragraph 3) because of the long-term cost of maintaining the facility. I was employed at the Beaufort Laboratory from 1958 until my retirement in 2002. I spent my last years as Director of the Laboratory, so I am familiar with the physical condition of the facility. I also know of its importance to the marine science community and the local and national community in general. The Beaufort Laboratory is the second oldest Federal Fisheries Laboratory in the United States dating to 1899. It was located at Beaufort because of the unique marine and estuarine ecosystem adjacent to the North Carolina coast. It is recognized as one of the most respected fisheries laboratories in this country, and in countries around the world, for the quality of its research on marine issues that affect the economy of sport and commercial fisheries, and the health of the marine waters of the United States.

Statements have been made that this "aging facility" requires infrastructure repairs and improvements exceeding agency budget. Nothing could be further from the truth. The fact that the Beaufort Laboratory is the second oldest Federal fisheries laboratory in the country does not mean that it is operating out of a 19th century facility. Only two building on the facility dates to the late 1950's and it has had many renovations over the years. In 1963 a new two story laboratory was built and it was completely renovated in 1993-94. In recent years NOAA has invested approximately \$14 million in new construction and renovations at the laboratory. A new administration building has been constructed with space for the North Carolina National Estuarine Research Reserve Program. The bridge to Pivers Island (cost shared with Duke Marine Laboratory) has been replaced and a new chemical storage building has been built. Other improvements include air conditioning/air handler replacement and mold abatement as well as seawall repair, electrical upgrade and State of North Carolina funded storm water control. An updated engineering report in 2014 documented that the Beaufort facility is NOT unsound.

In their closure request the National Ocean Service understated the number of Beaufort Laboratory employees that would be affected and the effect that it would have on them. They did not account for the more than 40 National Marine Fisheries Service staff or the 8 staff members of the North Carolina National Estuarine Research Reserve, located at the laboratory.

The current staffing at the Laboratory is as follows: 70 full-time Federal employees (39 National Marine Fisheries and 31 National Ocean Service staff); 32.5 contract positions (full and part time); and 6 North Carolina National Estuarine Research Reserve System (NERRS) staff. While the missions of the laboratory have been increased in recent years, the budget of the laboratory has decreased by approximately 30 percent and the NOS staff has decreased by 45 positions. NOS States that all full-time employees will be offered other positions so that none will lose their jobs due to the closure. This is of little comfort to the contract employees,

some of whom have worked at the facility for over 10 years. It is also not true (based on past experience) that all of the permanent employees will be able to move to other locations (due to various family matters) and, therefore, they will lose their jobs.

It is ironic that while the National Ocean Service, NOAA is calling for the closure of one of the most respected NOAA scientific laboratories in the country it is, at the same time, requesting an increase of \$4 million to another center (located in a more expensive region and in a non coastal area) to support the same type of research in which the Beaufort Laboratory is a recognized leader (see budget summary, page 8, paragraph 1).

In its 100 plus years the Beaufort Laboratory has established an extraordinary record for scientific excellence in its research in critical problems related to the public concern for coastal and ocean issues. This includes, but is not limited to, fisheries stock assessment (*i.e.* reef fish and menhaden), species distribution and life history, hypoxia, marine mammals and sea turtles, critical habitat evaluation, pollution effects (including oil spills) and harmful algal blooms to name a few.

NOAA has repeatedly recognized the laboratory, research teams and individual researchers for the outstanding quality of their work. It is hard to understand why NOAA would request an increase in funding for research in many of the above areas in fiscal year 2015 and then propose to close the Beaufort Laboratory, the very laboratory best positioned to do this research.

I urge you to reject the proposed closure of the NOAA Beaufort Laboratory. Should you have additional questions I would be more than happy to address them.

PREPARED STATEMENT OF THE INNOCENCE PROJECT

On behalf of the Innocence Project, thank you for allowing me to submit testimony to the Senate Appropriations Subcommittee on Commerce, Justice, Science, and Related Agencies as it considers budget requests for fiscal year 2015, and thank you for the subcommittee's support of innocence and forensic science research programs in fiscal year 2014. I write to request fiscal year 2015 funding for the following programs, please:

- \$4 million for the Wrongful Conviction Review and Capital Litigation Improvement Programs (the Wrongful Conviction Review Program is a part of the Capital Litigation Improvement Program), at the Department of Justice (DOJ), Bureau of Justice Assistance;
- \$4 million for the Kirk Bloodsworth Post-Conviction DNA Testing Program (the "Bloodsworth Program") at the DOJ, National Institute of Justice (NIJ);
- \$12 million for the Paul Coverdell Forensic Sciences Improvement Grant Program (the "Coverdell Program") at the NIJ;
- \$6 million for the Department of Justice to support the National Commission on Forensic Science; research at the National Institute of Justice; and related forensic science standards setting activities at the National Institute of Standards and Technology (NIST);
- \$11 million for NIST to support forensic science research and measurement science.

Freeing innocent individuals and preventing wrongful convictions through reform greatly benefits public safety. Every time DNA identifies a wrongful conviction, it enables the identification of the real perpetrator of those crimes. True perpetrators have been identified in approximately half of the over 300 DNA exoneration cases. Unfortunately, many of these real perpetrators had gone on to commit additional crimes while an innocent person was convicted and incarcerated in their place.

To date, 316 individuals in the United States have been exonerated through DNA testing, including 18 who served time on death row. These innocents served on average more than 13 years in prison before exoneration and release. However, I want to underscore the value of Federal innocence programs not to just these exonerated individuals, but also to public safety, fairness, and achieving true justice for victims of violent crimes. It is important to fund these critical innocence programs because reforms and procedures that help to prevent wrongful convictions enhance the accuracy of criminal investigations, strengthen criminal prosecutions, and result in a stronger, fairer system of justice that provides true justice to victims of crime.

WRONGFUL CONVICTION REVIEW PROGRAM

Particularly when DNA is not available, or when DNA alone is not enough to prove innocence, proving one's innocence to a level sufficient for exoneration is difficult compared to "simply" proving the same with DNA evidence. Innocents languishing behind bars require expert representation to help navigate the complex

issues that invariably arise in their bids for post-conviction relief. And the need for such representation is enormous when only a small fraction of cases involve evidence that could be subjected to DNA testing. (For example, it is estimated that among murders, only 10 percent of cases have the kind of evidence that could be DNA tested.) Realizing the imperative presented by such cases, the Bureau of Justice Assistance (BJA) dedicated part of its Capital Litigation Improvement Program funding to create the Wrongful Conviction Review program.¹ The program provides applicants—non-profit organizations and public defender offices dedicated to exonerating the innocent—with funds for providing high quality and efficient representation for potentially wrongfully convicted defendants in post-conviction claims of innocence. The program’s goals, in addition to exonerating the innocent, are significant: to alleviate burdens placed on the criminal justice system through costly and prolonged post-conviction litigation and to identify, whenever possible, the actual perpetrator of the crime.

Numerous local innocence projects have enhanced their caseloads and representation of innocents as a result of the Wrongful Conviction Review grant program, including those in Florida, Ohio, and in North Carolina at Duke University School of Law. The Reinvestigation Project, run through the Office of the Appellate Defender in New York, used funding that led to the exonerations of Latisha Johnson and Malisha Blyden and the identification of one of the real perpetrators. The Arizona Justice Project recently exonerated four innocent Arizonians who had served over a combined 100 years. The Exoneration Initiative in New York, cleared a backlog of hundreds of cases which allowed them to secure three exonerations and provided critical support that led to two other exonerations. The grant also helped California Innocence Project (CIP) free Daniel Larsen after 13 years in prison, and helped Hawaii Innocence Project recently secure the release of the first Native Hawaiian exonerated by DNA testing.

To help continue this important work, we urge you to please provide a total of \$4 million for the Wrongful Conviction Review and the Capital Litigation Improvement Programs to help bring them to parity with the critical Bloodsworth Program, that focuses on post-conviction DNA testing and cases. (The Wrongful Conviction Review Program is a part of the Capital Litigation Improvement Program.)

THE BLOODSWORTH PROGRAM

The Bloodsworth Program provides hope to innocent inmates who might otherwise have none by helping States more actively pursue post-conviction DNA testing in appropriate situations. These funds have led to great success, and many organizational members of the national Innocence Network have partnered with State agencies that have received Bloodsworth funding.²

The Bloodsworth Program does not fund the work of organizations in the Innocence Network directly, but State applicants which seek support for a range of entities involved in settling innocence claims, including law enforcement agencies, crime laboratories, and a host of others—often in collaboration with each other, and with Innocence Network organizations. For example, a Bloodsworth grant allowed the Arizona Attorney General’s Office to partner with the Arizona Justice Project to canvass the Arizona inmate population, review cases, locate evidence and file joint requests with the court to have evidence released for DNA testing. In addition to identifying the innocent, Arizona Attorney General Terry Goddard has 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.”³ Such joint efforts have also been pursued in Connecticut, Louisiana, Minnesota, North Carolina, and Wisconsin.

The Bloodsworth program is a relatively small yet powerful investment for States seeking to free innocent people who were erroneously convicted and to identify the true perpetrators of crime. The program has resulted in the exonerations of 22 wrongfully convicted persons in 10 States, and the true perpetrator was identified in 8 of those cases. We ask that you please provide \$4 million to continue the work of the Bloodsworth Post-Conviction DNA Testing Program.

¹Reauthorization of the Innocence Protection Act. 111th Cong., 1st Sess., 8 (2009) (testimony of Lynn Overmann, Senior Advisor, Office of Justice Programs).

²The Innocence Network is an affiliation of organizations dedicated to providing pro bono legal and investigative services to individuals seeking to prove innocence of crimes for which they have been convicted and working to redress the causes of wrongful convictions.

³Arizona receives Federal DNA grant, <http://community.law.asu.edu/news/19167/Arizona-receives-Federal-DNA-grant.htm> (last visited Mar. 13, 2012).

THE COVERDELL PROGRAM

Recognizing the need for independent government investigations in the wake of forensic scandals, Congress created the forensic oversight provisions of the Coverdell Program, a crucial step toward ensuring the integrity of forensic evidence. Specifically, in the Justice for All Act, Congress required that

[t]o request a grant under this subchapter, a State or unit of local government shall submit to the Attorney General . . . a certification that a government entity exists and an appropriate process is in place to conduct independent external investigations into allegations of serious negligence or misconduct substantially affecting the integrity of the forensic results committed by employees or contractors of any forensic laboratory system, medical examiner's office, coroner's office, law enforcement storage facility, or medical facility in the State that will receive a portion of the grant amount.⁴

The Coverdell Program provides State and local crime labs and other forensic facilities with much needed funding to efficiently and effectively carry out their work. As forensic science budgets find themselves on the chopping block in States and localities, the survival of many crime labs may depend on Coverdell funds. To both support crime labs and help ensure the integrity of forensic investigations in the wake of allegations of negligence or misconduct, we ask that you please provide \$12 million for the Coverdell Program.

FORENSIC SCIENCE IMPROVEMENT

To continue the critical work to improve forensic science, and help prevent wrongful convictions, we request:

- \$6 million for the Department of Justice, including:
 - \$1 million for the DOJ–NIST National Commission on Forensic Science to continue its work.
 - \$2 million for the National Institute of Justice to conduct laboratory efficiency and implementation research in this area.
 - \$3 million to go to NIST to support technical standards development in forensic science through the proposed Organization of Scientific Area Committees.
- \$11 million for the National Institute of Standards and Technology (NIST) at the Department of Commerce. As the sole entity that is both perfectly positioned and capable of conducting measurement science and foundational research in support of forensic science, 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 and redirecting resources to identifying the true perpetrators of crime.

ADDITIONAL NOTE ON THE DEPARTMENT OF JUSTICE'S BUDGET REQUESTS

DOJ's fiscal year 2015 budget proposal, as it has in past years, would defund the Coverdell and Bloodsworth Programs. Zeroing out these programs would negatively impact the State requirements and incentives to prevent wrongful convictions and ensure the integrity of evidence, which have been critical to the advancement of State policies to prevent wrongful convictions. Coverdell forensic oversight requirements have created State entities and processes for ensuring the integrity of forensic evidence in the wake of scandal and are essential to ensuring the integrity of forensic evidence in the wake of identified acts of negligence or misconduct. Innocence Project recommends that Congress fund these two programs by name, in order to preserve their important incentive and performance requirements, and to help to achieve their goals of providing access to post-conviction DNA testing and supporting State and local crime labs that process a significant amount of forensic evidence, helping to ensure public safety.

Thank you so much for your time and consideration of these important programs, and the opportunity to submit testimony. We look forward to working with the subcommittee this year.

⁴ 42 U.S.C. § 3797k(4) (emphasis added).

PREPARED STATEMENT OF THE INSTITUTE OF MAKERS OF EXPLOSIVES

INTEREST OF THE IME

IME is a nonprofit association founded over century ago to provide accurate information and comprehensive recommendations concerning the safety and security of commercial explosive materials. IME represents U.S. manufacturers, distributors and motor carriers of commercial explosive materials and oxidizers as well as other companies that provide related services. The majority of IME members are “small businesses” as determined by the U.S. Small Business Administration.

Millions of metric tons of high explosives, blasting agents, and oxidizers are consumed annually in the United States. IME member companies produce 99 percent of these commodities. These products are used in every State and are distributed worldwide. The ability to manufacture, distribute and use these products safely and securely is critical to this industry.

Commercial explosives are highly regulated by a myriad of Federal and State agencies. ATF plays a predominant role in assuring that explosives are identified, tracked, purchased, and stored only by authorized persons. We offer the following comments to give perspective about the need to ensure that ATF has sufficient funds to carry out its mission to ensure that commercial explosives are not misappropriated for criminal or terrorist purposes.

ATF’S EXPLOSIVES REGULATORY PROGRAM

The administration’s fiscal year 2015 budget request envisions a current services appropriation for explosives industry operations. We understand the current pressure to reduce the Federal budget deficit and the shared sacrifice that all segments of the Government are being asked to make to help the economy recover. We also understand the public attention to other programmatic responsibilities of ATF, and the attendant pressure to divert resources to these responsibilities. However, the success of the Bureau’s explosives industry programs in preventing the misappropriation of commercial explosives should not be used against us. ATF needs to retain a cadre of trained personnel to perform services needed by our industry. The commerce of explosives is so closely regulated that failure to provide adequate personnel and resources hurts our industry, our customers, and the U.S. economy.

By law, ATF must inspect over 11,000 explosives licensees and permittees at least once every 3 years and conduct background checks of so-called “employee possessors” of explosives and “responsible persons.”¹ ATF estimates that the requirement to inspect 100% of the licensees and permittees within their 3-year license/permit cycle consumes between 25 percent and 41 percent of available inspector resources per year.

Unfortunately, ATF’s fiscal year 2015 budget submission does not provide retrospective workload indicators such as the number of compliance inspections that were accomplished, the number of public safety violations, and what those violations were in fiscal year 2013. This data have been provided in prior budget submissions. In fiscal year 2014, ATF reported that, during fiscal year 2012, it:

- Conducted 5,390 explosives licensee and permittee compliance inspections that identified and corrected 1,528 public safety violations;
- Completed 1,249 Federal Explosive License (FEL) applicant inspections;
- Processed 4,222 FEL applications (new & renewal);
- Completed 77,965 explosives employee/possessor background checks; and
- Completed 12,188 explosives responsible persons background checks.²

We are certain that the subcommittee appreciates the need for annual reporting of these workload indicators to establish trend-lines that may point to new resource needs or reallocation and whether or not new safety concerns are being recognized. For example, we are very interested in understanding what public safety violations were found in past inspections. This data helps us to determine whether we need to enhance our industry best practices. Looking at ATF’s fiscal year 2013 and 2014 budget submissions, the Bureau identified 1,392 public safety violations during fiscal year 2011,³ and, as noted above, during fiscal year 2012, this number rose to 1,528. The subcommittee should direct ATF to consistently report this data in future budget submissions.

ATF did report that, in 2011, it met its statutory responsibilities 95.8 percent of the time, and in 2012, 105.7 percent of the time. However, in 2013, this performance rate fell to 88.2 percent. With the budget agreement enacted earlier this year, ATF

¹ Fiscal year 2015 ATF Budget Submission, page 15.

² Fiscal year 2014 ATF Budget Submission, page 26.

³ Fiscal year 2013 ATF Budget Submission, page 42.

estimates that its productivity will increase to 92 percent in 2014 and has set a target of 94 percent in 2015, which, while it represents an improvement over the 2013 number, is still not optimum.⁴ When ATF is unable to meet its responsibilities, there are adverse impacts on our industry. Without approved licenses and permits from ATF, our industry cannot conduct business. Delays in servicing our needs may lead to disruptions in other segments of the economy that are dependent on the products and materials we provide.

One key workload indicator is the number of background checks performed. One component of this investigation is determining whether any of our employees have terrorist ties. To make that determination, ATF submits names to the FBI to be run against the Terrorist Screening Database (TSDB). Currently, ATF does not follow the common practice of other Federal agencies with vetting programs that re-vet names at will. Rather, the agency runs the names in association with applications for new or renewal of "FELs" or Federal explosives permits. Because ATF does not re-vet names when information on the TSDB changes, ATF's program is not deemed equivalent to the vetting and clearance procedures used by other agencies. Harmonizing ATF's procedures with those used by these other programs will allow ATF's vetting program to be reciprocally recognized by these programs. This outcome would add intelligence value to all Government vetting programs sharing the same platform, and provide savings to the Federal Government and the regulated community. We urge the subcommittee to encourage ATF to enhance its vetting procedures.

As the subcommittee considers ATF's budget request, we ask that the Bureau's ability to perform its regulatory oversight of the explosives industry in a timely fashion not be compromised in the push for fiscal discipline and that it be given the resources to preform to current state-of-the-art oversight practices.

ATF'S REGULATORY WORKLOAD

Since 2003 when ATF was transferred to the Department of Justice, the agency has issued eight rulemakings of importance to IME, including two which were interim final rules. It has finalized three, withdrawn two, merged two, and docketed but not published three. Of the four rulemakings still pending, one is an interim final rule which dates to 2003. In the absence of a process to ensure timely rule-making that is capable of keeping up with new developments and safety practices, industry must rely on interpretive guidance and variances based on outdated requirements in order to conduct business. While we greatly appreciate ATF's accommodations, these stop-gap measures do not afford the surety, continuity and protections that rulemaking would provide the regulated community, nor do they allow the oversight necessary to ensure that all parties are being held to the same standard of compliance. These regulatory tasks are critical to the lawful conduct of the commercial enterprises that the Bureau controls. ATF should be provided the resources needed to make timely progress in this area.

ATF is also a key member of the Interagency Working Group (IWG) convened under Executive Order (EO) 13650.⁵ The EO tasked the IWG with identifying options to improve chemical security and safety after the tragic accidental explosion in West, TX as well as other recent industrial chemical accidents. Earlier this year, the IWG presented options for stakeholder comment.⁶ Among these options, several pertain to ATF.

- ATF asks whether it should close the regulatory gap surrounding black and smokeless powder. An examination of information from the Bomb Data Center (BDC) on the type and frequency of fillers used in bombings and attempted bombings supports closing this regulatory gap. It makes little sense to impose stringent controls on the explosives industry only to allow a consumer exemption that can be exploited by those with criminal or terrorist intent.
- The IWG also asks about updating its regulatory requirements for physical security at magazines. IME supports ATF's consideration of the adequacy of current locking standards,⁷ and supports the development of a rule on magazine key control. IME is ready to assist in any other research projects to help achieve our common goal of ensuring magazine integrity and security.
- The EO also directs ATF to determine the feasibility of sharing information with States and localities. While we oppose the sharing of security-sensitive information about explosives in public forums, we do support enhancing commu-

⁴ Fiscal year 2015 ATF Budget Submission, page 18.

⁵ <http://www.whitehouse.gov/the-press-office/2013/08/01/executive-order-improving-chemical-facility-safety-and-security>.

⁶ https://www.osha.gov/chemicalexecutiveorder/Section_6ai_Options_List.html.

⁷ A study on this topic was conducted by an IME member company, and the results were reported at an IME meeting where ATF officials were in attendance.

nications with local emergency responders. Specifically, we support annual FEL reporting to local fire safety authorities of the type, capacity, and location of magazines where explosives are stored. Current rules require a one-time notification.⁸

Each of these options, if pursued, would add to ATF's regulatory workload. ATF should have the resources to keep its regulations up to date.

ATF-INDUSTRY PARTNERSHIP

The BDC is the sole repository for explosives-related incident data, and contains information on thousands of explosives incidents investigated by ATF and other Federal, State, and local law enforcement agencies. While this data helps government entities to perform trend analysis and to compare incidents for similarities and crime methodologies, BDC data also helps our efforts to refresh and update best practice recommendations. Until 2006, this data was routinely provided to industry stakeholders. We are pleased that after an 8-year hiatus, ATF has again provided the regulated community with key data on bomb and improvised device fillers, as well as information on thefts, losses and recoveries categorized by the type and amount of explosives involved. The data also indicates the point in the supply chain where the reported thefts and losses occurred. ATF has committed to releasing this data on an annual basis and it needs the resources to continue this important service.

Explosives manufacturers and importers are required to mark products with codes to aid domestic and foreign law enforcement agencies in tracing these materials if they are lost or stolen. Explosives manufacturers and importers and others in the global supply chain cooperate in tracing efforts. However, various government entities are imposing their own unique system of identification marks without reciprocally recognizing each other's marks. These redundant and competing marks are creating non-tariff barriers to trade. We have petitioned the United Nations to help develop a harmonized marking scheme and expect this issue to be considered by the international community at meetings in July 2014. We have asked ATF to join with us in working to harmonize a global marking standard.

Since 2003, ATF, with our support, has required background checks of persons authorized to possess explosives. While, as noted above, this background check includes vetting against the TSDB, being named on the database does not disqualify individuals from possessing explosives. We think this is an oversight. The late-Senator Frank Lautenberg and Representative Peter King introduced legislation, S. 34 and H.R. 720, respectively, to close this glaring security gap in the Federal explosives law. This legislative change, advocated by both Presidents Bush and Obama, will better harmonize the vetting and clearance procedures used by the ATF with other government agencies that perform security threat assessments of individuals seeking to engage in security-sensitive activities. As these standards are harmonized, opportunities to leverage other vetting programs and security credentials increase. This outcome would add intelligence value to all government vetting programs sharing the same platform, and provide savings to the Federal Government and the regulated community.

Each of these collaborative initiatives requires resources. We request that ATF be given the requisite funds to advance these initiatives.

INDUSTRY STANDARDS

We take seriously the statutory obligation that ATF take into account industry's standards of safety when issuing rules and requirements.⁹ We continue to fulfill this obligation through our development of industry best practices for safety and security, membership in relevant standard-setting organizations, and active participation in forums for training. We have offered to ATF recommendations that we believe will enhance safety and security through our participation in the rulemaking process, in the Bureau's important research efforts, and in other standard-setting activities.

In this regard, IME has spent years developing a credible alternative to strict interpretation of quantity distance tables used to determine explosives setback distances. IME continues to collaborate in this effort with the Department of Defense Explosives Safety Board as well as Canadian and U.S. regulatory agencies, including ATF. The result is a windows-based computer model for assessing the risk from

⁸ 27 CFR 555.210(f).

⁹ 18 U.S.C. 842(j).

a variety of commercial explosives activities called IMESA FR.¹⁰ ATF and other regulatory agencies recognize the value of IMESA FR and have participated in development meetings for Version 2.0. ATF is also evaluating existing licensed locations with this risk-based approach and has agreed to accept variance requests based on IMESA FR evaluations. These efforts are vital if ATF is to remain at the forefront of technologies designed to safeguard the public. We strongly encourage ATF's continued support of this project. The benefits of risk-based modeling should continue to be recognized by ATF and resources should be provided to develop policies that allow the use of such models to meet regulatory mandates.

CONCLUSION

The manufacture and distribution of explosives is accomplished with a remarkable degree of safety and security. We recognize the critical role ATF plays in helping our industry achieve and maintain safe and secure workplaces. Industry and the public are dependent on ATF having adequate resources to fulfill its regulatory responsibilities. It is up to Congress and, in particular, this subcommittee to ensure that ATF has the resources it needs. We strongly recommend full funding for ATF's explosives program.

PREPARED STATEMENT OF DANIEL JENSEN, MOREHEAD CITY, NORTH CAROLINA

I am writing to specifically discuss the proposed closure of the National Oceanic and Atmospheric Administration (NOAA) Beaufort Laboratory located in Beaufort, North Carolina. The lab is part of the Department of Commerce, National Oceanic and Atmospheric Administration and houses employees of the National Marine Fisheries Service (NMFS), National Ocean Service (NOS), and National Estuarine Research Reserve (NERR).

I urge the proposed closure of NOAA's Beaufort Laboratory be removed from the NOS budget. Currently, the lab houses 108 employees from NMFS, NOS, and NERR. The costs associated with upkeep and maintenance of the lab were inaccurate and outdated in the NOAA explanation of budgetary items. There were mistakes in the number of employees at the facility and incorrect calculations used to detail the budget item. In the past several years, several activities have been completed to keep the facility in good working condition including the replacement of the administration building and maintenance building, replacement of the bridge to the facility, seawall repair, improvements to the air conditioning, and other improvements, which totaled approximately \$14 million. Finally, an updated engineering report (2014) documents that the facility is NOT structurally unsound.

Closing the Beaufort Lab would be a tragedy. The Beaufort Lab is a stalwart of fisheries and oceanic science that has produced many well known scientists. The Beaufort Lab has a good reputation for advancing science in population dynamics and stock assessments; Gulf and Atlantic menhaden biology, movement, and assessments; harmful algal blooms; hypoxia; pathogens; and snapper and grouper species. NOAA has repeatedly recognized individual researchers, research teams, and the Laboratory as a whole for the outstanding quality of scientific work completed. Several of the area fisheries labs have located in Beaufort due to the NOAA lab including Duke Marine Lab, North Carolina Division of Marine Fisheries, the Center for Marine Sciences and Technology (CMAST), and the Institute of Marine Science. The NOAA Beaufort Laboratory is the center of productive fisheries science informing fisheries management for the Atlantic and Gulf coasts and is currently the only NMFS lab between Sandy Hook, New Jersey, and Miami, Florida.

Specific items of note from each line office include:

NMFS

Stock Assessment Science

—The NOAA Beaufort Laboratory provides the stock assessment science that determines how many fish can be caught in the southeast United States.

¹⁰ IMESA FR was built on the DDESB's software model, SAFER. The DDESB currently uses SAFER and table-of-distance methods to approve or disapprove Department of Defense explosives activities. Not only can IMESA FR determine the amount of risk presented, but it can also determine what factors drive the overall risk and what actions would lower risk, if necessary. The probability of events for the activities were based on the last 20 years of experience in the U.S. and Canada and can be adjusted to account for different explosive sensitivities, additional security threats, and other factors that increase or decrease the base value.

The stock assessment science of the NOAA Beaufort Laboratory focuses on marine fish populations that are ecologically and economically vital to the region and Nation, including snapper-grouper and pelagic species managed by the South Atlantic Fishery Management Council, Atlantic menhaden managed by the Atlantic States Marine Fisheries Commission, and Gulf menhaden managed by the Gulf States Marine Fisheries Commission. Commercial landings from the South Atlantic have been valued at \$176.5 million, supporting a centuries-old cultural way of life, and salt-water recreational fishing in this region tops the Nation for its economic impact on sales and jobs (East Florida and North Carolina generate \$5.3 billion and 47,000 jobs). Atlantic menhaden support the largest fishery on the U.S. east coast, and Gulf menhaden support the largest fishery in the Gulf of Mexico, with a combined value of \$127.7 million.

Fishery-Independent Surveys

—Fishery-independent surveys collect data on fish populations for stock assessments and research, using standardized sampling gears and methodologies.

The Southeast Fishery-Independent Survey (SEFIS), run out of the NOAA Beaufort lab, collects annual information on the abundance, distribution, sizes, and ages of economically-important reef fish species like groupers and snappers on the U.S. East Coast between North Carolina and Florida. Using fish traps and underwater video, SEFIS determines whether reef fish species are increasing or decreasing in abundance so fish stocks can be managed with much greater certainty. The SEFIS staff has developed a close working relationship with fishermen in the Carolinas due to their co location in Beaufort, North Carolina. NOAA's Beaufort Lab is ideally situated, centered in the middle of substantial commercial and recreational fishing industries and a thriving marine science community. If the SEFIS staff was forced to move out of their survey region, ties with the fishing industry and the marine science community would be effectively severed, ultimately resulting in a significant disconnect between the National Marine Fisheries Service and the communities to which they serve.

NERR

Impacts of Closure to the Reserve-Strategic Location and Facility for the Reserve:

- North Carolina Coastal Reserve and National Estuarine Research Reserve staff (7) are currently located at the NOAA Beaufort Lab, which serves as the headquarters office for the program.
- In 2002, Congress provided NOAA with “. . . \$5,000,000 for the Beaufort Laboratory for necessary repairs to existing facilities and to construct a joint laboratory, dock, and other facilities in collaboration with the Rachel Carson National Estuarine Research Reserve.” (Public Law 107–77, See S.Rept. 107–42, p. 106–108.) \$1.32 million was invested in NOAA (\$1.28 million) and State funds (\$42,046) for the construction of a joint building at the NOAA Beaufort Lab to serve the Reserve's mission.
- The joint building was completed in 2007 and was constructed specifically with the Reserve's education programs in mind: the auditorium regularly hosts coastal training program workshops and the teaching classroom hosts school groups, teacher workshops, field trips, and lectures to support K–12 Estuarine Education Program activities.
- The NOAA Beaufort Lab is a 5-minute boat ride from the Rachel Carson component of the Reserve; this close proximity is essential for conducting Reserve activities efficiently to conduct mission-critical programming including educational programs, water quality and habitat monitoring and research programs, and stewardship of the site including species monitoring, debris clean-ups, feral horse management, and access point maintenance.

Reserve Activities at the NOAA Beaufort Lab, 2008–2013

Education

K–12 field trips

- 177 educational programs
- 4947 participants

Teacher workshops

- 28 teacher workshops
- 412 participants

Summer camps

- 109 camp sessions
- 921 participants

- Summer public field trips*
 - 96 field trips
 - 1123 participants
- Stewardship
 - Volunteer service at the Rachel Carson Reserve*
 - 1170 volunteers
 - 2873 volunteer hours
 - Site management*
 - The NOAA Beaufort Lab provides an ideal base from which to manage the Rachel Carson Reserve due to its close proximity to the Reserve site, location on calm inland waters, and boat launching facilities. Additionally, many NOAA staff conduct or have conducted research at the Rachel Carson Reserve and are able to provide professional perspectives that are valuable to Reserve research and management.
- Research
 - Research permits*
 - 31 research permits issued for research conducted at the Rachel Carson Reserve
 - Water quality monitoring*
 - Water quality inventory and monitoring stations at Middle Marsh and Shackleford Banks, in partnership with the National Park Service
- Coastal Training Program
 - Coastal Training Program workshops*
 - 31 workshops
 - 1076 participants

NOS

NOAA's HAB program was initiated at the Beaufort Laboratory from the work conducted in North Carolina in 1987 during the "red tide" that affected the central coast for more than 6 months. The Beaufort Lab continues to provide essential research and field data that inform Ecological Forecasting of HABs in Alaska, North Carolina, Florida, Guantanamo Bay, Cuba, Bay of Fundy, Gulf of Maine, Gulf of Mexico, and the Caribbean. Additionally, Beaufort Laboratory staff were recognized for conducting award winning science in elucidating the life history of *Pfiesteria*, a HAB species that inhabits estuaries and river systems up and down the eastern seaboard. The threat of *Pfiesteria* caused economic damages of ~\$35 million a month to the seafood industry following publicity of local fish kills. Beaufort laboratory staff provided expertise and knowledge to local and State resource managers and University partners to educate the public about the real facts concerning *Pfiesteria* and the safety of their seafood. Beaufort staff have continued to provide their expertise and knowledge to the North Carolina River Keeper Alliance and North Carolina Department of Natural Resources, Division of Water Quality when fish kill events have occurred in local estuaries. This has helped to alleviate public anxiety regarding seafood safety.

In conclusion, closure of the NOAA Beaufort Laboratory would be a poor choice scientifically, economically, and would leave a large part of the east coast without the science that they deserve. The numbers used to estimate the costs of maintaining the facility in good working order were incorrectly estimated and inaccurate numbers of current employees were provided for the budget. In addition, the Federal Government has invested in this laboratory over the long-term, and to close it now would be a gross misuse of Government resources.

PREPARED STATEMENT OF NANCY JENSEN, MOREHEAD CITY, NORTH CAROLINA

I am writing to specifically discuss the proposed closure of the National Oceanic and Atmospheric Administration (NOAA) Beaufort Laboratory located in Beaufort, North Carolina. The lab is part of the Department of Commerce, National Oceanic and Atmospheric Administration and houses employees of the National Marine Fisheries Service (NMFS), National Ocean Service (NOS), and National Estuarine Research Reserve (NERR).

I urge the proposed closure of NOAA's Beaufort Laboratory be removed from the NOS budget. Currently, the lab houses 108 employees from NMFS, NOS, and NERR. The costs associated with upkeep and maintenance of the lab were inac-

curate and outdated in the NOAA explanation of budgetary items. There were mistakes in the number of employees at the facility and incorrect calculations used to detail the budget item. In the past several years, several activities have been completed to keep the facility in good working condition including the replacement of the administration building and maintenance building, replacement of the bridge to the facility, seawall repair, improvements to the air conditioning, and other improvements, which totaled approximately \$14 million. Finally, an updated engineering report (2014) documents that the facility is NOT structurally unsound.

Closing the Beaufort Lab would be a tragedy. The Beaufort Lab is a stalwart of fisheries and oceanic science that has produced many well known scientists. The Beaufort Lab has a good reputation for advancing science in population dynamics and stock assessments; Gulf and Atlantic menhaden biology, movement, and assessments; harmful algal blooms; hypoxia; pathogens; and snapper and grouper species. NOAA has repeatedly recognized individual researchers, research teams, and the Laboratory as a whole for the outstanding quality of scientific work completed. Several of the area fisheries labs have located in Beaufort due to the NOAA lab including Duke Marine Lab, North Carolina Division of Marine Fisheries, the Center for Marine Sciences and Technology (CMAST), and the Institute of Marine Science. The NOAA Beaufort Laboratory is the center of productive fisheries science informing fisheries management for the Atlantic and Gulf coasts and is currently the only NMFS lab between Sandy Hook, New Jersey, and Miami, Florida.

Specific items of note from each line office include:

NMFS

Stock Assessment Science

—The NOAA Beaufort Laboratory provides the stock assessment science that determines how many fish can be caught in the southeast United States.

The stock assessment science of the NOAA Beaufort Laboratory focuses on marine fish populations that are ecologically and economically vital to the region and Nation, including snapper-grouper and pelagic species managed by the South Atlantic Fishery Management Council, Atlantic menhaden managed by the Atlantic States Marine Fisheries Commission, and Gulf menhaden managed by the Gulf States Marine Fisheries Commission. Commercial landings from the South Atlantic have been valued at \$176.5 million, supporting a centuries-old cultural way of life, and salt-water recreational fishing in this region tops the Nation for its economic impact on sales and jobs (East Florida and North Carolina generate \$5.3 billion and 47,000 jobs). Atlantic menhaden support the largest fishery on the U.S. east coast, and Gulf menhaden support the largest fishery in the Gulf of Mexico, with a combined value of \$127.7 million.

Fishery-Independent Surveys

—Fishery-independent surveys collect data on fish populations for stock assessments and research, using standardized sampling gears and methodologies.

The Southeast Fishery-Independent Survey (SEFIS), run out of the NOAA Beaufort lab, collects annual information on the abundance, distribution, sizes, and ages of economically-important reef fish species like groupers and snappers on the U.S. East Coast between North Carolina and Florida. Using fish traps and underwater video, SEFIS determines whether reef fish species are increasing or decreasing in abundance so fish stocks can be managed with much greater certainty. The SEFIS staff has developed a close working relationship with fishermen in the Carolinas due to their co location in Beaufort, North Carolina. NOAA's Beaufort Lab is ideally situated, centered in the middle of substantial commercial and recreational fishing industries and a thriving marine science community. If the SEFIS staff was forced to move out of their survey region, ties with the fishing industry and the marine science community would be effectively severed, ultimately resulting in a significant disconnect between the National Marine Fisheries Service and the communities to which they serve.

NERR

Impacts of Closure to the Reserve-Strategic Location and Facility for the Reserve:

—North Carolina Coastal Reserve and National Estuarine Research Reserve staff (7) are currently located at the NOAA Beaufort Lab, which serves as the headquarters office for the program.

—In 2002, Congress provided NOAA with “. . . \$5,000,000 for the Beaufort Laboratory for necessary repairs to existing facilities and to construct a joint laboratory, dock, and other facilities in collaboration with the Rachel Carson Na-

tional Estuarine Research Reserve.” (Public Law 107–77, See S.Rept. 107–42, p. 106–108.) \$1.32 million was invested in NOAA (\$1.28 million) and State funds (\$42,046) for the construction of a joint building at the NOAA Beaufort Lab to serve the Reserve’s mission.

- The joint building was completed in 2007 and was constructed specifically with the Reserve’s education programs in mind: the auditorium regularly hosts coastal training program workshops and the teaching classroom hosts school groups, teacher workshops, field trips, and lectures to support K–12 Estuarine Education Program activities.
- The NOAA Beaufort Lab is a 5-minute boat ride from the Rachel Carson component of the Reserve; this close proximity is essential for conducting Reserve activities efficiently to conduct mission-critical programming including educational programs, water quality and habitat monitoring and research programs, and stewardship of the site including species monitoring, debris clean-ups, feral horse management, and access point maintenance.

Reserve Activities at the NOAA Beaufort Lab, 2008–2013

Education

K–12 field trips

- 177 educational programs
- 4947 participants

Teacher workshops

- 28 teacher workshops
- 412 participants

Summer camps

- 109 camp sessions
- 921 participants

Summer public field trips

- 96 field trips
- 1123 participants

Stewardship

Volunteer service at the Rachel Carson Reserve

- 1170 volunteers
- 2873 volunteer hours

Site management

- The NOAA Beaufort Lab provides an ideal base from which to manage the Rachel Carson Reserve due to its close proximity to the Reserve site, location on calm inland waters, and boat launching facilities. Additionally, many NOAA staff conduct or have conducted research at the Rachel Carson Reserve and are able to provide professional perspectives that are valuable to Reserve research and management.

Research

Research permits

- 31 research permits issued for research conducted at the Rachel Carson Reserve

Water quality monitoring

- Water quality inventory and monitoring stations at Middle Marsh and Shackleford Banks, in partnership with the National Park Service

Coastal Training Program

Coastal Training Program workshops

- 31 workshops
- 1076 participants

NOS

NOAA’s HAB program was initiated at the Beaufort Laboratory from the work conducted in North Carolina in 1987 during the “red tide” that affected the central coast for more than 6 months. The Beaufort Lab continues to provide essential research and field data that inform Ecological Forecasting of HABs in Alaska, North Carolina, Florida, Guantanamo Bay, Cuba, Bay of Fundy, Gulf of Maine, Gulf of Mexico, and the Caribbean. Additionally, Beaufort Laboratory staff were recognized for conducting award winning science in elucidating the life history of *Pfiesteria*, a HAB species that inhabits estuaries and river systems up and down the eastern seaboard. The threat of *Pfiesteria* caused economic damages of ~\$35 million a month

to the seafood industry following publicity of local fish kills. Beaufort laboratory staff provided expertise and knowledge to local and State resource managers and University partners to educate the public about the real facts concerning *Pfiesteria* and the safety of their seafood. Beaufort staff have continued to provide their expertise and knowledge to the North Carolina River Keeper Alliance and North Carolina Department of Natural Resources, Division of Water Quality when fish kill events have occurred in local estuaries. This has helped to alleviate public anxiety regarding seafood safety.

In conclusion, closure of the NOAA Beaufort Laboratory would be a poor choice scientifically, economically, and would leave a large part of the east coast without the science that they deserve. The numbers used to estimate the costs of maintaining the facility in good working order were incorrectly estimated and inaccurate numbers of current employees were provided for the budget. In addition, the Federal Government has invested in this laboratory over the long-term, and to close it now would be a gross misuse of Government resources.

PREPARED STATEMENT OF DR. DAVID F. JOHNSON, FORMER DIRECTOR OF THE NOAA
BEAUFORT LABORATORY (RETIRED)

Testimony.—My statement is submitted in strong and direct opposition to the closure of the National Oceanic and Atmospheric Administration (NOAA) marine science laboratory located in Beaufort, North Carolina, as is presently proposed in the President's fiscal year 2015 Budget for:

- NOAA
- National Ocean Service (NOS)
- Coastal Science, Assessment, Response and Restoration:
 - National Centers for Coastal Ocean Science (NCCOS), (NOAA Blue Book, page 8), the cost is not specified in the Budget document.

The recommendation to close this laboratory is based on dated and faulty information, and has not been well justified in the administration's budget. I respectfully request this subcommittee to consider:

- directing NOAA's National Ocean Service to withdraw the request for closure of the Beaufort Laboratory, and
- prevent the National Ocean Service from withdrawing support, leading to an operational failure of the Laboratory.

The balance of my statement will provide greater detail and justification for this position.

The Beaufort Laboratory (the formal name is the NOAA, NOS, Center for Coastal Fisheries and Habitat Research located in Beaufort, North Carolina) is the second oldest Federal marine laboratory in the U.S., founded in 1899. This national laboratory is a prime location for marine science and provides the only Federal access to the most diverse marine ecosystem in the U.S. Within a short distance of the Beaufort Laboratory, ecological communities can be accessed which represent the northern extent of southern species and the southern extent of northern species. Offshore and adjacent to the Gulf Stream are reef communities representative of tropical environments. This location provides access to a ready supply of clean, high salinity, seawater which is so essential to marine cultures. In addition, this location provides ship access through a deep water inlet. I submit this location is an asset which should not be abandoned by NOAA.

In the budget request, the National Ocean Service proposes "to reduce its physical footprint and fixed costs by closing the Beaufort North Carolina laboratory". A NOAA spokeswoman in Maryland, Ciaran Clayton (Director of Communications and External Affairs), was quoted in our local newspaper: "this aging facility requires infrastructure repairs and improvements exceeding agency budget resources. . . ." In subsequent discussions and clarifications for this budget, it seems this argument forms the basis for the requested closure. This argument is based on outdated information. A recent engineering survey indicates some previously reported structural concerns were minor and easily addressed without major cost. Please also be informed NOAA has been slowly upgrading the facility. In recent years, NOAA has provided approximately \$14.5 million in infrastructure improvements, including three new buildings and a new bridge. In fact, NOAA just initiated a new construction project at the Beaufort Laboratory with more than a million dollars in funding. Under these present circumstances, closure would be a waste of recent Federal funding.

The proposal for closure was revealed to the Laboratory's partners and public with the release of the President's budget for 2015. This was a surprise to the National Marine Fisheries Service (NMFS), NERRS and contract partners using the facility, and the many State and academic partners involved in joint scientific efforts. I am unaware of formal efforts to evaluate the costs and impacts of such a closure on these many partner organizations. The loss of the ongoing activities at the Laboratory and the disruption to partner activities will have effects which will ripple across numerous agencies and programs. This lack of evaluation seems programmatically and scientifically irresponsible.

The Beaufort Laboratory has a long and extraordinary record for scientific excellence. The laboratory employs a number of internationally and nationally known scientists, who are providing support essential to international, U.S., and North Carolina issues. Without this ongoing support, NOAA programs like Harmful Algal Blooms, ecosystem forecasting and invasive species (lionfish) will be severely impacted. NMFS programs which, among others, represent management and recovery of key commercial species (snapper, grouper, menhaden) will be disrupted. The pioneering and essential work of these research teams (composed of leading scientists, junior scientists, technicians and essential support staff) will be terminated with the dissolution or dispersal of the teams. I am unaware of any NOAA efforts to evaluate the impacts to the many scientific programs through the loss of this scientific prestige.

The local community will be severely impacted. The laboratory provides jobs for 108 people who include not only NOAA, but also State and private partners. Beaufort is a small community which would be heavily impacted by the economic losses associated with these jobs, and those of related family members. I am unaware of any analysis of the economic impacts to the community.

The large Government investment in scientific equipment would be underutilized or wasted. The laboratory contains a large and diverse array of scientific equipment which cannot be maintained or effectively used with closure, or the loss of highly specialized support staff. I am unaware of any evaluation of the disposition of this equipment and the support requirements.

The cost to provide laboratory and office space at Beaufort is cheaper than most areas of the United States. With tightening budgets, it would seem to make more sense to relocate employees to Beaufort. From this location, NOAA scientists would have access to facilities, equipment and ecosystems which are unavailable where many NOAA scientists are presently located.

In summary, this proposal is ill conceived and not supported by any reasonable evaluation of the circumstances. I urge your subcommittee to oppose the closure of the Beaufort Laboratory.

PREPARED STATEMENT OF THE JOINT OCEAN COMMISSION INITIATIVE

Chairwoman Mikulski, Ranking Member Shelby, 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 2015 Commerce, Justice, Science, and Related Agencies appropriations bill.

The Joint Ocean Commission Initiative, a collaborative, bipartisan effort to catalyze ocean policy reform, urges incremental but significant increases for programs necessary to understand, protect, and restore our oceans and coasts, so vital to our Nation's economy and security. In particular we ask you to continue the progress made in the President's fiscal year 2015 budget request and provide \$5.6 billion for NOAA to protect those core programs that sustain our oceans.

We greatly appreciate your strong support of ocean and coastal issues over many years, and we understand the difficult choices made each year regarding scarce resources to address critically important issues under your jurisdiction. Our written testimony covers the following issues: coastal resilience; ocean observations; ocean acidification; STEM consolidation; ocean exploration; science, research, and education; and the Arctic.

COASTAL RESILIENCE

The Joint Initiative strongly supports the Regional Coastal Resilience Grant program in NOAA's fiscal year 2015 budget, and we ask that you consider funding this program at \$10 million, a \$5 million increase from the President's fiscal year 2015 proposal. This program can provide competitive funding to support multi-State regional ocean partnerships that coordinate data sharing and decisionmaking across jurisdictions, implement innovative solutions to shared priorities, and effectively engage ocean and coastal stakeholders.

These partnerships are critical as coastal States and communities confront challenges such as ocean acidification, sea level rise, growing ocean uses, burgeoning populations, and increasing threats from extreme weather events. Resilient coastal communities are not only able to minimize loss and negative impacts to life, property, and the coastal ecosystem, they are also able to quickly return residents to productive activities and restore essential services. This is imperative to facilitating full and timely economic, social, and environmental recovery. Recognizing the importance of regional solutions, Governors have already joined together to share information and coordinate with Federal agencies, businesses, nongovernmental organizations, and local governments to better adapt to changes underway in our oceans and on our coasts.

Funding the Regional Coastal Resilience Grant program at \$10 million will still only address a small fraction of the demand, but it will enable partnerships to more efficiently apply limited resources to ensure the health of our oceans and coasts.

SUSTAINED OCEAN OBSERVATIONS

Sustained observations are vitally important to ensure coastal communities have the information necessary to increase overall resiliency. NOAA's Sustained Ocean Observations and Monitoring program funds global observing programs, including floats, drifters, and fixed moorings to provide information essential for accurate forecasting of hurricanes, typhoons, rivers and associated flooding, heat waves, and wildfires.

Funding NOAA's Sustained Ocean Observations and Monitoring program at \$41.3 million will help maintain the continuity of long-term data sets that are essential for ensuring that communities are able to respond and adapt to today's changing world.

OCEAN ACIDIFICATION

The Joint Initiative encourages you, at a minimum, to include the \$8.8 million increase in the President's fiscal year 2015 budget request for Integrated Ocean Acidification, bringing the total funding level to \$15 million.

As oceans become more acidic, there is an urgent need to understand the chemistry, variability, and impact of acidification on the marine environment. Ocean acidification is happening along every shoreline in the United States. In the Pacific Northwest, it is killing young oysters by the billions, threatening the shellfish industry. In 2011, the State of Washington convened a Blue Ribbon Panel on Ocean Acidification, which identified gaps in scientific knowledge and recommended strategies to mitigate immediate threats and improve industry resilience. While shellfish and coral reefs receive most of the attention related to ocean acidification, fisheries, aquaculture, and coastal ecosystems around the Nation will be greatly affected.

While ocean acidification is a global problem needing global solutions, funding the Integrated Ocean Acidification program at NOAA at increased levels will allow us to measure and assess the emerging threat of ocean acidification, better understand the complex dynamics causing and exacerbating it, work to determine its impact, and develop mechanisms to address the problem.

STEM CONSOLIDATION

The Joint Initiative is deeply alarmed by the major restructuring in the administration's proposal that would consolidate science, technology, engineering, and mathematics (STEM) programs, including the elimination of funding for ocean education programs in NOAA. We appreciate your thoughtful response to the STEM consolidation proposal in the fiscal year 2014 Omnibus Appropriations report, noting that the proposal "failed to sufficiently recognize or support a number of proven, successful programs." We believe NOAA education programs—specifically the NOAA Competitive Education Grants Program, Ocean Exploration and Research education, and Sea Grant STEM education activities including all State Sea Grant Program STEM activities—fall into this category.

By eliminating key ocean education programs at NOAA, we are concerned that ocean science content may be lost in the proposed consolidation, as it is not traditionally viewed as a "core science." In addition, removing education programs from mission-driven agencies such as NOAA, where research is sponsored and conducted, will isolate scientific research and its results from ocean education efforts. Educating and cultivating current and future ocean stewards is critical, especially given the tremendous growth in careers that require ocean-related education and knowledge. A recent report by the statutorily-created Ocean Research Advisory Panel (ORAP) forecast a need for approximately one million more college graduates than currently estimated in STEM fields over the next decade. This report underscores

the need for a STEM literate, and ocean literate, workforce to fill positions in commerce, energy, transportation, food production, national security, recreation, and tourism.

The Joint Initiative strongly urges you to fund NOAA education programs at increased levels.

OCEAN EXPLORATION

The Joint Initiative appreciates your long standing support of ocean exploration at NOAA and requests that you provide \$30 million for the Ocean Exploration program to increase the pace, scope, and efficiency of exploration.

A bipartisan effort since inception, the Ocean Exploration program was strongly endorsed by Congress when created in 2002. The program has greatly contributed to our knowledge of the ocean, including Arctic surveys that enabled the U.S. to argue for an extension of our Exclusive Economic Zone; baseline characterization of the *Deepwater Horizon* site in the Gulf before and after the oil spill; discovery of new gas hydrates stretching from Cape Cod to Cape Hatteras, with implications for ocean acidification; and new fishery habitat maps off the Northeast.

SCIENCE, RESEARCH, AND EDUCATION

The Joint Initiative calls attention to the need for consistent and dedicated funding for ocean science, research, and education. We ask you to increase funding for ocean science research, infrastructure, and grant programs at NOAA, National Science Foundation (NSF), and National Aeronautics and Space Administration (NASA) that are working to improve our understanding of critical physical and biological ocean processes. These programs provide local, State, and national decision makers with the information they need to make informed decisions.

In particular, we encourage you to provide \$7.5 billion for the NSF to support core ocean and coastal research and research infrastructure, which are critical to understanding processes that impact the health of the ocean and its role as the “flywheel” that drives global environmental dynamics. Unfortunately, funding challenges within NSF have significantly impacted the Geosciences Directorate and its Division of Ocean Science, thereby seriously eroding funds available to support core research. We also urge \$1.8 billion in funding for the NASA’s Earth Science Division to support critically important ocean and coastal science and education, including ground support and data processing for the multiple Earth observation missions scheduled for launch this year, and key missions currently under development.

ARCTIC

The Joint Initiative recommends that the fiscal year 2015 appropriations bill make a significant investment toward implementation of the National Strategy for the Arctic Region. This will enable the United States to prepare for taking over chairmanship of the Arctic Council in 2015 and lay the groundwork for sound international management of the region while protecting a sensitive and rapidly changing ecosystem.

The changes occurring in the Arctic are not well understood. The area is seeing an influx of international activity as changes in sea ice coverage and thickness open new shipping routes and provide opportunities for energy exploration. Taking over chairmanship of the Arctic Council is a real opportunity to be an international leader in the Arctic; however, increased funding for Federal agencies operating in the Arctic under your jurisdiction, such as NOAA and NSF, is essential if we are to do so. NOAA provides a range of important services essential to our understanding of the Arctic including ocean observation services, weather and sea ice predictions, mapping and charting, and sound management of marine resources.

CONCLUDING REMARKS

The Joint Initiative is acutely aware of the challenges you face addressing the funding needs of agencies and programs across the government. However, the Joint Initiative believes a commitment to understanding and protecting our Nation’s ocean and coasts is an investment in the future of our country that will provide significant economic, social, ecological, and national security benefits.

Thank you for considering our requests as the subcommittee begins its fiscal year 2015 appropriations process. The Joint Initiative sincerely appreciates your attention to this matter and stands 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 William Ruckelshaus | The Honorable Norman Mineta
 Frances Beinecke | Don Boesch | Lillian Borrone | The Honorable Norm Dicks
 Vice Admiral Paul Gaffney | Robert Gagosian | Sherri Goodman | Scott Gudes
 Vice Admiral Conrad Lautenbacher | Margaret Leinen | Christopher Lischewski
 The Honorable Jane Lubchenco | Julie Packard | The Honorable Leon Panetta
 John Pappalardo | Pietro Parravano | Diane Regas | Randy Repass
 Andrew Rosenberg | Patten White | The Honorable Christine Todd Whitman

PREPARED STATEMENT OF G. TODD KELLISON, CARTERET COUNTY, NORTH CAROLINA
 RESIDENT AND CHIEF, FISHERIES ECOSYSTEMS BRANCH, NOAA FISHERIES/SOUTH-
 EAST FISHERIES SCIENCE CENTER/BEAUFORT LABORATORY

Dear Members of the U.S. Senate Subcommittee on Commerce, Justice and Science, and Related Agencies: First, allow me to state that while I am a National Oceanic and Atmospheric Administration (NOAA) employee, I have written this letter on my own time, with my own resources and not as any part of my NOAA-related job. The comments I offer below are my personal opinion as a citizen regarding the proposed closure of the NOAA Beaufort Laboratory in Beaufort, North Carolina.

I am gravely concerned about the proposal in the 2015 President's budget to close the NOAA Beaufort Laboratory. The Laboratory is part of the National Oceanic and Atmospheric Administration; it is administered by the National Ocean Service (NOS), but also houses the National Marine Fisheries Service (NMFS) and National Estuarine Research Reserve System (NERRS). The Laboratory is a stalwart of fisheries and oceanic science, with an outstanding national and international reputation for advancing science in numerous areas: population dynamics and stock assessments; Gulf and Atlantic menhaden biology, movement, and assessments; harmful algal blooms; hypoxia; habitat science; pathogens; and science to support management of economically important fisheries. NOAA and the President have repeatedly recognized individual researchers, research teams, and the Laboratory as a whole for its outstanding quality of scientific work. Furthermore, the Laboratory is the originator and centerpiece of an internationally esteemed consortium of marine science institutions, including the marine laboratories of Duke University, North Carolina State University, the University of North Carolina at Chapel Hill, and the North Carolina Division of Marine Fisheries. Beaufort was chosen because it is a prime location where northern and southern marine ecological communities intersect, and as such the Laboratory provides the only Federal access to the most diverse marine ecosystem in the United States. There is no other location where these opportunities can be accessed as easily or as cheaply. The Beaufort Laboratory is the only NMFS facility on the Atlantic coast between Sandy Hook, New Jersey and Miami, Florida, a stretch of over 1200 miles of coastline.

The request to close the laboratory was based on current funding allocation, but inaccurate and outdated information that overstated the costs of maintaining the facility was used in the analysis that led to this request. Currently, the lab houses 108 employees from NOS, NMFS, and NERRS. The NOS initiated the proposed closure, but the request understated the number of NOS employees and did not account at all for employees from NMFS or NERRS. In effect, this mistake excluded more than half the staff of the Laboratory. Furthermore, the request was based on estimated costs for the Laboratory's upkeep and maintenance that were in error. Since 2006, several activities have been completed to keep the facility in good working condition, including replacement of the administration building, replacement of the maintenance building, replacement of the chemical storage building, replacement of the bridge to the facility, repair of the seawall, and other improvements (air conditioning, electrical, storm water runoff), which totaled approximately \$14 million. After such investments, closing the Laboratory now would represent a conspicuous waste of tax-payer money. Finally, contrary to previous claims, an updated engineering report (2014) documents that the facility is NOT structurally unsound. Based on mistakes both in the number of staff at the facility and in the costs associ-

ated with its upkeep, the budgetary calculations used to justify the proposed closure were fundamentally flawed.

I highlight below, by line office, the critical role that the NOAA Beaufort Laboratory has played in helping NOAA achieve its Strategic Mission (1) to understand and predict changes in climate, weather, oceans, and coasts, (2) to share that knowledge and information with others, and (3) to conserve and manage coastal and marine ecosystems and resources.

NOS

While the National Ocean Service is calling for the closure of the Beaufort North Carolina laboratory, it is requesting an increase of \$4 million to another center to support Ecological Forecasting of Harmful Algal Blooms (HABs), Hypoxia, pathogens, and Species Distributions. These areas of research are the bread and butter of NOS at the Beaufort Laboratory. In fact, NOAA would not have the strength it currently has in forecasting HABs if it were not for the Laboratory's seminal and award-winning work that has been ongoing from the 1980s to this day. Furthermore, the Beaufort Laboratory initiated the first-ever study of the invasive lionfish in the U.S. South Atlantic, and it has continued to play a pivotal role in monitoring the distribution and abundance of this invasion throughout the South Atlantic, Gulf of Mexico, and Caribbean, providing information that has been critical for mitigation and management strategies. It is ironic and perplexing that the fiscal year 2015 President's budget requests increased research funding for coastal ocean issues, including harmful algal blooms, hypoxia, and coastal ecosystem management, while at the same time proposing to close an existing facility that already has both well-established expertise and facilities required to address many of those very same issues.

NMFS

The Beaufort Laboratory provides the stock assessment science that allows NOAA to fulfill its obligation toward the Magnuson-Stevens Fishery Conservation and Management Act, as mandated by Congress. The stock assessment science of the NOAA Beaufort Laboratory focuses on marine fish populations that are ecologically and economically vital to the region and Nation, including snapper-grouper and pelagic species managed by the South Atlantic Fishery Management Council, Atlantic menhaden managed by the Atlantic States Marine Fisheries Commission, and Gulf menhaden managed by the Gulf States Marine Fisheries Commission. Atlantic menhaden support the largest fishery on the U.S. Atlantic coast, and Gulf menhaden support the largest fishery in the Gulf of Mexico. To enable robust stock assessments, sampling of the Atlantic and Gulf menhaden fisheries has been conducted by the Beaufort Laboratory for decades, and monitoring of snapper-grouper species has been accomplished by the Laboratory's Southeast Fishery-Independent Survey. Removing this sampling and monitoring from the Beaufort Laboratory would not only result in a significant disconnect between NOAA and the communities that it serves, but would also degrade the quality of stock assessments at a time when Congress is rightly calling for improvements.

NERRS

NERRS is partnered with the North Carolina Coastal Reserve, with program headquarters at the NOAA Beaufort Laboratory. This program supports long-term research, water-quality monitoring, education, and coastal stewardship. In 2002, Congress provided NOAA with “. . . \$5,000,000 for the Beaufort Laboratory for necessary repairs to existing facilities and to construct a joint laboratory, dock, and other facilities in collaboration with the Rachel Carson National Estuarine Research Reserve.” With this funding, NOAA invested \$1.28 million and the State of North Carolina invested \$42,000 for the construction of a joint building at the NOAA Beaufort Laboratory to serve the Reserve's mission. The joint building was completed in 2007 and was constructed specifically with the Reserve's education programs in mind: the auditorium regularly hosts coastal training program workshops and the teaching classroom hosts school groups, teacher workshops, field trips, and lectures to support K–12 Estuarine Education Program activities. The NOAA Beaufort Laboratory is a 5-minute boat ride from the Rachel Carson component of the Reserve, and this close proximity is essential for performing Reserve activities efficiently to conduct mission-critical work, including educational programs, water quality and habitat monitoring, research programs, and stewardship of the site, which involves species monitoring, debris clean-ups, feral horse management, and access point maintenance. In short, NERRS activities in education, training, and steward-

ship have been extensive, and they would not be feasible from any other Federal laboratory.

In conclusion, closure of the NOAA Beaufort Laboratory would be a detriment to NOAA's ability to accomplish its own Strategic Mission and to meet its obligations toward such congressional mandates as the Magnuson-Stevens Fishery Conservation and Management Act. The only argument for closing the laboratory was financial, but that argument was based on flawed estimates of maintenance costs and an outdated engineering report, which has since been revised with opposite conclusions regarding the lab's structural integrity. Relative to NOAA's budget, any cost savings associated with closing the Laboratory would be trivial; however the loss to the Nation would be significant.

PREPARED STATEMENT OF MARY E. KENTULA, CORVALLIS, OREGON

I am writing on opposition of the proposed closure of the National Oceanic and Atmospheric Administration (NOAA) Center for Coastal Fisheries and Habitat Research located in Beaufort, North Carolina (hereafter the Beaufort Lab), as recommended on page 8 of NOAA's 2015 Budget Summary. As someone who has worked in the field of aquatic science for over 30 years, I am concerned that one of the Nation's premier research facilities may be closed. The Beaufort Lab is located strategically where the entire East and Gulf Coasts can be easily and cheaply accessed. The Lab is manned by an impressive team of nationally and internationally known scientists who conduct research critical to the understanding of the Nation's coastal ecosystems and the protection of our fisheries and other enterprises supporting the economy of coastal communities.

I have had the opportunity to work with scientists from the Beaufort Lab throughout my career. I have been consistently impressed with the quality of their work and their commitment to the mission of NOAA. One of the invaluable services such facilities provide is the ability to assemble technical teams from a variety of backgrounds and organizations to address difficult problems. This includes expertise from academia, the private sector, and other government agencies, as well as scientists from the natural and social sciences. Because of the mix of skills and perspectives, these teams are highly creative and productive. The Beaufort team has been very successful in using this approach, for example, to address the protection and restoration of coastal ecosystems and to provide guidance to coastal communities on how best to manage their lands in a productive and sustainable way.

I understand the intension is to move the Federal scientists to other laboratories; however, the teams that have formed over the years to conduct what NOAA deemed high priority research will be disbanded, along with the associated institutional history. The time and effort lost while the capability is rebuilt will be costly in real dollars as well as in delays to important work. In addition, the investment in the large and diverse array of equipment at the Beaufort Lab will be lost and the funds used to purchase and maintain the equipment wasted. In this time of budget constraints, it is "penny wise and pound foolish" to destroy a well-functioning unit and lose the investment in the staff and equipment.

There is also the impact to the community of Beaufort to consider. I have read articles expressing concerns about the potential closure of the NOAA Lab. One account mentions the NOAA lab is the largest member of the North Carolina Marine Science and Education Partnership which accounts for over 58 million dollars in funding for research and, with the addition of the education component, more than 100 million dollars is brought into Carteret County. Loss of a key component of this hub for research and education would be devastating to the economy of the area and its citizens.

I urge the Committee on Appropriations Subcommittee on Commerce, Justice, Science and Related Agencies to remove the recommendation to close the NOAA Center for Coastal Fisheries and Habitat Research from NOAA's budget for 2015 and thus prevent the loss of an outstanding center for high priority and critical research on coastal systems and fisheries.

Thank you for your consideration.

PREPARED STATEMENT OF NIKOLAI KLIBANSKY PH.D., ATLANTIC BEACH, NORTH CAROLINA

Dear subcommittee members,

I am writing this letter as a private citizen using only my own resources on my own time. I write on behalf of myself and no other agency to express my opposition

to the closure of the National Oceanic and Atmospheric Administration (NOAA) Beaufort Laboratory in Beaufort North Carolina, proposed in the fiscal year 2015 budget. The Beaufort Lab is a part of the National Oceanic and Atmospheric Administration within the U.S. Department of Commerce. Employees of National Estuarine Research Council (NERR), the National Marine Fisheries Service (NMFS), and the National Ocean Service (NOS) are housed at the Lab.

Though I am currently a post-doctoral research associate for the National Research Council working at the Beaufort Lab I am there temporarily and closure of the lab would likely occur after I am gone. But as a citizen, a voter, and a scientist I find that closing the lab would be a loss for us all, for the gain of none.

While I am strongly in favor of fiscal responsibility, and I appreciate public officials trying to save taxpayers money, it is clear to me that closure of the Beaufort Lab would cost far more in intellectual capital and scientific information than would be gained in dollars and cents. The Beaufort Lab is the second oldest marine lab in the United States, commemorated in downtown Beaufort by the kind of historical marker that honors battlefields and the birthplaces of presidents. It is the only lab of its kind on the East Coast from Cape May, New Jersey to Miami, Florida, situated in an ideal location near Cape Hatteras which serves as the most significant marine ecological boundary on this coast. As a North Carolina resident for nearly 7 years, I assure you that this Federal facility is a point of pride to North Carolina voters, who live and breathe to enjoy a healthy ocean, and many who feed their families from it.

The organizations housed within the Beaufort Lab perform essential functions for us all, providing information needed to properly manage marine fisheries like red snapper, mahi mahi, and shrimp; and to mitigate harmful algal blooms and the formation of marine dead zones. Other personnel dedicate their time to managing barrier beach islands and marshes that protect the mainland, human lives, and billions of dollars in coastal real estate from the damaging effects of massive hurricanes like Katrina and Sandy.

Though the argument has been made that closure of the Beaufort lab would save money, this is apparently based on inaccurate numbers. In the budget it was claimed that the buildings are all falling apart and the costs to repair them would be prohibitively expensive, and yet the largest building on the property was built less than 10 years ago and houses the largest proportion of employees. Of all the NOAA labs on the East Coast, the Beaufort Lab is situated on some of the least expensive property. It seems highly unlikely that proper accounting would show a financial benefit of the closure the Lab that would come close to the damage it would inflict. I don't expect that the calculations in the budget were intentionally biased, but they are quite clearly wrong. Therefore I urge you to do what is in your power, to see that the Beaufort Lab is maintained and protected.

PREPARED STATEMENT OF LUND'S FISHERIES INCORPORATED

Dear Chairwoman Mikulski and Ranking Member Shelby: On behalf of the 150 employees of our family-owned, vertically-integrated seafood processing facility and the company-owned and independently-owned commercial fishing vessels and crew whom work to support us here in the port of Cape May, New Jersey, I am writing in strong opposition to the fiscal year 2015 budget proposal to close the National Oceanic and Atmospheric Administration (NOAA) National Ocean Service (NOS)/ National Marine Fisheries Service (NMFS) Fisheries Laboratory in Beaufort, North Carolina.

While the Beaufort Fisheries Laboratory is the second oldest marine fisheries lab in the United States, contrary to the budget proposal's justification that the lab be closed because it is structurally unsound, a recent engineering report, reflecting more than \$14 million in new construction and renovations, states that this is not an accurate description of the facility's capabilities or infrastructure.

More importantly, from the perspective of our fishing company, the Beaufort Laboratory is strategically located, geographically, to monitor the ecological resources and communities of both the northern range of southern species and the southern range of northern species, which are vitally important to marine fisheries on both the Atlantic and Gulf coasts. This location is critical for continued study of emerging issues, like climate change-related warming of ocean habitats, so that fishery managers may be informed of resulting species regime shifts, which are challenging our ability to sustainably manage the region's living marine resources.

Specifically, the Beaufort Laboratory houses a state-of-the-art population dynamics and stock assessment program that focuses on a number of important, regional commercial fishery species, including Atlantic and Gulf Menhaden, which provide a

critical source of bait for the lobster fisheries of the northeast and the crab and crawfish fisheries of the mid-Atlantic, south and southeast.

Atlantic menhaden, for example, support the largest fishery on the Atlantic coast, and Gulf menhaden support the largest fishery in the Gulf of Mexico, worth more than \$125 million, combined, to local and regional coastal economies including the Port of Cape May. Decades of experience in assessing and monitoring these fishery resources is housed in Beaufort, the loss of which to the region would be significant and, we believe, unnecessary.

Thank you for the opportunity to provide you with our view of this important budget issue. It is clear to us that this proposal should be rejected and that the Beaufort Fisheries Laboratory should be maintained by NOAA. We urge you and the other members of the subcommittee to adopt this point of view.

Please do not hesitate to contact me if I can provide you or your staff with any additional information in support of maintaining the Beaufort Laboratory.

With best regards,

JEFFREY B. REICHLE,
President.

PREPARED STATEMENT OF THE MARINE CONSERVATION INSTITUTE

Ms. Chairwoman and members of the subcommittee: Marine Conservation Institute, based in Seattle, Washington, is a nonprofit conservation organization that uses the latest science to identify important marine ecosystems around the world and advocates for their protection for us and future generations. We wish to thank the members of the subcommittee for the opportunity to submit written testimony on the fiscal year 2015 appropriations for the National Oceanic and Atmospheric Administration (NOAA).

Marine Conservation Institute was instrumental in President Bush's designation of the Papahānaumokuākea Marine National Monument (Northwest Hawaiian Islands) and the Pacific Remote Island Marine National Monuments, which has given rise to our concern for the only species of endangered marine mammal, the Hawaiian Monk Seal, that is found entirely within U.S. territorial waters. Marine Conservation Institute supports \$5.0 million in base funding for the Hawaiian Monk Seal recovery program, which is one element of the Marine Mammal program within the Protected Resources budget line. If funded at \$5 million, the Hawaiian Monk Seal program would receive approximately 35–45 percent more than allocated in the fiscal year 2014 spending plan and about double what has been requested in the last two Presidential budgets. Though these suggested percentage increases, by themselves, would seem large, the amount that the Protected Resources budget would increase in order to accommodate this request is quite small: 1.3 percent (\$2.5 million increase to \$186 million).

WHY HAWAIIAN MONK SEAL RECOVERY IS IMPORTANT

NOAA is responsible for recovering populations of the Hawaiian monk seal, one of the most critically endangered marine mammals in the world. The monk seal is also the only marine mammal whose entire distribution range lies within our national jurisdiction; thus the U.S. is solely responsible for its continued survival. Over the last 50 years, the Hawaiian monk seal population has experienced a severe decline of 60 percent, and now the population is slightly more than 1,000 individuals. Various factors have contributed to the seal's decline including: human hunting of the species to near extinction in the mid-1800's; entanglement in marine debris and fishing gear; loss of habitat for pupping and resting; and competition for food in the Northwestern Hawaiian Islands; to name a few.

There is reasonable hope for the monk seal if a small subpopulation in the main Hawaiian Islands can continue to grow beyond its current level of 130–200 individuals. However, this population growth has generated increased conflicts with citizens and recreational fishermen who unintentionally hook or entangle monk seals. In 2012 alone, there were 15 confirmed hooking incidents, and three seals died as a result. Hostility toward the seal has become toxic in some communities, prompting at least four intentional seal killings on Kaua'i and Moloka'i in a little over a year. Due to the efforts of private foundations and funders, Marine Conservation Institute has been able to successfully conduct culturally appropriate anger reduction activities on Kaua'i in the last 2 years, and there has not been an intentional killing since then. But this kind of private funding is not a permanent solution for plugging a hole in NOAA's budget.

It has been conservatively estimated that 30 percent of the monk seals are alive today due to direct actions by NOAA and its partners.¹ However, we are concerned that funding for the monk seal has severely decreased in recent years (a level as low as \$2.7 million in 2011). Furthermore, our analysis indicates that cuts to the monk seal program have been disproportionate compared to other marine mammal species under NOAA's jurisdiction.

Lower funding levels in recent years have already severely affected recovery efforts by reducing seasonal field camps essential for population monitoring and seal protection in the Northwest Hawaiian Islands; hampering critical community liaison efforts to explore and explain the importance of the monk seal in Native Hawaiian culture; removing specialists who eliminate sharks preying on seal pups; and diminishing research programs that develop mitigation measures for fisheries interactions and other human-seal interactions.

FUNDING LEVEL NECESSARY FOR MONK SEAL RECOVERY

Marine Conservation Institute strongly recommends the subcommittee devote a modest absolute increase in funding, an additional \$2.5 million, to reach \$5.0 million in fiscal year 2015 to begin to reinstate NOAA's lost capacity to recover the species.

PREPARED STATEMENT OF THE NATIONAL ASSOCIATION OF MARINE LABORATORIES

The National Association of Marine Laboratories (NAML) is pleased to submit testimony to the subcommittee with a series of recommendations that we believe would strengthen the Nation's research and education enterprise. NAML is a nonprofit organization representing the ocean, coastal and Great Lakes interests of member laboratories that employ thousands of scientists, engineers and professionals nationwide. NAML labs conduct high quality research and education in the natural and social sciences and translate that science to improve decisionmaking on important issues facing our country. NAML requests the subcommittee to:

- Provide strong support for competitive, merit-based ocean, coastal, and Great Lakes research, infrastructure and education programs at the National Oceanic and Atmospheric Administration (NOAA), the National Science Foundation (NSF), and the National Aeronautics and Space Administration (NASA). This issue is discussed in detail later in this statement;
- Support the research infrastructure of marine laboratories that will lead to better integration of environmental data networks into Federal information and observing system networks and in so doing achieve cost effective science-based decisionmaking regarding the management of marine, coastal and Great Lakes ecosystems and related resources;
- Increase the co-location of Federal scientists and Federal research infrastructure initiatives at NAML laboratories as well as increased coordination and cooperation between NOAA's ocean, coastal and Great Lakes research and education programs; and
- Advance a diverse, distributed ocean science education agenda through strong support for ongoing programs within NSF, NOAA, and NASA. NAML is concerned that the administration's STEM education consolidation plan will terminate K-12 STEM education and fellowship activities within the Sea Grant program as well as terminate important ocean literacy activities in the Office of Education at NOAA. NAML urges the committee to reinstate these activities within NOAA.

THE ROLE OF MARINE LABORATORIES IN THE NATION'S RESEARCH AND EDUCATION ENTERPRISE

Ocean, coastal and Great Lakes marine laboratories are vital, cost-effective, place-based "windows on the sea." They connect communities with cutting edge marine, coastal and social sciences, while also providing students and citizens with meaningful learning experiences. The members of the National Association of Marine Laboratories (NAML) work together to improve the quality and relevance of ocean, coastal and Great Lakes research, education and outreach. In particular, NAML laboratories compete for support for the:

- Conduct of basic and applied research of the highest quality making use of the unique capabilities of coastal laboratories;

¹McAvoy, Audrey. "Feds—Efforts to rescue monk seals helping species." Associated Press in West Hawaii Today, January 26, 2012.

- Revitalization of research infrastructure through increased cost-effective networking of capabilities;
- Unique role that coastal laboratories play in conducting education, outreach and public service;
- Encouragement of wise use and conservation of marine and coastal habitats and resources using ecosystem-based management approaches;
- Coastal and other observing systems that collect front line data needed to improve predictions of natural and human-caused disasters, the management of marine resources, research, and education; and
- Increased public ocean and Great Lakes literacy to promote greater environmental stewardship.

OCEANS, COASTS AND GREAT LAKES—VITAL FOR ECONOMIC GROWTH AND ENHANCED COASTAL RESILIENCY

The ocean, coasts, coastal watersheds, and the Great Lakes play a central role in the well being of the Nation. Over 8.5 million people reside in the 100-year coastal flood hazard area. More than half of the United States population lives in 673 coastal watershed counties, and these counties generate 58 percent (\$8.3 trillion) of the Nation's gross domestic product (GDP)—even though they comprise only 25 percent of the Nation's land area. Every day, the marine environment supplies a multitude of products and services that enhance and support the lives and livelihoods of citizens. In 2011, Americans, on average, ate 15 pounds of fish and shellfish per person—4.7 billion pounds all together—making the U.S. second in the world in total seafood consumption. Offshore oil production in Federal waters accounts for 24 percent of total U.S. crude oil production. If American coastal watershed counties were considered an individual country, that country would have a GDP higher than that of China. The United States has jurisdiction over 3.4 million square miles of oceans—an expanse greater than the land area of all 50 States combined. This vast marine area offers many environmental resources and economic opportunities, but also presents threats such as damaging tsunamis and hurricanes, industrial accidents and outbreaks of water borne pathogens. The 2010 Gulf of Mexico *Deepwater Horizon* oil spill, the 2011 Japanese earthquake and tsunami, and the 2012 Superstorm Sandy are vivid reminders that our understanding of our oceans and coastal areas is far from complete. Developing sufficient capabilities to sustain ocean-based economies and protect our coasts and coastal communities from natural and man-made hazards will require a sustained investment in research, infrastructure and education and training. NOAA's budget request contains several programs designed to reduce coastal and community vulnerability to future storms, inundation and sea level rise. NAML encourages the Committee to support these resilience programs

NAML PRIORITY—INVESTING IN RESEARCH

NAML believes America is driven by innovation—advances in ideas, products and processes that create new industries and jobs, contribute to our Nation's health and security, and support a high standard of living. In the past half-century, educated people and the knowledge they produce have increasingly driven innovation. It is essential that the Nation reaffirms and revitalizes the unique partnership that has existed between the Federal Government, the States and business and industry with the Nation's research and education enterprise. In doing so, we encourage the innovation that leads to high-quality jobs, increased incomes, security, health, and prosperity for the Nation. Investing in the Nation's research enterprise should be seen as a high priority that has contributed significantly to our long-term prosperity and technological preeminence through interdisciplinary research spanning a landscape of disciplines, from physics to geology, chemistry to biology, engineering to social sciences and modeling to observation. NAML believes that research and education programs at the major Federal science agencies with ocean and coastal responsibilities should be viewed as priority investments in the future health and well being of the Nation.

Programs that support the extramural community via competitive, merit-based research provide highly cost-effective returns on investment, leverage additional resources to meet science and management priorities, and distribute economic and societal benefits over a broad array of communities. While NOAA has acknowledged his assertion on many occasions, its support for its extramural partners has continued to decline. From background information developed for the NOAA Science Advisory Board's R&D Portfolio Review Task Force support by the Office of Oceanic and Atmospheric Research (OAR) for extramural R&D has declined by \$60 million since 2005—from \$171.6M to \$107.1M while the percentage of OAR's research activities

to support extramural programs has dropped from just over 50 percent down to 34 percent of the total. In the National Ocean Service (NOS), support for extramural R&D has declined from a level of \$21.6M in 2005 to \$13.7M in 2011 while intramural support has grown from a level of \$53 million in 2005 to a level of \$58 million in 2011. Moreover NOAA has repeatedly proposed the termination of numerous extramural programs—such as the John H. Prescott Marine Mammal Grants program—and the consolidation of research programs—such as Ocean Exploration and Research—which has led to the dramatic reduction in extramural research and education support.

Beyond cutting back on its extramural support, NOAA now seeks permission to “receive and expend funds made available by, any . . . private organization, or individual (proposed Section 108 of the General Provisions in the NOAA Section of the Appendix to the fiscal year 2015 Budget).” This would enable NOAA to compete against non-Federal and private entities for private sector support. Thus not only is NOAA cutting back its own support, it intends to further exacerbate the situation by competing against its partners for the limited available non-Federal resources needed to fill the gaps created by NOAA’s decision to scale back its extramural support.

NAML urges the Committee to restore to the maximum extent possible NOAA support for its extramural research, education, and other related programs while also limiting NOAA’s ability to compete with the private sector for non-Federal resources needed for research, education, and conservation programs.

Much attention has been justifiably focused on the need for our Nation to continue its support of premier basic research programs. It is also important to maintain strong support for mission-oriented ocean, coastal and Great Lakes research, observing and monitoring programs. Further, NAML believes that developing exchange programs between Federal agencies and marine laboratories—such as co-location of Federal scientists and Federal research infrastructure initiatives at NAML laboratories—will further strengthen the capacity of both sectors while also reducing costs by eliminating duplicative activities.

NAML PRIORITY—INVESTING IN RESEARCH INFRASTRUCTURE

NAML believes that a comprehensive range of ocean and coastal research infrastructure will be needed to meet growing demands for scientific information and to enable the safe, efficient, and environmentally sustainable use of the ocean. Institutional barriers have inhibited collaborative efforts to plan for the deployment, operation and maintenance of high-cost critical infrastructure assets such as ships, satellites, observing systems and cyber-infrastructure for data sharing, networking and collaborative use of available facilities. Marine laboratories often play a critical role in supporting studies that extend across decades. Marine laboratories can provide the infrastructure to collect data throughout a lifetime, and even maintain important data streams that extend well beyond any single researcher. Marine laboratories are often a hotbed of sensor development and testing. With technology changing rapidly, marine laboratories provide the expertise to maintain a level of standardization that ensures such data can be interpreted accurately even as protocols change in response to improving technology. Marine laboratories are playing an increasingly important role in supporting networks that extend beyond any single lab. Because environmental processes occur on a wide range of spatial and temporal scales, data streams are standardized and networked to varying degrees to facilitate cross-site and long-term analyses. Finally, given the complexity and interconnected nature of many environmental processes, marine laboratories provide important opportunities to weave together the work of many researchers across diverse disciplines to detect patterns and understand processes that would not be apparent from any single study or data stream.

NAML PRIORITY—SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS (STEM) EDUCATION

NAML’s education mission is two-fold: to enhance ocean STEM education to ensure that all citizens recognize the role of the oceans, coasts and Great Lakes in their own lives and the impacts they themselves have on these environments; and to provide formal research and training opportunities at K–12, college, and post-graduate levels to ensure a technically-qualified, and ethnically diverse workforce capable of solving problems and answering questions related to the protection, restoration and management of coastal and ocean resources, climate variability and society’s needs. An informed and engaged public is essential to understand complex ocean- and coastal-related issues, balance the use and conservation of marine resources, and maximize future benefits from the ocean. The public should be armed

not only with the knowledge and skills needed to make informed choices, but also with a sense of excitement about the marine environment. Public understanding of human impacts on the marine environment should be balanced with recognition of the benefits to be derived from well-managed ocean resources. Inland communities need to be just as involved as seaside communities, because of the connection among the ocean, the atmosphere and the land. Ocean-related education also has the potential to help stem the tide of science illiteracy threatening to undermine the Nation's health, safety and security. The scientific literacy of U.S. high school graduates is well below the international average. This progressive loss of literacy weakens the Nation's ability to maintain its traditionally strong foundation in science and mathematics. NAML laboratories seek to expand the engagement of individuals from groups that have been historically under-represented in ocean research, education and outreach. This is particularly important in fulfilling the goal of achieving a diversified STEM pipeline to meet future science and ocean workforce needs.

NAML remains concerned with certain elements of the administration's STEM Education Consolidation proposal for fiscal year 2015. A total of 31 STEM education programs at nine key R&D mission agencies (including NOAA, NSF, and NASA) will be impacted by this proposal. It is important for mission agencies to help support the next generation of scientific and technical talent—much of which will be needed by these agencies in future years. We urge the subcommittee to reject these particular consolidation proposals and support the continuation of these programs within their current agencies.

NAML appreciates the opportunity to present these views to the subcommittee as it begins work on the development of the fiscal year 2015 appropriations bill.

Thank you.

PREPARED STATEMENT OF THE NATIONAL CONGRESS OF AMERICAN INDIANS

On behalf of the National Congress of American Indians (NCAI), this testimony addresses important programs in the Department of Justice (DOJ) and Department of Commerce. NCAI is the oldest and largest American Indian organization in the United States. Tribal leaders created NCAI in 1944 as a response to termination and assimilation policies that threatened the existence of American Indian and Alaska Native tribes. Since then, NCAI has fought to preserve the treaty rights and sovereign status of tribal governments, while also ensuring that Native people may fully participate in the political system. As the most representative organization of American Indian and Alaska Native tribes, NCAI serves the broad interests of tribal governments across the Nation. As Congress considers the fiscal year 2015 budget and beyond, leaders of tribal nations call on decision-makers to ensure that the promises made to Indian Country are honored in the Federal budget.

INTRODUCTION

Annual funding decisions by Congress are an expression of our Nation's moral priorities. Numerous treaties, statutes, and court decisions have created a fundamental contract between tribal nations and the United States: tribes ceded millions of acres of land that made the United States what it is today, and in return tribes have the right of continued self-government and the right to exist as distinct peoples on their own lands. And for its part, the United States has assumed a trust responsibility to protect these rights and to fulfill its solemn commitments to Indian tribes and their members.

Part of this trust responsibility includes basic governmental services in Indian Country, funding for which is appropriated in the discretionary portion of the Federal budget. Tribal governments exist to protect and preserve their unique cultures, identities, and natural environments for posterity. As governments, tribes must deliver a wide range of critical services, such as education, workforce development, 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.

DEPARTMENT OF JUSTICE

The bi-partisan Indian Law and Order Commission (ILOC) recently released its report to Congress and the President emphasizing that "[n]ow is the time to elimi-

nate the public safety gap that threatens so much of Native America.”¹ The public safety problems that continue to plague tribal communities are the result of decades of gross underfunding for tribal criminal justice systems; a uniquely complex jurisdictional scheme; and the historic, abject failure by the Federal Government to fulfill its public safety obligations on American Indian and Alaska Native lands. Residents and visitors on tribal lands deserve the safety and security that is taken for granted outside of Indian Country. The time is now to remedy the disparities.

Congress has taken historic steps in recent years with the passage of the Tribal Law and Order Act in 2010 and the Violence Against Women Reauthorization Act of 2013 (VAWA 2013), both of which begin to address some of the structural barriers to public safety in tribal communities. For the promise of these laws to be fully realized, however, these laws must be fully implemented, which requires sufficient resources for tribal justice systems and ongoing coordination and consultation between various Federal agencies and tribal governments. The Department of Justice recognized this reality in its recently issued Proposed Statement of Principles. The Proposed Statement articulates DOJ’s belief that stable funding at sufficient levels for essential tribal justice functions is critical to the long-term growth of tribal institutions.²

Increased and targeted funding in the following program areas will have a huge impact on safety in tribal communities for tribal citizens, residents, and visitors to tribal lands. This would also help foster economic development on tribal lands and improve the quality of life in immeasurable ways. As the Federal Government balances the Federal budget, it must also pledge to honor its distinct legal, treaty, and trust obligations to assist tribal nations in providing public safety to their citizens. Highly-functioning criminal justice systems and basic, on-the-ground police protection are fundamental priorities of any government; tribal governments are no different.

As the ILOC asserts, “[h]ow we choose to deal with the current public safety crisis in Native America—a crisis largely of the Federal Government’s own making over more than a century of failed laws and policies— can set our generation apart from the legacy that remains one of [the] great unfinished challenges of the Civil Rights Movement. Lives are at stake, and there is no time to waste.”³

Provide at least \$395.4 million for the Department of Justice (DOJ) public safety initiatives in Indian Country (including \$375.4 million in discretionary funds and \$20 million from the Crime Victims Fund, a mandatory account).—The Crime Victims Fund, administered by the Office for Victims of Crime (OVC) within DOJ’s Office of Justice Programs (OJP) includes the \$20 million set-aside for tribal victim assistance within the Crime Victims Fund, which was initiated in fiscal year 2014. The Crime Victims Fund was initially established to address the need for victim services programs, and to assist tribal, State, and local governments in providing appropriate services to their communities. The Fund is financed by collections of fines, penalty assessments, and bond forfeitures from defendants convicted of Federal crimes, but until last year, tribes have only been eligible to receive a very small portion of the discretionary funding from the Fund. The tribal funding is requested as part of OVC’s Vision 21 Initiative, a strategic planning initiative based on an 18-month national assessment by OJP that systematically engaged the crime victim advocacy field and other stakeholder groups in assessing current and emerging challenges and opportunities facing the field. The initiative focuses on supplemental victim services and other victim-related programs and initiatives in areas like research, legal services, capacity building, national and international victim assistance, and—of course—tribal assistance.

The Department proposes bill language for a 7 percent tribal set-aside from all discretionary *Office of Justice Programs* to address Indian Country public safety and tribal criminal justice needs. Under the fiscal year 2015 request, the 7 percent set-aside totals approximately \$102.8 million—a slight increase from last year’s request.

This year’s DOJ budget also requests a total of \$1.6 million for the *Office of Tribal Justice* (OTJ) to, amongst other things, help fund a total of six attorney positions in fiscal year 2015. This request is identical to fiscal year 2014. The request for additional staffing resources was made in recognition of the increased workload and

¹ Indian Law & Order Commission. (November 2013). *A roadmap for making Native America safer: Report to the President & Congress of the United States*, Executive Summary, p. v. Retrieved on January 10, 2014, from www.aisc.ucla.edu/iloc/report/files/A_Roadmap_For_Making_Native_America_Safer-Full.pdf.

² U.S. Department of Justice. (November 2013). Proposed statement of principles for working with federally recognized Indian tribes, p. 2. Retrieved on January 10, 2014, from www.justice.gov/tribal/docs/statement-of-principles-for-working-with-tribes.pdf.

³ Indian Law & Order Commission.

duties of OTJ staff in recent years, particularly since the Tribal Law & Order Act of 2010 established OTJ as a permanent component of the Department. Hundreds of Federal cases, in addition to other conflicts needing resolution are generated in Indian Country each year, and OTJ serves as the primary point of contact between all 566 federally recognized tribes and DOJ on these matters. Additionally, with the special domestic violence criminal jurisdiction (SDVCJ) tribal provisions of the Violence Against Women Reauthorization Act of 2013, OTJ plays an important role in implementation. OTJ coordinates these complex matters, the underlying policy, and emerging legislation between more than a dozen DOJ components active in Indian Country. As such, it is imperative that OTJ has the necessary resources to sufficiently fulfill all of these obligations.

Additionally, the fiscal year 2015 budget request for tribes under the *Community Oriented Policing Services* (COPS) program to fund tribal law enforcement expenses is \$35 million, an increase of \$15 million from the fiscal year 2014 requested amount. This program provides funding and resources to meet the public safety needs of law enforcement and advance community policing on tribal lands. The President's fiscal year 2015 increase brings the amount closer to his request in fiscal year 2012 (which was closer to \$42 million). These funds are critical for the hiring and retention of tribal law enforcement officers.

DOJ's fiscal year 2015 Budget Request for Indian Country programs is an increase over its fiscal year 2014 numbers, which is particularly encouraging given the current budget climate in Washington, DC. Moreover, DOJ's request provides tribes with more flexibility in how they spend their DOJ grant dollars, demonstrating the Justice Department's continued commitment to tribal self-determination and the improved administration of justice on Indian lands.

OFFICE ON VIOLENCE AGAINST WOMEN—VIOLENCE AGAINST NATIVE WOMEN

NCAI urges Congress to fully fund the programs authorized in the Violence Against Women Act (VAWA), including the funds authorized for tribal implementation of VAWA special domestic violence criminal jurisdiction. In fiscal year 2015, VAWA in CJS should be funded at the authorized level of \$569.5 million instead of \$422.5 million. Tribes receive statutory set-asides.

VAWA is a cornerstone of our Nation's response to domestic violence, sexual assault, dating violence, and stalking. Its effective coordinated community response model helps hundreds of thousands of victims find safety and receive services while holding thousands of perpetrators accountable for their actions. VAWA also supports victims' long-term stability and security, and it addresses the unique barriers that many victims face in accessing services and finding justice.

It is estimated that one in three Indian women will be raped and that 6 in 10 will be physically assaulted in their lifetimes. This violence threatens the lives of Native women and the future of American Indian tribes and Alaska Native villages. No area of need is more pressing or compelling than the plight of American Indian and Alaska Native women and children fleeing physical and sexual violence.

On March 7, 2013, President Obama signed into law the Violence Against Women Reauthorization Act (VAWA 2013) which recognizes and affirms the inherent sovereign authority of Indian tribes to exercise Special Domestic Violence Criminal Jurisdiction (SDVCJ) over all persons—Indian and non-Indian—who commit crimes of dating violence, domestic violence, and violations of protection orders within Indian Country. The bill authorized \$5 million for tribes to implement the new VAWA provisions and otherwise strengthen tribal justice systems.

[Dollars in millions]

Name of Grant Program	Fiscal year 2013 enacted *	Fiscal year 2014 budget	Present fiscal year 2015	Authorized level
COMMERCE, JUSTICE, SCIENCE APPROPRIATIONS				
STOP—Grants	\$176.18	\$193	\$193	\$222
Sexual Assault Services Program (SASP)	23.30	27	27	40
Services for Rural Victims	34.02	36	33	50
Civil Legal Assistance for Victims	38.22	37	42.5	57
Transitional Housing (OVW)	23.30	24.75	25	35
Grants to Encourage Arrest Policies	46.61	50	50	73
CHOOSE Youth Program	4.66	5	5	15
SMART Program	4.66	5	5	15
Grants to Support Families in the Justice System ..	14.45	15	16	22
Research on Violence Against AIAN Women	0.93	1	1	1

[Dollars in millions]

Name of Grant Program	Fiscal year 2013 enacted *	Fiscal year 2014 budget	Present fiscal year 2015	Authorized level
COMMERCE, JUSTICE, SCIENCE APPROPRIATIONS				
Nat'l Clearinghouse on Sexual Assault of AI/AN				
Women	0.47	0.5	0.5	0.5
National Tribal Sex Offender Registry	0	0	—	1
Tribal Jurisdiction	—	—	—	5.0
VAWA CJS Total	388.24	417.0	422.5	569.5

* With sequestration and rescissions.

DEPARTMENT OF COMMERCE

Provide \$35 million for the Minority Business Development Agency (MBDA).—Created by Executive Order in 1971, the MBDA was established to support minority business development centers and received funding of almost \$63 million to carry out this mission. Since then, MBDA's funding has shrunk by over 50 percent to an estimated \$30.5 million for fiscal year 2013 and \$29.3 million for fiscal year 2014. After MBDA revamped its cooperative assistance grants to Minority Business Centers (MBCs), the Native American Business Enterprise Centers (NABECs) were eliminated and their services were consolidated with the MBCs. About \$13 million of MBDA's budget is disbursed to the MBCs to provide business consulting; advice on business financing; and some procurement technical assistance to minority businesses, entrepreneurs, and tribal enterprises.

With the service gap created by the elimination of NABECs, the need for an increased level of funding for MBDA is even greater. MBDA must sustain and expand support for these centers, which provide important assistance to businesses that help them grow and develop, thereby creating a stronger private sector and healthier national economy. The MBDA also supports minority contractors' teaming efforts to pursue Federal contracts, directs efforts to track minority business data, collaborates with the Office of Native American Affairs, and is increasing its focus on global trade.

Fund the Office of Native American Affairs (ONAA) at a minimum of \$1.25 million as part of the Commerce Department Management Budget.—In the late 1990s, the Secretary of Commerce established ONAA within the Secretary's office that was codified by the enactment of the Native American Business Development, Trade Promotion and Tourism Act of 2000 (Public Law 106-464) (the 2000 Act). Since then, funding for the Office has been partial and very limited. In order to carry out its mission, ONAA must receive adequate support to implement Indian policy initiatives and expand Native American business development initiatives both domestically and internationally. Funding made available through Commerce's Departmental Management budget would help ONAA's efforts, particularly given the reduced focus of MBDA on specific Native American business assistance.

CONCLUSION

Thank you for your consideration of this testimony. For more information, please contact Natasha Anderson, Staff Attorney, at nanderson@ncai.org, Amber Ebarb, NCAI Budget and Policy Analyst, at aebarb@ncai.org or Brian Howard, Legislative Associate, at bhoward@ncai.org.

PREPARED STATEMENT OF THE NATIONAL COURT APPOINTED SPECIAL ADVOCATE ASSOCIATION

Chairwoman Mikulski, Vice Chairman Shelby, members of the subcommittee, thank you for the opportunity to submit remarks on the Department of Justice (DOJ) fiscal year 2015 budget. On behalf of the National Court Appointed Special Advocate (CASA) Association's network of 933 State and local CASA and guardian ad litem (GAL) programs in 49 States, including Maryland and Alabama, I strongly urge the subcommittee to fully fund the Court Appointed Special Advocates program through DOJ's Office of Juvenile Justice and Delinquency Prevention at the Congressionally authorized level of \$12 million. This funding, along with significant local and State sources, will be used to expand advocacy on behalf of abused and neglected children, a vulnerable population that is highly at-risk of juvenile delinquency and incarceration.

We appreciate the subcommittee's long standing recognition of the overwhelmingly positive impact CASA programs have in the lives of abused and neglected children, and we urge your ongoing support as we strive to achieve our national goal of providing a CASA volunteer for every child in foster care. In the U.S. today, too many of our 646,000 foster youth are going it alone. They want and need advocates to help them reach their full potential, and every day, CASA programs across the country provide an important voice in the lives of children beyond the walls of the courtrooms in which their cases are heard.

The effectiveness of the CASA/GAL program model in achieving positive, long-term outcomes for children in care is well documented and well supported. CASA volunteer advocates are an influential protective factor in children's lives. A child with a CASA/GAL volunteer is more likely to receive needed counseling services, less likely to experience disruptive changes of placement, and more likely to pass all their courses in school. As community members with a vested stake in the long-term success of the children they serve, CASA volunteers advocate against tremendous odds for the fundamental right of every individual to live in a safe and secure environment.

As the subcommittee is acutely aware, foster youth face an extensive range of risk factors, including a much greater chance of juvenile delinquency and incarceration than the general youth population. According to data last collected by the National Institute of Justice in 2011, children who suffer from abuse and neglect are 28 percent more likely to be arrested as adults and 59 percent more likely to be arrested as juveniles.

Through smart, targeted investments in a program that provides a stable, supportive advocacy-based presence in children's lives, together, we can stem the tide of youth delinquency in this Nation and move our young people—high-risk foster youth included—toward a safe and promising future. The value of saving a high risk youth from a life of crime has been reliably estimated to range between \$2.6 and \$5.3 million. Our programs provide one-on-one advocacy and mentoring throughout the course of a child's case that is critical to keeping the lives of foster youth on a positive trajectory and away from a devastating future.

As with a number of programs across the Federal Government, the Court Appointed Special Advocate program has weathered its share of funding cuts over the past few fiscal years as Congress works to achieve deficit reduction. I assure you that our programs have left no stone unturned in our quest to serve children, but we need the support of Congress to help vulnerable children, a population to whom we all share a significant obligation. These Federal funds, which are leveraged with other State and local resources, have been a significant driver of increased service to children.

While CASA funding has decreased by half of the fiscal year 2011 enacted level, the need for effective advocacy for foster youth in the courtroom—and the need for the robust training, technical assistance, and other resources that make this advocacy possible—has not at all diminished. Additionally, CASA/GAL programs across the Nation are reporting that their cases are increasingly complex and challenging—including cases involving the overmedication of foster youth as just one example—which require additional time, energy, and resources, all of which are stretched significantly across our programs.

We ask the subcommittee to provide funding for a program that not only transforms the lives of foster youth, but is also an effective cost investment of taxpayer dollars at a time in which every single one of those dollars must be spent wisely. CASA/GAL programs, in addition to advocating for a child's best interest in the courtroom and ensuring that he/she has the services needed to succeed, work to move the child out of the foster care system as quickly and as safely as possible. Less time in care is a better outcome for the child and it is a better outcome for State governments and Federal child welfare programs, compared to the cost of keeping a child in care.

CASA volunteers save tens of millions of dollars in child welfare and other costs to society, as we work to keep at-risk youth out of the burgeoning prison system and on the path to promising, fulfilling futures. More than 90 percent of children with CASA volunteers never re-enter the foster care system. By reducing long-term placements, subsequent victimization, and reentry into the system, the CASA program substantially reduces foster care costs and significant costs associated with long-term services for children who have endured traumatic and difficult circumstances through no fault of their own.

To put this in simple accounting terms, it costs the Federal Government \$3,250 per month to keep a child in the foster care system. Every child with a CASA volunteer saves the taxpayer approximately \$24,375 per year, because our volunteers are moving these children safely out of the system. While a more efficient use of re-

sources is of paramount importance, let me also emphasize the value of our work in purely human terms. Every day a child spends in the foster care system, is a day he or she can never get back. It is a day that they are unable to do many of the things that we take for granted in the lives of our own children—making lasting friendships, forming a bond with a teacher, enjoying the movements of everyday life with a loving family that is truly their own. All children deserve a safe, nurturing, permanent home.

I would also like to thank the subcommittee for continuing to provide strong funding for DOJ's competitive youth mentoring grants program. This funding is critical to strengthening and expanding the reach of organizations across the country that positively impact the lives of at-risk and underserved youth through one-on-one mentoring. The mentoring programs funded through these grants build needed assets in young people and change their lives for the better.

We again ask the subcommittee to fund the Court Appointed Special Advocates program at \$12 million in fiscal year 2015 to address an overwhelming need for advocacy on behalf of abused and neglected children. Thank you for your consideration of our request.

PREPARED STATEMENT OF THE NATIONAL CRIME PREVENTION COUNCIL (NCPC)

Thank you, Chairwoman Mikulski and Ranking Member Shelby, for the opportunity to submit testimony to the subcommittee in support of funding for the U.S. Department of Justice's crime prevention programs. In fiscal year 2015, we respectfully urge the subcommittee to appropriate \$25 million for the Byrne Memorial Competitive Grants Program, \$15 million for the Economic, High-Technology, Cybercrime Prevention program, and \$75 million to continue the Comprehensive School Safety Program.

Within the funds for the Byrne Competitive Grants program, we respectfully request that the subcommittee provide specific guidance to the Office of Justice Programs (OJP) to continue its historic support for two essential crime prevention functions. The first is ensuring the existence of independent, non-governmental national repositories of best practices and evidence-based crime prevention. This ensures that State and local law enforcement have access to the best materials on effective crime prevention practices—to get the best possible outcomes from the subcommittee's investments in Byrne Justice Assistance Grants and in OJP's other State and local assistance programs. The second essential function is a strong national public education campaign to reach the general public with evidence-based crime prevention messages—a tactic which has been shown to have tremendous impact in changing individual and collective behavior to prevent crime.

We also want to applaud the Department of Justice (DOJ) for a well thought out, comprehensive grants program that supports the work of its Intellectual Property Crimes Task Force. In the last few years, OJP has awarded grants to State and local law enforcement to encourage strong investigations and effective prosecutions of Intellectual Property crimes, which cost our economy 373,000 jobs and \$58 billion per year, and pose serious threats to Americans' health and safety.

The Department also wisely included a demand reduction component to this comprehensive effort. In partnership with DOJ, late in 2011 NCPC launched a public education campaign to increase public awareness of the consequences of purchasing counterfeit and pirated products. The campaign addresses the impacts to health and safety, support for organized criminal elements, and job loss. We hope the subcommittee will support this effort and encourage OJP to continue this sensible approach of including demand reduction and public education in the effort to fight Intellectual Property crime. Grants through the Economic, High-Technology, Cybercrime Prevention program can continue this important purpose.

Like all Americans, we remain troubled by the increase of violent activity in our schools, and support efforts to continue the Comprehensive School Safety Initiative with \$75 million in fiscal year 2015. School safety must be addressed through a sustained commitment nationally—both to reassure schools that they have a partner, and to reassure parents that work is being done to make their schools a safe place for their children. Though new, the initiative is a research-focused plan to increase the safety of schools nationwide. DOJ has just begun work to detail the root causes of school violence, develop technologies and strategies for increasing school safety, and provide pilot grants to test innovative approaches to enhance school safety across the Nation. Significant funding in fiscal year 2015 will continue this commitment and realize the gains made in fiscal year 2014.

School safety has been at the heart of NCPC's work for much of our history. Our signature Be Safe and Sound in School (B3S) initiative combines target hardening

and Crime Prevention Through Environmental Design techniques with concrete ideas on engaging the school and surrounding community in activities to promote a culture of respect in schools. These techniques include: participation by students, staff, parents, teachers and administrators in strategic planning for school safety; improved surveillance and maintenance; training; and ongoing evaluation.

Background.—NCPC's mission is to be the Nation's leader in helping people keep themselves, their families, and their communities safe from crime. Through different media and methods, NCPC enables communities and law enforcement to work together to create safe environments, especially for children and youth. Established in 1980, the NCPC-led National Citizens' Crime Prevention Campaign and related initiatives have featured our beloved icon McGruff the Crime Dog® and his signature message that beckons all Americans to "Take a Bite Out of Crime.®"

McGruff has had lasting impact. Eighty-three percent of adult Americans recognize McGruff. Over 80 percent of kids would follow his advice on crime prevention. Over 90 percent of adults describe McGruff as informative, trustworthy, and effective. And 72 percent think he's cool. Further, Federal resources invested in the National Citizens' Crime Prevention Campaign have been well leveraged. For every \$1 of Federal investment, the Campaign generated \$100 or more in donated media. Over its history, the Campaign has produced \$1.4 billion worth of donated advertising.

Since the inception of the Campaign, NCPC, a private, non-profit, tax-exempt 501(c)(3) organization, has maintained a close partnership with DOJ and local law enforcement. Together we create cost-effective and award-winning public education campaigns, launch groundbreaking and comprehensive support initiatives for crime-besieged cities, provide training and technical assistance, produce and distribute hundreds of ready-to-use publications filled with practical tips, expand the reach of crime prevention tools through online resources, conduct conferences, and more. Our goal is to give Americans the tools they need on the ground and in the field.

Supporting Crime Prevention Practitioners.—To the greatest extent possible, NCPC designs messages and trains law enforcement, community leaders, and other individuals on crime prevention practices with proven outcomes based on the highest standards of research. NCPC's commitment to promoting the most effective crime prevention tools is based on our capacity to monitor crime prevention research and translate that research into practice.

With additional support from DOJ, NCPC provides National Training and Technical Assistance to address the nationwide gap in education opportunities for new law enforcement officers, which was a result of local department cuts in training and crime prevention budgets. NCPC has also recorded or released five podcast interviews with experts in the field on topics such as Neighborhood Watch and Citizen Corps, crime-free multi-housing, and what a crime prevention officer is worth. Soon NCPC will develop a toolkit for new officers, which will include PowerPoint presentations, fact sheets, and resources on basic crime prevention that they can share with their communities.

National Crime Prevention Activities.—NCPC works closely with State and local law enforcement and their national organizations to anticipate and respond to persistent crime challenges, emerging crime trends, and changing crime prevention needs nationwide.

Through a Byrne Competitive grant, NCPC is working with DOJ and a number of other partners to conduct a crime prevention awareness campaign to address the dangerous and costly problem of intellectual property (IP) crime, such as pirating and counterfeiting. Our goal for the campaign is to engage the public in demand reduction and decrease threats to public health and safety. We are also working with law enforcement to bring the consequences of IP theft to the forefront for the public. Through focus groups and survey assessments NCPC uncovered that consumers do not expect to get caught. They do not believe that law enforcement is overly concerned about this problem because if law enforcement were concerned, the public would be more aware of the crime and subsequent IP prosecutions. In order to educate the public, we need to encourage and equip those officers and agencies who understand the impact to talk about IP investigations and arrests in the same way they would about a big drug bust or capture of a violent criminal.

We are also working on several other public education campaigns to help people protect themselves, particularly from fraud. In 2013, NCPC hosted a virtual conference for consumers and organizations that support them in avoiding and recovering from mortgage fraud. It provided valuable information to homeowners on how to protect themselves against mortgage scams. This complements our individual- and community-focused work on foreclosure fraud and vacant property crime. Its reach will soon be expanded through public service advertising.

Additionally, we are tailoring crime prevention information to the overlooked population of young people ages 18 to 24. As teens and young adults leave their homes to pursue education and employment for the first time they are often the victims of criminals and scams that prey on their inexperience. That is why we are developing programs to help these young people “Be Smarter,” live safely and protect themselves as they handle their first credit cards, first apartments, first cars, first college campuses, first vacations on their own, and first jobs.

We are providing practical, ready-to-use resources on crimes against senior citizens. Senior citizens are vulnerable to telemarketing and financial fraud that threaten their financial stability. We are also educating the public on the under-reported crime of elder abuse. An alarming number of senior citizens are physically, emotionally, sexually, or financially abused—frequently by people they trust. We are striving to ensure that people of all ages can speak out and act to prevent abuse and victimization and live in safe communities. On April 10, we held a virtual conference to protect senior citizens from physical abuse and financial exploitation. For law enforcement and direct service organizations, this is also a wonderful opportunity to learn how to better serve the victims of such scams. It remains available online at <http://engage.vevent.com/rt/ncpcsafeseniors>.

Four years ago, NCPC set out to work on a new crime prevention initiative that would “inspire us to live in ways that embody respect... where we live, learn, work, and play.” That is our vision for the Circle of Respect. Lack of respect contributes to school violence, property theft, online aggression, and cyberbullying among teens. Studies show that young people join gangs because it is the only place they get respect.

The Circle of Respect is a national initiative that engages and challenges children, young people, adults, families, and communities to promote a culture of respect that transcends what has been a traditional tolerance of unacceptable behavior. The Circle of Respect website will also host VOICES—a user-generated site for teens to speak about personal experiences of respect within their families, peers, and communities. We will use their submitted artwork, poetry, short stories, music, and films to guide development on respect-centered materials for other youth, service providers, and crime prevention practitioners.

When McGruff and NCPC came on the scene almost 35 years ago, community groups and individual citizens thought that crime prevention was the sole responsibility of law enforcement. Working together with DOJ, local law enforcement, and communities all across the Nation, we have “moved the needle” so that today, we know that crime prevention is everyone’s business. McGruff has carried the message that all people—whether they are 7 or 107—can do their part to prevent crime and make America safer. That’s what “Take A Bite Out of Crime” means. Three out of four adults now know they have a personal responsibility for helping to keep their communities safe from crime.

New forms of crime are growing, such as identity theft, mortgage and foreclosure fraud, and cybercrimes of every stripe. We must effectively deploy our tightening resources to combat crime. Crime extracts a significant financial cost—approximately \$3.2 trillion per year—borne by victims and their families, employers, communities, and taxpayers. In 2011, governments at all levels spent more than \$236 billion for police protection, correctional facilities, and legal and judicial costs—corrections alone costs \$81 billion annually. In 2010 violent crimes (murder, rape, assault, and robbery) cost Americans \$42 billion. In 2011, consumers lost an estimated \$1.5 billion to fraud. There is also an unknowable opportunity cost both financial and social. We cannot afford these upwardly trending costs in today’s economy. Research concludes that crime prevention initiatives are cost effective; we can pay modest costs now or exorbitant ones later.

Crime Prevention in fiscal year 2015.—In an era of tightening budgets, investment in prevention initiatives reduces the need for government spending on intervention, treatment, enforcement, and incarceration. Therefore, investment in crime prevention has never been more critical. There is no doubt that when individuals, community groups, and businesses work closely with law enforcement to help keep watch over their communities, crime is prevented.

Though most crime prevention activities are local, the Federal Government sets the tone by promoting crime prevention strategies that work. It provides leadership through funding, education, technical assistance, and support for State and local programs. Research and identification of what works, and translation and transmission of evidence-based best practices and lessons learned to and among the field require national leadership.

Thank you again for allowing NCPC to submit written testimony and for your ongoing commitment to State and local crime prevention programs. NCPC is proud to have worked with Congress, DOJ, State and local law enforcement and other agen-

cies, and the private sector in the past, and we believe we can continue to be an effective partner going forward. As Congress continues its work to prevent crime, please consider NCPC and McGruff as a resource and as your active collaborators in building safer communities.

PREPARED STATEMENT OF THE NATIONAL ESTUARINE RESEARCH RESERVE
ASSOCIATION

Chairman and members of the subcommittee, my name is William Reay and I am the Director of the Chesapeake Bay National Estuarine Research Reserve in Virginia, administered by the Virginia Institute of Marine Science. I submit this testimony in my capacity as President of the National Estuarine Research Reserve Association (NERRA). NERRA is a not-for-profit scientific and educational organization dedicated to the protection, understanding, and science-based management of our Nation's estuaries and coasts.

For fiscal year 2015, NERRA strongly recommends the following reserve system programs and funding levels within the National Oceanic and Atmospheric Administration (NOAA):

NERRS Operations	\$22.9 million
NERRS Procurement, Acquisition, and Construction (PAC) ...	\$1.7 million

The National Estuarine Research Reserve System (NERRS) program and its sites bring the strength of NOAA science and stewardship to important coastal regions across the Nation. NERRS encompasses 28 protected reserves located in estuaries that are home to our most productive habitats and populated communities—that support science-based coastal resource management, research, and education to meet national priorities as mandated by Congress in the Coastal Zone Management Act (CZMA) of 1972. The States have been entrusted to operate and manage NOAA's program in 22 States and Puerto Rico, where over 1.3 million acres of land and water are protected in perpetuity. What distinguishes the NERRS is the community and State implementation of programs and local control of these places that form this Federal-State partnership program.

The administration's fiscal year 2015 request for the NERRS is a total of \$21.3 million. This amount will result in a reduction of funding to each State because a 29th reserve, located in Hawaii, will be added this year. Therefore, the administration's budget represents reduced funding to States from last year's appropriation (enacted fiscal year 2014 budget at \$21.3 million). After reviewing the detailed NOAA budget request sent to the Congress, it is clear that States implementing this national program are left short-changed in their ability to fulfill the vision of Congress in its creation of the NERRS program.

NERRA is deeply concerned with the administration's funding levels that we believe are inconsistent with key tenants of NOAA's own strategic plan—specifically, enhancing community and economic resiliency and strengthening science in support of coastal management. The administration's fiscal year 2015 requested funding level will diminish the NERRS's capacity to deliver important research, education and training to its State, local, and regional partners.

First, the administration budget requests flat-funds the program at the fiscal year 2014 level of \$21.3 million. Flat-funding in the face of the program adding a 29th reserve in fiscal year 2015 will in effect result in reduced budgets for each of the current reserves. This funding level is problematic because in addition to the new Hawaii reserve that is on track to join the system in fiscal year 2015, there are two more known—one in Louisiana, and one in Connecticut—in process for future years. Equally troubling is the absence of any mention of the expected expansions in NOAA's fiscal year 2015 budget submission. In addition to projected losses to the States operating NERRS sites, the administration's budget will mean less funding for science and monitoring of sea level rise change impacts at a time when community need is great.

Investments in the NERRS are dollar-smart because funding for the program is matched by the States and leveraged significantly, resulting in an average of more than five other local and State partners contributing to the work at each reserve. Funding of \$22.9 million for the NERRS would be a minimal level to provide each reserve with the necessary funding to assist our coastal communities, industries and resource managers to enhance coastal resiliency in a changing environment.

Second, within the budget request for NOAA, the administration is again proposing the elimination of funding for the Bay-Watershed Education and Training (B-WET) regional programs—a reduction of \$7.2 million in funding. The rationale provided for program reductions is misleading in stating that NOAA education expe-

riences will continue to be provided by programs including the NERRS. Where States are eligible for B-WET funding, reserves are able to increase their educational capacity by as much as 50 percent, as documented in the Chesapeake Bay NERR (VA) for example. NERRA strongly opposes the cut of B-WET regional programs and any of the other NOAA STEM educational programs.

MAKING COASTS MORE RESILIENT AND SAVING THE NATION DOLLARS THROUGH THE
NATIONAL ESTUARINE RESEARCH RESERVE SYSTEM

NERRS assists our coastal communities, industries and resource managers to enhance coastal resiliency in a changing environment. As severe weather events become more common, Federal, State, and local officials are recognizing that estuaries have the capacity to provide green resilience infrastructure. Through NERRS, NOAA can tailor science and management practices to enable local planners to use estuarine habitat as a tool for resilience and adaptation.

Through science and science-based management of more than 1.3M acres of protected land, NERRS provides numerous benefits to communities that result in improved water quality, increased upland flood and erosion control, and improved habitat quality that support local fisheries and provide storm protection to coastal communities. The approximate \$10 million Federal contribution in science supports NERRS research and a coastal observing system capacity that informs regional policy that saves communities money. For example, research conducted by the Rookery Bay NERR at Naples, Florida, resulted in modified best management practice training for Florida's landscape industry, thus saving local businesses hundreds of thousands of dollars. It is important to emphasize that the work at each reserve goes beyond its property boundaries and creates a number of environmental and economic benefits for the communities and regions where they exist.

Additionally, NERRS supports community planning initiatives by providing training to local officials and residents about critical resource management issues such as impending hazards, storm water control, shoreline management, and habitat restoration. The NERRS training is designed to help people on the ground and to get resources in the hands of the community—all of which amount to saving States and local communities more than \$13.4 million annually.

The reserves have a tremendous positive impact on our economy including work to maintain clean water, keep the seafood and fishing industry viable, provide opportunities for local tourism, and provide communities with practical help and science-based information to address coastal hazards. Estuaries, where rivers meet the sea, provide nursery ground for two-thirds of commercial fish and shellfish. Protected and well managed estuaries including those managed by the NERRS keep commercial and recreational fishermen sustainable, contributing over \$2.7B to the shellfish and seafood industry in 2012 and 2009 respectively in States that have a reserve and over \$28 billion in ocean-dependent industries in 2011 along our coasts (Source: National Ocean Economic Program and NOAA Fisheries, Office of Science and Technology). In 2010, coastal counties that included a NERR supported more than 468,000 jobs in ocean-dependent industries (Source: Bureau of Labor Statistics; NOAA).

Protection of these important estuaries within the NERRS can have a significant impact on specific ecologically and economically important species. For example, Apalachicola Bay, Florida, home to one of three reserves in the State, produces approximately 90 percent of Florida's oyster harvest and 10 percent of the total U.S. harvest (Source: Wilber, 1992).

Beyond the economic benefits to our national, State, and local economies, reserves operate national infrastructure that brings science to the management of our coasts and helps our communities prepare for weather and accident related disasters. NERRS is a leader in coastal monitoring that provides immediate and long-term data to assess water quality in support of State environmental programs and water dependent industries, enhance understanding of harmful algal blooms, guide and track habitat restoration and reconstruction strategies, identify ecosystem impacts from changing sea levels and temperature, aid in weather and marine forecasting, and improve emergency and insurance industry response to storm surges and inundation.

Being integral members of coastal communities is a key element to NERRS successful delivery of science and monitoring data as evidenced in the Deep Water Horizon Oil Spill of 2010, a coastal area that is home to five reserves. We know that the billion dollar tourism and seafood industries depend upon clean water, and during the Deep Water Horizon Oil Spill crisis the communities and industries along the Gulf Coast relied on disaster support efforts including the wide variety of data supplied by the five Gulf Coast NERRs, some of which continues today.

Each reserve receives operation funds from NOAA that are matched by the States and are used to leverage significantly more private and local investments that results in each reserve having, on average, more than five program partners assisting to implement this national program. In addition, the program significantly benefits from volunteers that are engaged in habitat restoration, citizen science and education which offset operation costs at reserves by donating thousands of hours. Annually, volunteers contribute more than 100,000 hours to the NERRS with an estimated value of over \$2.2 million.

NERRS have made countless economic contributions to their local communities, States, and the Nation. In the aftermath of Superstorm Sandy, the Jacques Cousteau Reserve in New Jersey was cited by CNN as being “a natural sponge . . . for absorbing storm and tidal surges.” (November 3, 2012). In the category of eco-tourism, more than 2 million people annually visit the NERRS: an estimated more than \$20 million is generated annually in direct benefit from these visitor use opportunities (estimated using Federal, State, and local park entry fees). Visitors to our reserves walk and snowshoe the trails, paddle the waterways, watch wildlife, hunt and fish, engage in community stewardship and restoration programs, and participate in numerous public outreach activities and events at each of our 28 reserves.

In addition, NERRS strategically contributes more than \$4.9M annually in education relief to offset costs to communities that face tight budgets in meeting the needs of local school districts. Through Estuaries 101 curriculum, NERRS prepares the next generation workforce in the key disciplines of science, technology, engineering and math (STEM education). The B-WET regional program funding is money that is spent in addition to the annual NERRS money invested in the education programs. The NERRS educate more than 83,000 children annually.

The NERRS Procurement, Acquisition, and Construction (PAC) funding is designated for land conservation, through acquisition of priority lands, and essential facilities construction and upgrades. This competitive funding program is matched by State funds and has resulted in not only the preservation of critical coastal lands as described above, but also in the increase of construction jobs. For example NERRS creates more than 60 jobs for each \$1 million of Federal construction (PAC) money spent. In addition, NERRS leveraged investments of more than \$115 million to purchase over 30,000 acres of coastal property over the last 12 years.

CONCLUSION

NERRA greatly appreciates the past support the subcommittee has provided. This support is critical to sustain and increase the economic viability of coastal and estuary-based industries.

With NERRA's fiscal year 2015 request of \$22.9 million for the NERRS and \$1.7 million for NERRS PAC, the program will be able to maintain delivery of credible scientific research that contributes to the resiliency of the natural and built communities and that yields a high rate of return to the 28, soon to be 29, coastal gems around the country. We urge the subcommittee to support this request, and to restore funding for the B-WET regional programs.

Thank you for the opportunity to present these remarks. On behalf of NERRA, I would be happy to answer questions or provide additional information to the subcommittee.

PREPARED STATEMENT OF THE NATIONAL MARINE SANCTUARY FOUNDATION

FISCAL YEAR 2015 APPROPRIATIONS REQUEST

The National Marine Sanctuary Foundation (NMSF) works with Congress and the National Oceanic and Atmospheric Administration (NOAA) to connect fellow citizens to the underwater places that define the American ocean—the National Marine Sanctuary System. We remain concerned that NOAA's Office of National Marine Sanctuaries (ONMS) has not received sufficient appropriations for several budget cycles. Recognizing the coastal job creation benefits provided by sanctuaries, NMSF respectfully requests that the subcommittee remedy this situation by appropriating:

- \$5.5 million to the National Marine Sanctuary Program—Construction/Acquisition Base, within NOAA's Procurement, Acquisition, and Construction account; and
- \$51 million to the Sanctuaries and Marine Protected Areas Base, within NOAA's Operations, Research, and Facilities account.

Joining NMSF in this request is the national network of community-based, non-profit organizations that support sites within the sanctuary system. On behalf of

their members, the Channel Islands Sanctuary Foundation (California), Cordell Marine Sanctuary Foundation (California), Farallones Marine Sanctuary Association (California), Friends of Thunder Bay National Marine Sanctuary (Michigan), Hawai'i National Marine Sanctuary Foundation (Hawaii), Monterey Bay Sanctuary Foundation (California), Olympic Coast Alliance (Washington), Sanctuary Friends Foundation of the Florida Keys (Florida), and Stellwagen Alive! (Massachusetts) support funding the National Marine Sanctuary System at these levels (Appendix I).

While we recognize the challenges of providing increased funding in the current budget climate, we believe that the President's fiscal year 2015 budget request fails to address critical sanctuary contributions to job creation and economic growth. It also continues a disturbing trend of underfunding the sanctuary program—despite signals from Congress that the program warrants additional funds.

THE NATIONAL MARINE SANCTUARY SYSTEM AND NOAA'S OFFICE OF NATIONAL MARINE SANCTUARIES

Encompassing over 170,000 square miles of marine and Great Lakes waters, the National Marine Sanctuary System includes 13 national marine sanctuaries and Papahānaumokuākea Marine National Monument. Sanctuaries protect vibrant ocean ecosystems, conserve essential habitat for endangered and commercially important marine species, and safeguard historical and cultural resources.

Congress provides funding to ONMS through separate accounts for operations and procurement; both are vital components for maintaining a robust and effective sanctuaries program.

- The Operations, Research and Facilities (ORF) account funds operation of a variety of education, research, monitoring and management programs managed by ONMS, including development and implementation of research and monitoring programs, cultural resource programs, education and outreach activities; permitting; and management of volunteer programs and citizen advisory councils.
- The Procurement, Acquisition and Construction (PAC) account funds the purchase and overhaul/restoration of assets managed by ONMS, including construction of vessels, visitor facilities, and exhibits; development of partnerships for education and outreach; and safety improvements and repairs to NOAA-owned facilities.

NATIONAL MARINE SANCTUARIES ARE UNIQUE AND SUCCESSFUL OCEAN CONSERVATION TOOLS

Generations of Americans have grown up, worked jobs, and supported their families on the waters of our national marine sanctuaries. Among all the statutes enacted by Congress to govern ocean resources, the National Marine Sanctuaries Act stands alone in terms of the comprehensiveness, community participation, transparency and balanced approach provided for all stakeholders. An independent legal analysis concluded that “the National Marine Sanctuaries Act is the best existing mechanism available for preserving ocean ecosystems,” due to sanctuaries’ commitment to public participation, community engagement, and use of a place- and ecosystem-based approach.¹

Unlike other ocean resource laws, the National Marine Sanctuaries Act protects nationally significant places and their natural, historical, and cultural riches. Experience shows that this approach is vital to maintaining the healthy seascapes that underpin our productive economies, supporting thousands of businesses while maintaining public access for recreation, research, and education.

NATIONAL MARINE SANCTUARIES ARE ECONOMIC ENGINES FOR COASTAL COMMUNITIES

National marine sanctuaries are vital to the success of coastal businesses and job creation. According to the National Ocean Economics Program, 70 percent of ocean and coastal employment in the tourism and recreation sector depend on visitor opportunities requiring clean beaches, clean water, and abundant fish and wildlife promoted by national marine sanctuaries. Benefits of funding national marine sanctuaries far outweigh the Federal outlays that support them:

¹Perkins Coie LLP. (2013) “Area-Based Management of Marine Resources: A Comparative Analysis of the National Marine Sanctuaries Act and Other Federal and State Legal Authorities.” Available: <http://www.nmsfocean.org/files/ABMReport.pdf>.

- Over 64,000 jobs and \$4.5 billion in GDP contributed annually from the marine tourism and recreation sector in the two counties adjacent to Florida Keys National Marine Sanctuary.²
- Over \$126 million in whale watching revenue and 600 jobs at 31 businesses resulting from less than \$2 million invested in the Stellwagen Bank National Marine Sanctuary off of Massachusetts.³
- 2,100 jobs and a \$291 million budget from marine science and education at the Monterey Bay National Marine Sanctuary, more than 100 times the \$3 million investment by taxpayers.⁴

NATIONAL MARINE SANCTUARIES START AND STAY IN LOCAL COMMUNITIES

Public participation is a hallmark of the sanctuary program. Coastal communities have a controlling influence on sanctuary priorities to ensure unique, local circumstances are addressed. All sanctuary rules and regulations are developed on a site-by-site basis, and, from the outset, sanctuaries are designed to accommodate multiple uses of the ocean.

National marine sanctuaries are created by and for the people: citizens and communities around the Nation recognized the benefits of sanctuaries and expressed strong interest in establishing sanctuaries in their own coastal waters. Over 700 Sanctuary Advisory Council representatives from the fishing, tourism, and maritime commerce industries; Tribes, State and local government; and researchers, educators, and conservationists help manage sanctuary operations. Over 100,000 hours are contributed by local sanctuary volunteers each year.

NATIONAL MARINE SANCTUARIES AND EDUCATION

Through education and outreach programs, sanctuaries function as living classrooms that provide students with the knowledge and tools to act as responsible ocean stewards. Science, technology, engineering and mathematics (STEM) education programs are a key part of national marine sanctuaries mission. Eliminating important education infrastructure, such as NOAA Office of Education's Bay Watershed Education and Training (B-WET) and NOAA's Teacher at Sea program, hinders the ability to deliver meaningful watershed education initiatives in sanctuaries.

We strongly encourage you to oppose any efforts to move or terminate the Dr. Nancy Foster Scholarship Program (NFSP). The direct connections between students and researchers in sanctuaries are critical for the effectiveness of the NFSP. While we support the administration's efforts to recognize efficiencies across STEM education initiatives, NFSP should remain administered by ONMS, as consistent with the National Marine Sanctuaries Act.

NATIONAL MARINE SANCTUARIES' PROGRAMMATIC OUTLOOK UNDER REDUCED FISCAL YEAR 2015 FUNDING LEVELS

Funding decreases and level-funding have resulted in layoffs and cutbacks to mission critical sanctuary programs. A lack of funds results in cuts to public access and recreation opportunities, cancellation of partnerships that leverage private funds for taxpayer benefit, and the dismantling of successful education initiatives. Budget cuts may result in reduced operations at visitor centers; a lack of contingency funding needed in case of emergencies like oil spills; and additional inoperable vessels. Of particular concern are proposals to reduce funding for necessary and ongoing renovation and construction projects.

The potential impact of reducing sanctuary appropriations goes far beyond the individual sanctuaries themselves: limiting visitor center hours, eliminating research programs, and diminishing enforcement capacities prevents ONMS from fulfilling its statutory mandates, while also reducing the economic activity and job creation from which healthy communities benefit. Funding sanctuaries below recommended levels could force the program to:

²National Ocean Economics Program. (2011) "Ocean Economy Data." Available: <http://www.oceaneconomics.org>.

³O'Connor, Simon *et al* (2009). Whale Watching Worldwide: tourism numbers, expenditures and expanding economic benefits, a special report from the International Fund for Animal Welfare. Prepared by Economists at Large. Available: http://www.ifaw.org/Publications/Program_Publications/Whales/asset_upload_file841_55365.pdf.

⁴Monterey Bay Crescent Ocean Research Consortium. (2012) "Major Marine Sciences Facilities in the Monterey Bay Crescent- 2012." Available: http://web.me.com/paduan/mbcorc/Membership_Info_files/MontereyBayLabs2012-2.pdf.

Reduce public access and recreation opportunities for all Americans.—Funding cuts risk the Florida Keys National Marine Sanctuary's 767 mooring buoys, which provide public access and recreational opportunities within the sanctuary while protecting coral reefs and shipwrecks from anchor damage.

Restrict enforcement operations that protect legal fishermen.—Lack of funding jeopardizes on-water patrols for illegal fishermen in the Florida Keys National Marine Sanctuary. In a single 2013 case, illegal fishermen were charged with over 1,300 violations for pilfering 664 yellowtail snapper from a closed area that was shown to have provided benefits to both fish populations and commercial and recreational anglers.

Cut visitor center hours.—Sanctuary visitor centers act as a public face of NOAA to over 350,000 visitors per year, including Monterey Bay National Marine Sanctuary Exploration Center (California), Mokupāpapa Discovery Center (Hawaii), Great Lakes Maritime Heritage Center (Michigan), and Florida Keys EcoDiscovery Center (Florida).

Cancel education and outreach programs that leverage private funds.—Reduced funding jeopardizes education and outreach activities on the water, at sanctuaries and visitor centers, and in classrooms.

NOAA NEEDS SUFFICIENT FUNDS TO FULFILL ITS RESPONSIBILITIES TO THE AMERICAN PEOPLE

We strongly support the Friends of NOAA Coalition request to fund the agency at no less than \$5.6 billion in fiscal year 2015.—From weather forecasts to fisheries management, NOAA provides decision makers with critical data, products, and services that promote and enhance the Nation's economy, security, environment, and quality of life. Insufficient funding will only serve to diminish the economic activity and job creation that is successfully revitalizing communities across America.

JASON PATLIS,
President and CEO.

LETTER FROM THE NATIONAL MARINE SANCTUARY FOUNDATION, CORDELL MARINE SANCTUARY FOUNDATION, FARALLONES MARINE SANCTUARY ASSOCIATION, FRIENDS OF THUNDER BAY NATIONAL MARINE SANCTUARY, HAWAII NATIONAL MARINE SANCTUARY FOUNDATION, MONTEREY BAY & CHANNEL ISLANDS SANCTUARY FOUNDATIONS, OLYMPIC COAST ALLIANCE, SANCTUARY FRIENDS FOUNDATION OF THE FLORIDA KEYS, AND STELLWAGEN ALIVE!

APRIL 25, 2014.

HON. BARBARA MIKULSKI,
Chairwoman, Appropriations
Subcommittee on Commerce, Justice,
Science, Dirksen Senate Office
Building, Washington, DC.

Hon. RICHARD C. SHELBY,
Ranking Member, Appropriations
Subcommittee on Commerce, Justice,
Science, Hart Senate Office Building,
Washington, DC.

Dear Chairwoman Mikulski and Ranking Member Shelby:

As Congress begins negotiations on the fiscal year 2015 Commerce, Justice, Science, and Related Agencies Appropriations bill, we respectfully request that you prioritize programmatic requests for:

- National Marine Sanctuary Program—Construction/Acquisition, within the National Oceanic and Atmospheric Administration's (NOAA) Procurement, Acquisition, and Construction (PAC) account at a level of \$5.5 million; and
- Sanctuaries and Marine Protected Areas Base, within NOAA's Operations, Research, and Facilities (ORF) account, at a level of \$51 million.

We are deeply concerned by recent decreases to sanctuaries' PAC account, which result in multiple, unfinished construction projects, and prevent NOAA's Office of National Marine Sanctuaries (ONMS) from acquiring the vessels necessary to complete core research, education, and law enforcement missions that simply cannot be accomplished from land alone. Facilities supported by PAC funds anchor tourism and recreation economies and serve as the public face of the government's ocean management. We strongly encourage you to support PAC funds that provide critical links between our ocean and the millions of Americans who visit the coast each year.

Among all the statutes enacted by Congress to govern ocean resources, the National Marine Sanctuaries Act stands alone for its comprehensive, community-driven, transparent and balanced approach. While seeking to sustainably protect resources within sanctuaries, the law allows compatible commercial and recreational activities. Sanctuaries serve as economic engines for our communities and busi-

nesses, supporting thousands of jobs and generating billions of dollars in local revenues. Sanctuaries serve as living laboratories for research and centers for civic pride.

Sanctuaries are making essential contributions to marine ecosystem health and coastal job creation, and sufficient ORF funding will allow ONMS to sustain progress to date. ONMS has not received adequate appropriations in past budget cycles, despite the program's increased responsibilities. Lack of funds will force ONMS to cut public access and recreation opportunities, cancel collaborative efforts with museums and universities that leverage private funds for taxpayer benefits, and terminate education initiatives. We strongly encourage you to ensure that funding for these priorities is added to the base level for the Marine Sanctuary Program.

Closing visitor centers, eliminating research programs, diminishing enforcement capacities, and abolishing education initiatives will prevent ONMS from implementing management plans—driven and informed by local communities—for yet another year. We strongly urge you to remedy this situation by supporting an overall appropriation of \$56.5 million for sanctuaries in fiscal year 2015.

Thank you for your consideration. We wish you all the best for the remainder of the 113th Congress.

Sincerely,

Jason Patlis, National Marine Sanctuary Foundation; Tom Lambert, Cordell Marine Sanctuary Foundation; Chris Kelley, Farallones Marine Sanctuary Association; Charles N. Wiesen, Friends of Thunder Bay National Marine Sanctuary; Lynette Poncin, Hawai'i National Marine Sanctuary Foundation; Dennis J. Long, Monterey Bay & Channel Islands Sanctuary Foundations; Jill Silver, Olympic Coast Alliance; George Neugent, Sanctuary Friends Foundation of the Florida Keys; and William Grafton, Stellwagen Alive!

PREPARED STATEMENT OF THE NATIONAL NETWORK TO END DOMESTIC VIOLENCE

Chairwoman Mikulski, Vice Chairman Shelby and distinguished members of the Appropriations Committee, thank you for this opportunity to provide testimony on the importance of investing in Violence Against Women Act programs and the Victims of Crime Act. I sincerely thank the Committee for its ongoing support for these lifesaving programs.

I am the President and CEO for the National Network to End Domestic Violence (NNEDV), the Nation's leading voice for victims of domestic violence and their advocates. We represent the 56 State and territorial domestic violence coalitions, their over 2,000 member domestic violence and sexual assault programs, and the millions of victims they serve. Our direct connection with victims and those who serve them gives us a unique understanding of their needs and the vital importance of these continued investments.

The purpose of this testimony is to request an investment of the full authorized amount of \$569.5 million in the Violence Against Women Act (VAWA) and the release of \$1.5 billion from the Victims of Crime Act Fund administered by the U.S. Department of Justice in the fiscal year 2015 Budget.

Incidence, Prevalence, Severity and Consequences of Domestic and Sexual Violence.—The crimes of domestic and sexual violence are pervasive, insidious and life-threatening. In 2011, the Centers for Disease Control and Prevention (CDC) released the first-ever National Intimate Partner and Sexual Violence Survey, which found that domestic violence, sexual violence, and stalking are widespread. Domestic violence affects more than 12 million people each year, and nearly three in ten women and one in four men have experienced rape, physical violence, or stalking in his or her lifetime. The terrifying conclusion of domestic violence is often murder, and every day in the U.S. an average of three women are killed by a current or former intimate partner.¹ The cycle is perpetuated as approximately 15.5 million children are exposed to domestic violence every year.² One study found that men exposed to physical abuse, sexual abuse and adult domestic violence as children were almost four times more likely to have perpetrated domestic violence as adults.

In addition to the terrible cost of domestic and sexual violence to individual victims and their families, these crimes cost taxpayers and communities. According to the Centers for Disease Control, based on 1999 figures, the cost of intimate partner

¹Bureau of Justice Statistics (2008). Homicide Trends in the U.S. from 1976–2005. U.S. Dept. of Justice.

²McDonald, R., et al. (2006). "Estimating the Number of American Children Living in Partner-Violence Families." *Journal of Family Psychology*, 30(1), 137–142.

violence exceeds \$5.8 billion each year, \$4.1 billion of which is for direct healthcare services.³ Translating this into 2012 dollars, based on share of GDP, the annual cost to the Nation is over \$9 billion per year, more than two-thirds of which is for direct healthcare services. In addition, domestic violence costs U.S. employers an estimated \$3 to \$13 billion annually.⁴

Despite this grim reality, we know that when a coordinated response is developed and immediate, essential services are available, victims can escape from life-threatening violence and begin to rebuild their lives. To address unmet needs and build upon their successes, VAWA programs and the Victims of Crime Act fund release should receive significant increases in the fiscal year 2015 Commerce, Justice, Science Appropriations bill.

The Need for Increased Funding to Maintain Programs and Bridge the Gap.—At a Congressional briefing in March, NNEDV released Domestic Violence Counts (the Census), a 24-hour national snapshot of domestic violence services. The report revealed that in just one day in 2013, while more than 66,000 victims of domestic violence received services, over 9,640 requests for services went unmet due to lack of funding and resources. In 2013, domestic violence programs reported that they had laid off nearly 1,700 staff positions, including counselors, advocates and children's advocates, and also had to reduce or completely eliminate over 1,280 services, including emergency shelter, legal advocacy, and counseling. I strongly encourage you to read the Census at www.nnedv.org/census2013 to learn more. Additionally, since 2011, at least 19 local domestic violence programs have been forced to close entirely and sequestration meant that approximately 140,000 more victims were unable to access services last year.

For those individuals who are not able to find safety, the consequences can be dire, including homelessness or continued exposure to life-threatening violence. In order to meet the immediate needs of victims in danger and to continue to prevent and end domestic violence, VAWA funding must be increased and additional funds must be released from VOCA.

VIOLENCE AGAINST WOMEN ACT (VAWA)

Violence Against Women Act (VAWA)—\$569.50 million funding request.—Since its passage in 1994, VAWA has been the cornerstone of our Nation's response to domestic violence. Now in its 20th year, VAWA has contributed to substantial progress toward ending domestic violence. Despite this progress, an unconscionable need remains for victim services. The progress and promise of VAWA, and related programs aimed at addressing domestic and sexual violence, can only be only be fulfilled if the programs receive continued investment through the appropriations process. We have highlighted the following programs as key priorities and we urge you to support full funding for these and all VAWA programs as you work on the fiscal year 2015 CJS bill.

VAWA STOP Program—\$222 million funding request.—VAWA's STOP Grant Program is at the core of effective coordinated community responses to domestic violence and sexual assault. These coordinated responses help hundreds of thousands of victims find safety and get the services they need to start over, while holding perpetrators accountable. As the foundational VAWA program, the STOP program awards funds to every State and territory through a formula-based system. States use this STOP funding for law enforcement, prosecution, and courts training and response. Many States establish special units in law enforcement agencies and prosecutors' offices to address domestic and sexual violence. Victims benefit from services including advocacy, crisis intervention, local crisis hotlines, counseling and support, and victim witness notification. We urge you to provide \$222 million to support these essential, comprehensive services.

Additionally, we urge you to include report language that would exempt the STOP program from the Prison Rape Education Act (PREA) penalty, which would cut 5 percent of the STOP funding in States that are not in compliance with PREA.

Legal Assistance for Victims (LAV)—\$57 million funding request.—Research indicates that the practical nature of legal services gives victims long-term alternatives to their abusive relationships. However, the retainers or hourly fees for private legal representation are beyond the means of most victims of domestic violence, dating violence, sexual assault and stalking. In fact, almost 70 percent of all victims are

³National Center for Injury Prevention and Control. *Costs of Intimate Partner Violence Against Women in the United States*. Atlanta (Georgia): Centers for Disease Control and Prevention; 2003.

⁴Bureau of National Affairs Special Rep. No. 32, Violence and Stress: The Work/Family Connection 2 (1990); Joan Zorza, *Women Battering: High Costs and the State of the Law*, Clearinghouse Rev., Vol. 28, No. 4, 383, 385.

without legal representation. The Civil Legal Assistance for Victims Program is the only federally funded program designed to meet the legal needs of victims. Due to the high demand for these services, the Office on Violence Against Women receives almost 300 applications per year, and only one-third of these are funded. Last year, funding for LAV was cut by \$4 million despite its efficacy and the great demand for these services. Targeted increases to the LAV program are a sound investment in long-term solutions to violence. We urge you to provide \$57 million for this program.

Rural Grant program—\$50 million funding request.—The Rural Grant Program supports services for victims of domestic violence and sexual assault living in rural and isolated areas. Rural victims face unique barriers including lack of access to child care, legal services, and public transportation, under-resourced law enforcement, and a shortage of safe shelter and services. Funding for this program has either been cut or remained stagnant for the last several years despite the great need and a number of States becoming newly eligible through the most recent VAWA reauthorization. We urge you to provide \$50 million for this program.

Transitional Housing program—\$35 million funding request.—This vital VAWA program helps communities in every State offer victims a safe place to begin to rebuild their lives. In just one day in 2013, 5,270 adults and 7,561 children were housed in domestic violence transitional housing programs. On the same day, however, 5,778 requests (60 percent of the unmet requests) for emergency shelter or transitional housing were denied due to a lack of capacity. The extreme dearth of affordable housing produces a situation where many victims of domestic violence must return to their abusers because they cannot find long-term housing, while others are forced into homelessness. Increased investment in the Transitional Housing program will allow more States and localities to ensure that victims do not have to make these unfathomable choices. We urge you to provide \$35 million for this program.

Grants to Encourage Arrest (GTEAP)—\$73 million funding request.—GTEAP helps communities develop and sustain a seamless and comprehensive criminal justice response to domestic violence, enhancing victims' safety and holding perpetrators accountable. GTEAP encourages State, local, and tribal governments and State, local, and tribal courts to treat domestic violence, dating violence, sexual assault, and stalking as serious violations of criminal law requiring the coordinated involvement of the entire criminal justice system. The homicide reduction initiative set aside (\$4 million) is designed to address the risk of homicide of abuse victims, especially those in escalating domestic violence situations. Increased investment in GTEAP at \$73 million will allow communities to continue this lifesaving work.

Sexual Assault Services Program—\$40 million funding request.—The Sexual Assault Services Program (SASP) is the only Federal funding source dedicated to providing direct services to adult and minor victims of sexual violence and is distributed through a State formula grant. Services include hotlines, crisis intervention, advocacy, and accompaniment through medical and legal systems. Increased funding will help eliminate waiting lists and respond to the unmet needs of victims. We urge you to provide \$40 million for this vital program.

Remaining VAWA programs—full funding (see chart below).—All VAWA programs work together to improve the system-wide response domestic and sexual violence and to meet the unique and pressing needs of victims. VAWA programs should be funded at their full authorization levels, as indicated in the table below.

VAWA AND OTHER RELATED PROGRAMS—Appropriations for Fiscal Years 2012, 2013, 2014, and 2015—Campaign for Funding to End Domestic and Sexual Violence

[All numbers are expressed in millions.]—Updated: March 6, 2014

Name of Grant Program	Fiscal year 2012 budget	Fiscal year 2013 budget	Fiscal year 2013 reduced by sequestration and rescissions ¹	Fiscal year 2014 budget	President's fiscal year 2015 budget	Authorized level
COMMERCE, JUSTICE, SCIENCE APPROPRIATIONS						
STOP—Grants to Combat Violence Against Women	\$189.00	\$189.00	\$176.18	\$193.00	\$193.00	\$222.00
Sexual Assault Services Program (SASP)	23.00	25.00	23.30	27.00	27.00	40.00
Services for Rural Victims	34.00	36.50	34.02	36.00	33.00	50.00

VAWA AND OTHER RELATED PROGRAMS—Appropriations for Fiscal Years 2012, 2013, 2014, and 2015—Campaign for Funding to End Domestic and Sexual Violence—Continued

[All numbers are expressed in millions.]—Updated: March 6, 2014

Name of Grant Program	Fiscal year 2012 budget	Fiscal year 2013 budget	Fiscal year 2013 reduced by sequestration and rescissions ¹	Fiscal year 2014 budget	President's fiscal year 2015 budget	Authorized level
Civil Legal Assistance for Victims	41.00	41.00	38.22	37.00	42.50	57.00
Transitional Housing (OVW)	25.00	25.00	23.30	24.75	25.00	35.00
Grants to Encourage Arrest Policies ²	50.00	50.00	46.61	50.00	50.00	73.00
CHOOSE Youth Program ³	5.00	5.00	4.66	5.00	5.00	15.00
SMART Program ³	5.00	5.00	4.66	5.00	5.00	15.00
Grants to Support Families in the Justice System	16.00	15.00	14.45	15.00	16.00	22.00
Violence on College Campuses (Campus Grants)	9.00	9.00	8.39	9.00	11.00	12.00
Protections and Services for Disabled Victims	5.75	5.75	5.36	5.75	5.75	9.00
Elder Abuse Grant Program	4.25	4.25	3.96	4.25	4.25	9.00
National Institute of Justice (NIJ) Research on Violence Against Indian Women	3.00	3.50	3.26	3.25	3.00	—
National Resource Center on Workplace Responses	1.00	1.00	0.93	1.00	1.00	1.00
Nat'l Clearinghouse on Sexual Assault of American Indian and Alaska Native Women	1.00	0.50	0.47	0.50	0.50	1.00
Outreach to Underserved Populations	0.50	0.50	0.47	0.50	0.50	0.50
National Tribal Sex Offender Registry	0.00	0.00	0.00	0.00	—	2.00
Tribal Jurisdiction	0.00	0.00	0.00	0.00	—	1.00
VAWA CJS Total	—	—	—	—	—	5.00
VAWA CJS Total	412.50	416.00	388.24	417.00	422.50	569.50

	Fiscal year 2012 budget	Fiscal year 2013 budget	Fiscal year 2013 reduced by sequestration	Fiscal year 2014 budget	President's fiscal year 2015 budget	Funding request
VOCA Fund Cap ⁴	\$705.00	\$730.00	N/A	\$745.00	\$810.00	\$1.50B
State Victim Assistance Grants	379.00	425.20	N/A	—	—	500.00
Tribal VOCA Funding Stream	—	—	—	—	20.00	20.00
Vision 21 & Trafficking Initiatives	—	—	—	12.50	35.00	35.00

Name of Grant Program	Fiscal year 2012 budget	Fiscal year 2013 budget	Fiscal year 2013 reduced by sequestration and rescissions ¹	Fiscal year 2014 budget	President's fiscal year 2015 budget	Authorized level
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LABOR, HEALTH AND HUMAN SERVICES, AND EDUCATION APPROPRIATIONS

ADMINISTRATION FOR CHILDREN AND FAMILIES

Family Violence Prevention and Services Act (FVPSA) ⁵ / Domestic Violence Shelters	\$129.50	\$129.50	\$121.19	\$133.50	\$135.00	\$175.00
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Name of Grant Program	Fiscal year 2012 budget	Fiscal year 2013 budget	Fiscal year 2013 reduced by sequestration and rescissions ¹	Fiscal year 2014 budget	President's fiscal year 2015 budget	Authorized level
National Domestic Violence Hotline ⁵	3.20	3.20	3.04	4.50	5.00	5.00
CENTERS FOR DISEASE CONTROL						
Rape Prevention and Education	\$41.70	\$41.70	\$39.39	\$38.00	\$38.00	\$50.00
DELTA—Domestic Violence Prevention Enhancement and Leadership Through Alliances ⁵	5.40	5.40	5.13	5.20	5.20	6.00
Preventive Health and Health Services Block Grant (PHHSBG) Sex Offense Set-Aside ⁶	7.00	7.00	7.00	7.00	0.00	7.00
OFFICE ON WOMEN'S HEALTH						
Violence Against Women Health Initiative	\$2.30	\$2.30	\$2.30	\$2.30	\$2.30	\$10.00
L-HHS Total	189.10	189.10	178.05	190.50	185.50	253.00

PLEASE NOTE: This chart will continue to be updated throughout the fiscal year 2015 Appropriations process.

Updates can be found at www.nnedv.org/funding.

¹ Rescissions and sequestration: The L-HHS programs were reduced by a 0.189 percent across the board cut for fiscal year 2012. In fiscal year 2012, VAWA DOJ programs were subject to an across-the-board rescission of 1.877 percent. In fiscal year 2013, most discretionary programs, including those at OWH, were subjected to Sequestration cuts between 5–7 percent. Also, in fiscal year 2013 and fiscal year 2014, the final bills each included a \$12 million rescission from OWH from unobligated or deobligated funds.

² In fiscal years 2012, 2013, and 2014, and in the President's fiscal year 2015 budget, \$4 million has been set aside in GTEAP for a homicide reduction initiative.

³ VAWA 2013 consolidated youth and prevention programs into two programs. Appropriations funded these programs as one consolidated program for the past several years. The chart above divides the amounts given to the Consolidated Youth program into the two new programs to demonstrate the funding history. Both the President's fiscal year 2014 budget and the final fiscal year 2014 bill consolidated these programs and funded them at \$10 million overall. This chart estimates that roughly \$5 million will be spent on each.

⁴ VOCA Notes: State victim assistance grants are a portion of the total VOCA "cap" and are distributed to States on a population-based formula. The total annual amount for State victims assistance grants is determined by a formula and is not specified in Appropriations bills or Presidential budgets. We highlight this portion of VOCA because it funds local victim service programs and is a priority for the field. Vision 21: The President's fiscal year 2014 and fiscal year 2015 Budgets proposed setting aside \$25 million dollars from the amount of money released from the VOCA fund for the Vision 21 initiative, \$20 million for tribal victim services and \$10 million to address trafficking. In the final fiscal year 2014 bill, Congress appropriated \$12.5 million for the Vision 21 initiative from its general CJS funds and not as a set-aside of VOCA funds. We support \$35 million for Vision 21 through CJS funds. Tribal funding: We support the President's request for a VOCA Tribal funding set-aside.

⁵ FVPSA, the National Domestic Violence Hotline, and DELTA are authorized through the Family Violence Prevention and Services Act (FVPSA).

⁶ PHHSBG is authorized through the Public Health Services Act and includes a mandatory set-aside for providing services to rape victims and for rape prevention. The sex-offense set-aside was not cut by sequestration in 2013.

VICTIMS OF CRIME ACT (VOCA) FUNDING

VOCA uses non-taxpayer money from the Crime Victims Fund for programs that serve victims of crime, including State formula victim assistance grants. These funds, which are generated by fines paid by Federal criminals, provide support for services to four million victims of all types of crimes annually, through 4,400 direct service agencies such as domestic violence shelters, rape crisis centers, and child abuse treatment programs. Additional VOCA funds are critically needed to respond to the crisis caused by the dangerous lack of services for victims of domestic and sexual violence.

With an obvious need for increased funding, and a more than ample balance of at least \$11 billion in the Fund, now is the time to establish a long-term, logical and consistent basis for determining the annual VOCA cap in order to release additional money for the purpose Congress intended and for which it has been collected. The balance in the Crime Victims Fund is more than enough to significantly increase VOCA funding without jeopardizing the Fund's future sustainability.

We urge you to request that the committee set the annual VOCA funding release level at no less than the amount deposited into the Fund during the previous full fiscal year. This number is approximately \$1.5 billion for fiscal year 2014. We urge you to release \$1.5 billion from the VOCA fund in fiscal year 2015 to address the needs of victims of crime.

In addition, once at least \$500 million is guaranteed for the State victim assistance grants, we request that there also be a Native American tribal funding stream for victim services. We also request funding for the Office for Victims of Crime's Vision 21 Initiative through CJS appropriations.

CONCLUSION

These programs work together to prevent and end domestic and sexual violence. While our country has made continued investments in the criminal justice response to these heinous crimes, we need an equal investment in the human service, public health and prevention responses in order to holistically address and end the violence. These vital, cost-effective programs help break the cycle, reduce related social ills, and will save our Nation money now and in the future.

PREPARED STATEMENT OF THE NATIVE AMERICAN RIGHTS FUND

The Native American Rights Fund (NARF)¹ submits this written statement for the record. We respectfully request this subcommittee's consideration as you develop the fiscal year 2015 Commerce, Justice, Science and Related Agencies appropriations bill of maintaining funding within the Department of Justice (DOJ), the Office of Justice Program's State and Local Law Enforcement Assistance account, at approximately \$3 million as provided in recent years to the Bureau of Justice Assistance (BJA), within assistance to Indian tribes, for the Tribal Civil and Criminal Legal Assistance, Training and Technical Assistance grant program.

Twenty-five Indian Legal Services programs, which are the Indian program components of the Legal Services Corporation, operate in 23 States. They annually provide both civil and criminal legal representation in tribal courts to hundreds of individual Native American clients, including juveniles, who meet Federal poverty guidelines.² Legal work encompasses a broad array of cases, including domestic violence, *pro se* assistance, family member prisoner visitation and re-entry, child welfare and adoption, employment and home foreclosure assistance.

In addition to individual representation, these Indian Legal Services programs are currently assisting more than 160 tribes and/or tribal judicial systems in such activities as tribal court development and improvement, development of tribal dispute resolution and peacemaker/mediation systems, drafting of civil and criminal codes and rules of procedure and other structural development for court implementation, and training of tribal court and justice systems personnel and tribal court lay advocates and guardians *ad litem*.

Specific project examples with recent funding from BJA include a State-wide tribal court support group; a video-conferencing system for court appearance; development of Domestic Violence ordinances; work with a newly-established Tribal Wellness Drug and Alcohol Court; helping to review a tribal criminal and juvenile justice system and to recommend reforms based on traditional tribal values and restorative justice concepts; assisting juvenile clients who have severe truancy, chemical dependency, and mental health issues to receive education, treatment, counseling, and other holistic wraparound services to avoid out of home placements and further criminal/delinquent behavior and consequences; and partnering with a tribal court and tribal college on a tribal advocacy certificate program.

In many instances, these Indian Legal Services programs have been "on the ground," in these tribal communities, for decades, an integral part of the legal structure of the reservation communities they serve. The programs' representation of individual tribal citizens and training for and assistance to tribal governments and tribal judicial systems help keep citizens safe, help assure that tribal justice systems are grounded in solid codes and laws so that those communities can better attract business investments, and provide economic opportunities by training tribal citizens to work in the justice system as advocates and judges. The Indian Legal Services

¹Founded in 1970, the Native American Rights Fund (NARF) is the oldest and largest non-profit law firm dedicated to asserting and defending the rights of Indian tribes, organizations and individuals nationwide. NARF's practice is concentrated in five key areas: the preservation of tribal existence; the protection of tribal natural resources; the promotion of Native American human rights; the accountability of governments to Native Americans; and the development of Indian law and educating the public about Indian rights, laws, and issues.

²In 2000, Congress enacted the Indian Tribal Justice Technical and Legal Assistance Act (Public Law 106-559), which specifically authorized the Department of Justice to provide grants to "non-profit entities . . . which provide legal assistance services for Indian tribes, members of Indian tribes, or tribal justice systems pursuant to Federal poverty guidelines" [emphasis added]. The Indian Tribal Justice Technical and Legal Assistance Act of 2000 was reauthorized through fiscal year 2015 as part of the Tribal Law and Order Act (Public Law 111-211).

programs' work in developing and strengthening the institutions of tribal justice and creating a solid legal infrastructure on the reservations ultimately builds sustained economic opportunity and growth in those tribal communities.

Between fiscal year 2010 and fiscal year 2013, these Indian Legal Services programs have competed with other non-profit entities and received grant funding under DOJ's Office of Justice Programs' Bureau of Justice Assistance's Tribal Civil and Criminal Legal Assistance, Training and Technical Assistance (TCCLA) grant program to supplement Legal Services Corporation resources and other Federal grant funds in order to expand services to tribal citizens and tribal justice systems.³ The Native American Rights Fund serves as the administering agency for these grant funds to the National Association of Indian Legal Services (NAILS), an umbrella association of the Indian Legal Services programs.

The fiscal year 2014 Consolidated Appropriations Act (Public Law 113-76) provided \$30 million for "assistance to Indian tribes." We have not yet learned in full detail how DOJ intends to allocate these funds. However, we note that the reports of both the House and Senate Appropriations Committees accompanying your stand-alone fiscal year 2014 CJS appropriations bills directed again that DOJ allocate fiscal year 2014 funds based on tribal consultation for such purposes as tribal courts, alcohol and substance abuse reduction grants, tribal detention facilities, and tribal civil and criminal legal assistance. We are hopeful that this report language will encourage the Department to allocate some fiscal year 2014 funding for the TCCLA grant program.

With respect to the fiscal year 2015 budget request, the administration has again proposed bill language in General Provisions—Department of Justice for several set-asides for DOJ funding, including a set-aside of 7 percent for tribal criminal (note: not criminal AND civil, as provided now, through TCCLA) justice assistance.

Because the Indian Legal Services programs are not tribal governments, and do not want to have to compete with tribes for DOJ funding,⁴ what is most helpful is to have a specific funding amount for tribal civil and criminal legal assistance, a reference to the authorizing statute that allows DOJ to award grants for these services (Public Law 106-559), and a mention of the inclusion of the purpose of providing tribal civil and criminal legal assistance.

If in fiscal year 2015, as in fiscal year 2014, (though at a lesser percentage than the administration requested), the Senate Appropriations Committee should agree with DOJ's request for a tribal set-aside, or if, as under the final fiscal year 2014 Consolidated Appropriations Act, you should, instead, provide an overall "lump sum" amount to OJP for "assistance to Indian tribes," we would ask for your consideration of report language, as included in recent years, that would encourage DOJ to make some funding available to non-tribal governmental entities such as Indian Legal Services programs for the purpose of the provision of tribal civil and criminal legal assistance services.

Prior years' instructive report language of the Appropriations Committees has directed the Office of Justice Programs to consult with tribal stakeholders in determining how the overall amount of funding for tribal assistance will be allocated, and has specifically mentioned tribal civil and criminal legal assistance. That report language has been helpful in ensuring that the Department of Justice provide approximately \$3 million in funding to the Tribal Civil and Criminal Legal Assistance, Training and Technical Assistance grant program, for which Indian Legal Services has competed for funding awards.

Funding of approximately \$3 million should be appropriated in fiscal year 2015, as in recent years, for tribal civil and criminal legal assistance, and tribal court development work, as undertaken by Indian Legal Services programs. Thank you for your attention to and consideration of this submission.

³In fiscal year 2010, under TCCLA, NAILS was awarded \$1.25 million for civil legal assistance and \$1.1 million for criminal legal assistance; in fiscal year 2011, NAILS was awarded \$536,363 for tribal civil legal assistance, and \$1.1 million for tribal criminal legal assistance; in fiscal year 2012, NAILS was awarded \$850,659 for tribal civil legal assistance, and \$875,000 for tribal criminal legal assistance; and in fiscal year 2013, NAILS was awarded \$715,944 for tribal civil legal assistance, and \$515,940 for tribal criminal legal assistance. We are awaiting announcement of an fiscal year 2014 solicitation, upon which the Indian Legal Services programs plan to submit applications for both tribal civil and criminal legal assistance for fiscal year 2014 funding.

⁴Having to compete with tribal governments for a portion of the overall DOJ funds for Indian Country assistance is, as a policy matter, something that the Indian Legal Services programs have worked hard over the years to avoid, and which led us to get the initial authorizing legislation enacted in 2000, Public Law 106-559.

PREPARED STATEMENT OF THE NORTHWEST INDIAN FISHERIES COMMISSION

Mr. Chairman and members of the subcommittee, thank you for the opportunity to provide testimony on the National Oceanic and Atmospheric Administration fiscal year 2015 appropriations. My name is Billy Frank, Jr. and I am the Chairman of the Northwest Indian Fisheries Commission (NWIFC). The NWIFC is comprised of the 20 tribes that are party to the *United States v. Washington*¹ (*U.S. v. Washington*). I am providing written testimony for the record in support of funding for the National Oceanic and Atmospheric Administration (NOAA)/National Marine Fisheries Service (NMFS) and National Ocean Service (NOS).

SUMMARY OF FISCAL YEAR 2015 APPROPRIATIONS REQUESTS

- \$110.0 million for the Pacific Coastal Salmon Recovery Fund (NOAA/NMFS)
- \$14.7 million for the Pacific Salmon Treaty, including the Additional \$3.0 million for the 2008 Chinook Salmon Agreement (NOAA/NMFS)
- \$15.8 million for the Mitchell Act Hatchery Program (NOAA/NMFS)
- \$20.0 million for the Regional Ocean Partnership Grants Program (NOAA/NOS)

We are generally pleased with the President's fiscal year 2015 budget request as it establishes a good starting point. However, it's just that—a starting point—much more needs to be done. It promotes a strong stewardship in sustaining our vital natural resources. The natural resources that we depend on are vital to our tribal communities, economies and jobs. The President's budget provides for economic growth by paying for new investments while protecting the environment. Our economy depends on a healthy natural environment. The land and the many natural resources we depend on are a necessity for our communities to thrive. We need to continue to improve the condition of our changing environment for the benefit of future generations.

The western Washington treaty tribes brought to the Federal Government our Treaty Rights at Risk (TRAR) initiative almost 3 years ago. We are slowly creating change in the manner in which government agencies operate but it has not yet been enough to change the trajectory of salmon recovery in our region from a negative to a positive direction. In this initiative we asked the Federal Government to take charge of salmon recovery because it has the obligation and authority to ensure both the recovery of salmon and the protection of tribal treaty rights. We requested that the Federal Government implement their fiduciary duties by better protecting salmon habitat and the tribes' treaty-reserved resources. The treaty-reserved right of the western Washington treaty tribes to harvest salmon is at risk. The danger exists due to diminishing salmon populations, which limits or eliminates our right to harvest. All of this is due to the inability to restore salmon habitat faster than it is being destroyed. Wild salmon and their habitat continue to decline despite massive reductions in harvest and a significant investment in habitat restoration. We have all made a huge investment in the recovery of salmon and their habitat. These good investments must continue and will contribute to recovery as we work to slow down the continued loss of habitat. Fulfilling these Federal obligations is not an option and by addressing our TRAR—we will recover the salmon populations.

Adequate funding is needed in order to restore salmon habitat. A critical funding source for this work is the Pacific Coastal Salmon Recovery Fund (PCSRF). The PCSRF assists tribes in the implementation of salmon recovery plans and moves us in the direction of achieving the recovery goals, which is a direct request in our TRAR initiative. As Congress considers the fiscal year 2015 budget, we ask you to consider our requests that are further described below.

JUSTIFICATION OF REQUESTS

Provide \$110.0 million for NOAA Pacific Coastal Salmon Recovery Fund

We support the restoration of the PCSRF to the \$110.0 million level, an increase of \$60.0 million over the President's request. These funds have decreased from the peak of \$110.0 million in fiscal year 2002. We continue to support the original congressional intent of these funds that would enable the Federal Government to fulfill its 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 wild salmon throughout the Pacific coast region. The PCSRF supports projects that restore, conserve and protect Pacific salmon and steelhead and their habitats. PCSRF is making a significant contribu-

¹*United States v. Washington*, Boldt Decision (1974) reaffirmed Western Washington Tribes' treaty fishing rights.

tion to the recovery of wild salmon throughout the region by financially supporting and leveraging local and regional efforts. Salmon restoration projects not only benefit fish populations and their habitat but provides much needed jobs for the local communities.

The tribes' overall goal in the PCSRF program is to restore wild salmon populations. The key tribal objective is to protect and restore important habitat in Puget Sound and along the Washington coast that is essential for western Washington tribes to exercise their treaty-reserved fishing rights consistent with *U.S. v. Washington* and *Hoh v. Baldrige*² and also promotes the recovery of ESA listed species and other salmon populations. These funds support policy and technical capacities for tribes to plan, implement, and monitor recovery activities. The tribes use these funds to support the scientific salmon recovery approach that makes this program so unique and important. In addition to watershed restoration and salmon recovery work they also help fund fish hatchery reform efforts to allow for the exercise of tribal treaty fishing rights. It is for these reasons that the tribes strongly support the PCSRF.

Provide \$14.7 million for NOAA Pacific Salmon Treaty, including the Additional \$3.0 million associated with the 2008 Chinook Salmon Agreement

We support the Pacific Salmon Commission (PSC)/U.S. Section's request of \$14.7 million, an increase of \$3.9 million over the President's request. We also support as part of their request \$1.5 million for the Puget Sound Critical Stock Augmentation Program and \$1.5 million for the Coded Wire Tag (CWT) Program as required by the 2008 Pacific Salmon Treaty (PST) Chinook Annex Agreement. The Puget Sound Critical Stock funding covers the operation and maintenance costs for the hatchery augmentation programs established for Dungeness, Stillaguamish, and Nooksack Chinook. These hatchery efforts were initiated in connection with the 2008 Chinook Agreement of the U.S./Canada PST as the conservation needs of these populations could not be met by harvest restriction actions alone. The CWT funding allows for continued maintenance and efficiency improvements of the coast-wide CWT program. This is essential for the sustainability and management of our fisheries resources. Currently there is not enough funding allocated to carry out the requirements of the PST, which causes the PSC to not be able to perform all of its responsibilities required in the treaty and its Chinook and coho annexes.

The PST was implemented in 1985 through the cooperative efforts of tribal, State, U.S. and Canadian Governments, and sport and commercial fishing interests. The PSC was created by the United States and Canada to implement the treaty, which was most recently updated in 2008. The PSC establishes fishery regimes, develops management recommendations, assesses 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. As co-managers of the fishery resources in western Washington, tribal participation in implementing the PST is critical to achieve the goals of the treaty to protect, share and restore salmon resources.

Adult salmon returning to most western Washington streams migrate through U.S. and Canadian waters and are harvested by fisherman from both countries. For years, there were no restrictions on the interception of returning salmon by fishermen of neighboring countries. The 2008 update of the treaty gave additional protection to weak runs of Chinook salmon returning to Puget Sound rivers. The update also provided compensation to Alaskan fishermen for lost fishing opportunities, while also funding habitat restoration in the Puget Sound region.

Provide \$15.8 million for NOAA Mitchell Act Hatchery Programs

We support the President's request of \$15.8 million for the Mitchell Act Hatchery Programs. Funding is provided for the operation of 17 fish hatcheries that release between 50 and 60 million juvenile salmon and steelhead in Oregon, Washington, and Idaho. This program has historically provided fish production for tribal treaty fisheries, and recreational and commercial fisheries in the Columbia River and the ocean. It is especially important to us in that they provide significant fish production for harvest opportunities for tribal treaty fisheries along the Washington coast. Providing adequate funding to maintain the current production levels from the Mitchell Act hatcheries on the Columbia River is important as this production not only supports coastal salmon fisheries but dampens the impact of Canadian fisheries under the terms of the PST Chinook Annex on Puget Sound and coastal stocks.

Overall production from these hatcheries has been reduced from more than 100 million to fewer than 60 million fish. This hatchery production is intended to miti-

²*Hoh v. Baldrige*—A Federal court ruling that required fisheries management on a river-by-river basis.

gate for the lost production caused by the hydropower dam system on the Columbia River. Substantial changes have been made, and will continue to be required of the Mitchell Act Program, due to the application of the ESA throughout the Columbia Basin. Adequate funding will also allow these facilities to be retrofitted to meet current ESA standards as identified through the hatchery reform process.

Provide \$20.0 million for NOAA Regional Ocean Partnership Grants Program

We request \$20.0 million for the Regional Ocean Partnership. It appears the President's fiscal year 2015 budget didn't include a request for this program but we feel it is necessary to highlight it since it is so critical to our regional approach to coastal management. Funding for this competitive grant program has in the past been included within the National Ocean Service/Coastal Management account and supports regional ocean partnerships, including coastal and marine spatial planning. This program was developed to advance effective coastal and ocean management through regional ocean governance by improving communications, aligning priorities and enhancing resource sharing.

The Hoh, Makah, and Quileute Tribes, and the Quinault Indian Nation helped form the Intergovernmental Policy Council with the intent to strengthen management partnerships through coordination and focus of work efforts. They have pioneered cooperative partnerships with the State of Washington and the Federal Government in an effort to advance management practices in the coastal waters. Through this partnership, the entities hope to coordinate rockfish research, habitat mapping, and deep sea coral and climate change considerations. The four coastal tribes and the State also wish to engage in an ocean monitoring and research initiative to support and transition into an ecosystem-based fisheries management plan for the Washington coast. This tribal-State effort would be in collaboration with NOAA and consistent with regional priorities identified by a regional ocean planning body. Effective management of the ocean ecosystem and its associated resources requires the development of baseline information against which changes can be measured. For the tribes and State to conduct an ocean monitoring and research initiative off the Washington coast, they will need funding to support this effort. Healthy oceans are essential if we value stable climates that will sustain our economies and our lives. Tribes must be partners in the efforts to research, clean up and restore the environment in order to deal with identified problems.

CONCLUSION

We are sensitive to the budget challenges that Congress faces. However, we need your continued support in upholding the treaty obligations and fulfilling the trust responsibility of those treaties in order for tribes to be successful. We respectfully urge you to continue to support our efforts to protect and restore our great natural heritage that in turn will provide for thriving economies. Thank you.

PREPARED STATEMENT OF THE OCEAN CONSERVANCY

Thank you for this opportunity to provide Ocean Conservancy's recommendations for fiscal year 2015 funding for National Oceanic and Atmospheric Administration (NOAA). Ocean Conservancy has worked for 40 years to address ocean threats through sound, practical policies that protect our ocean and improve our lives. We support funding for NOAA at or above the President's request of \$5.5 billion, and we support balanced investments across NOAA's atmospheric and oceanic missions. We recommend the following funding levels for specific programs.

Account, Program or Activity	Fiscal year 2014 enacted	Fiscal year 2015 President's request	Fiscal year 2015 recommended level
OPERATIONS RESEARCH AND FACILITIES			
National Ocean Service:			
Coastal Science, Assessment, Response, and Restoration:			
Marine Debris	\$6 million	\$6 million	\$8 million
Arctic Spill Preparedness	—	\$1.315 million increase.	\$1.315 million increase
Coastal Management Grants:			
Regional Coastal Resilience Grants	—	\$5 million	\$10 million
National Marine Fisheries Service:			
Marine Mammals	\$49.717 million	\$47.217 million	\$49.717 million
Fisheries Research and Management Programs	\$177.833 million ...	\$181.833 million ...	\$181.833 million

Account, Program or Activity	Fiscal year 2014 enacted	Fiscal year 2015 President's request	Fiscal year 2015 recommended level
OPERATIONS RESEARCH AND FACILITIES			
Expand Annual Stock Assessments	\$69.745 million	\$72.245 million	\$75.6 million
Fisheries Statistics	\$22.361 million	\$22.361 million	\$23.9 million
Climate Regimes & Ecosystem Productivity	\$2.031 million	\$2.879 million	\$2.879 million
Distributed Biological Obs. (Arctic)	—	\$848,000 increase	\$848,000 increase
Office of Oceanic and Atmospheric Research:			
Integrated Ocean Acidification	\$6.051 million	\$14.922 million	\$15 million
Regional Climate Data and Information	\$37.312 million	\$52.312 million	\$52.312 million
NOAA Arctic Research Program	—	\$2.190 million in- crease.	\$2.190 million in- crease
Program Support:			
NOAA Wide Corporate Services & Agency Mgmt. Base.	\$113.139 million ...	\$125.139 million ...	\$125.139 million
Marine Operations & Maintenance	\$172.181 million ...	\$175.032 million ...	\$175.032 million

REGIONAL COASTAL RESILIENCE GRANTS: \$10 MILLION

The resilience of our coastal communities is a critical mission for NOAA and the National Ocean Service. But resilience means more than just storm-ready; truly resilient communities are prepared to face changing ocean conditions, from acidification to sea level rise, changing economic conditions, from recession to emerging ocean uses, as well as major catastrophes, from Superstorm Sandy to marine debris clogging waterways. Resilient communities invest up-front today to ensure they avoid unnecessary costs—economic, social, and environmental—in the future. Regional approaches are an effective and efficient way to address the full range of changing ocean and coastal conditions and risks—bringing communities, States, and Federal agencies together to share their collective knowledge and experience and move forward on shared priorities. Regional Coastal Resilience Grants from NOAA support work to advance resilience by supporting regional priorities for ocean and coastal science and activities.

Because regional grants were left unfunded for the first time in fiscal year 2014, ongoing efforts through States and partnerships (like the Regional Ocean Partnerships) have been threatened—interfering with progress to support local and regional ocean and coastal needs and priorities, or leverage the Federal Government's expertise and data collection capacity. Failure to restore the regional competitive grant funding and provide an increase to \$10 million will undermine and threaten the progress these partnerships have made. For these reasons, we request that the Regional Coastal Resilience Grants within NOAA's National Ocean Service be funded at \$10 million.

PREPARING FOR A CHANGING ARCTIC

We support the three funding increases requested by NOAA in fiscal year 2015 that make investments we need now to be prepared for economic and ecological challenges of a changing Arctic.

- Arctic Spill Preparedness: \$1.315 million increase.*—Currently, there is no demonstrated technology, technique or infrastructure to respond effectively to an oil spill in icy Arctic waters. Funding to support improved models, increased capacity and coordination, and research is urgently needed. Along with a precautionary approach, these efforts can guide decisions about whether development activities should occur in the Arctic and, if so, when, where, and how they occur.
- Distributed Biological Observatory (Arctic): \$848,000 increase.*—The Arctic marine ecosystem provides irreplaceable benefits, but our understanding of this ecosystem is hampered by a lack of reliable baseline data, critical science gaps, and limited documentation and application/use of traditional knowledge. Funding will provide much-needed support for collection of baseline data and analysis of ecosystem functions in Arctic marine waters so we better understand Arctic fisheries and other valuable ecosystem services. Without this better understanding our ability to make informed decisions is compromised.
- NOAA Arctic Research Program: \$2.190 million increase.*—Temperatures in the Arctic are warming at twice the rate of the global average and seasonal sea ice is diminishing rapidly. Funding to expand and improve NOAA's Arctic Observing Network is critical to track and understand these profound changes and provide products that inform industries and decision-makers and support our ability to adapt.

MARINE DEBRIS: \$8 MILLION

Marine debris has become one of the most pervasive pollution problems facing the world's oceans, coasts and waterways. Research has demonstrated that persistent debris has serious effects on the marine environment, wildlife and the economy. Marine debris causes wildlife entanglement, ghost fishing, destruction of habitat, navigational hazards, vessel damage and pollutes coastal areas. There is also increasing concern over the threat of microplastics to the marine food web and potentially humans. NOAA's Marine Debris program supports existing monitoring and research efforts to better understand accumulation rates of debris and debris source and sink dynamics. The program catalyzes scientific research efforts to quantify the direct and indirect economic impacts caused by marine debris on coastal communities and economies that rely on them. And increasingly, NOAA's program is emphasizing research on microplastics in the ocean and their toxicological impacts on marine organisms. NOAA's Marine Debris program was originally authorized at a level of \$10 million. We support funding for this program at \$8 million, a \$2 million increase over fiscal year 2014.

MARINE MAMMALS: \$49.717 MILLION

We do not support NOAA's proposed cut of \$2.5 million dollars from the John H. Prescott Marine Mammal Rescue Assistance Grant Program. This cut would harm marine mammal stranding networks, which are the first responders for sick or dying marine mammals. Marine mammals face significant threats in the Gulf of Mexico, with the Galveston Bay Spill providing the latest example. Programs in Texas and Florida in particular would be harmed by this cut because they are not currently benefitting from BP Natural Resource Damage Assessment dollars that are temporarily filling funding gaps in northern Gulf rescue centers, but not elsewhere.

FISHERIES SCIENCE AND INFORMATION

We support funding for programs that implement the "Magnuson-Stevens Fishery Conservation and Management Act". As we review the Act for reauthorization, it is important to note that the Act is working—NOAA has made great strides towards ending overfishing and continued investments in these programs are needed.

- Expand Annual Stock Assessments: \$75 million.*—This funding line provides critically needed resources for fisheries managers to assess priority fish stocks, implement the requirement for annual catch limits (ACLs), and ensure the successful recovery of overfished populations. The survey and monitoring and stock assessment activities funded under this line give fishery managers greater confidence that their ACLs will avoid overfishing while providing optimal fishing opportunities. Because the information provided by stock assessments is so vital for sustainable management of U.S. fisheries, increased funding for stock assessments should remain among the highest priorities in fiscal year 2015.
- Marine Operations and Maintenance: \$175.032 million.*—Marine Operations and Maintenance should be funded at or above the President's Request level of \$175.032 million. Days at sea funded by this line are functionally tied to fishery stock assessments, and the two programs must be viewed together. In addition, while not currently requested in the NOAA budget, we encourage Congress to consider the needs of the NOAA fleet as well.
- Fisheries Statistics (Marine Recreational Information Program): \$23.9 million.*—Despite their often sizeable economic and biological impacts, much less data are collected from recreational saltwater fisheries than commercial fisheries due to the sheer number of participants and limited sampling of anglers' catches. The low level of data collection and lack of timely reporting of data in these fisheries is a large source of uncertainty and has become a flashpoint for controversy in regions where catch restrictions have been adopted to rebuild overfished stocks, particularly in the Southeast. By all accounts, improved sampling and timelier reporting of catch data are needed for successful management of marine recreational fisheries.
- Fisheries Research & Mgmt. Programs (elec. monitoring): at least \$181.833 million.*—We support increasing funding for electronic monitoring and reporting by at least the \$4 million requested by NOAA. This funding has been requested for nationwide efforts, but in the Gulf of Mexico alone, where managers need electronic monitoring to keep track of catch and prevent overruns in the red snapper fishery, there is significant need for additional funding. In conjunction with the charter-for-hire, seafood, environmental and regulatory communities across all five Gulf States, we recommend that NOAA direct \$2 million of in-

creased funding to create an electronic data collection program for the federally-permitted charter boat fishery in the Gulf of Mexico.

INTEGRATED OCEAN ACIDIFICATION

In recent years, scientists have raised the alarm about ocean acidification—a process whereby ocean waters’ absorption of carbon dioxide emissions alters marine acidity. These changes can have far-reaching consequences for marine life, including economically important species like shellfish. For example, the shellfish industry in the Pacific Northwest has been devastated in recent years as increasingly acidic water impacted oyster hatcheries, nearly wiping out several years-worth of oyster “seed.”

Given the magnitude of the potential impacts of ocean acidification we believe this area warrants significantly more research investment. The President’s fiscal year 2015 request of \$15 million is a good step in the right direction of the actual on-the-ground needs for Ocean Acidification research. Funding at the \$15 million level will allow NOAA to improve the understanding of ocean and coastal acidification impacts and to develop tools and adaptive strategies for vulnerable industries and stakeholders. These tools may include advanced technologies to enhance the U.S. Ocean Acidification Observing System, develop models to better understand carbonate chemistry dynamics and impacts, and provide valuable data products for coastal resource managers and other stakeholders. By increasing funding for Integrated Ocean Acidification to this level, NOAA will be able to take these concrete actions to more effectively tackle the economic, on-the-ground implications of ocean acidification and better plan for future strategies that will protect our Nation’s key ocean and coastal economic assets.

NOAA WIDE CORPORATE SERVICES & AGENCY MANAGEMENT BASE: \$125.139 MILLION

We support the administration’s request for a \$12 million increase for NOAA wide Corporate Services & Agency Management Base. As Administrator Sullivan said recently, it is rarely popular to invest in back-of-house functions, but if you do not support these critical functions, program delivery suffers. Appropriate funding for organizational hygiene ultimately allows the agency to more effectively carry out its mission, and thus results in benefits to ocean programs.

PREPARED STATEMENT OF DR. JAMES OLIVER, UNIVERSITY OF NORTH CAROLINA AT CHARLOTTE

Dear Sirs: The President’s 2015 budget lists closure of the Center for Coastal Fisheries and Habitat Research, National Centers for Coastal Ocean Programs, National Ocean Science, National Oceanic and Atmospheric Administration (NOAA), at Beaufort North Carolina. I wish to strongly voice my opposition to this aspect of the budget, which I feel is not in our Nation’s best interests.

The Government has invested heavily in this facility: The Beaufort Laboratory facility has, over the last few years, had major upgrades of approximately \$14 million. The lab is also rich in manpower, with a total of 108 staff and contractors who would be directly affected by the proposed closure.

Scientific expertise.—The President’s same budget also includes an increase of \$4 million to another center to support ecological forecasting of harmful algal blooms (HABs), the effects of the decreasing levels of oxygen in our coastal waters, and an increase in human and animal pathogens. This is ironic in that the Beaufort Laboratory is a recognized leading facility for such studies, and has the expertise and facilities needed to address them. Their acknowledged reputation attracts support from other NOAA offices and other organizations that realize the benefits of this laboratory’s experience.

Along with numerous other ocean scientists, many of whom like myself who enjoy scientific collaborations with the Beaufort Lab, I plead for Congress to direct NOAA to restore support and funding to full operational levels in order to fully utilize the capacity of the NOAA Beaufort Laboratory.

Thank you for studying this issue for the benefit of our country’s scientific efforts.

PREPARED STATEMENT OF OMEGA PROTEIN, INC. AND DAYBROOK FISHERIES, INC.

AUGUST 8, 2014.

Dear members: This letter is submitted on behalf of the roughly 1500 men and women employed by the menhaden industry in the Gulf of Mexico and the Mid-Atlantic, many if not most of whom work and fish here in Louisiana. The two remain-

ing commercial menhaden fisheries, Omega Protein, Inc. and Daybrook Fisheries, Inc., which combined, produce an economic impact in excess of \$1 billion to these regions and manufacture products that support domestic and foreign agriculture, aquaculture, and human health and nutrition industries, among many others. To do so, our industry must depend on credible and accurate scientific and commercial information, which for over a half century has been provided by the scientists and researchers at the National Oceanic and Atmospheric Administration (NOAA) Southeast Fisheries Science Center's ("SEFSC") Beaufort, North Carolina Lab.

In his fiscal year 2015 budget, President Obama proposes to close the Beaufort Lab and consolidate its operations at other SEFSC facilities to be determined in the future. While the President does not include a separate line item in his budget for this proposal, the closing accounts for a fraction of the \$14 million projected savings from the Department of Commerce's reorganization of six science and technology programs; perhaps a million dollars per year, according to staff. We respectfully and urgently request that you oppose this proposal and continue funding the Beaufort Lab in the fiscal year 2015 budget and beyond.

The Beaufort Lab and its staff of over 100 employees support the management activities of the Gulf States and Atlantic States Marine Fisheries Commissions, primarily by conducting and leading the menhaden stock assessment (the Southeast Data Analysis and Review, or "SEDAR") for each region. It also collects, digitizes, and analyzes commercial catch data provided by the companies' captains in detailed logbook form. This information is an essential component of the joint Federal/State menhaden management system and critical for continuing science-based, sustainable management of these economically and ecologically important stocks.

As such, we are concerned that the Beaufort Lab's closure presents a serious risk of disruption and loss of menhaden expertise. The Lab currently houses personnel with nearly a century of combined experience with the Atlantic and Gulf menhaden fisheries-biologists who provide aging data for the stock assessment and who have tracked and analyzed the fisheries for decades. It is nearly a certainty that longest serving and most knowledgeable staff will not make transition to a new location. If the assessment scientists likewise choose to remain in North Carolina, the National Marine Fisheries Service ("NMFS") would essentially be faced with starting its menhaden program from the ground-up, if it chooses to continue it at all.

While the menhaden industry has received assurances that NOAA Fisheries is committed to continuing to provide support for these fisheries, we remain concerned for the future. Given that the States take the lead in managing the Gulf and Atlantic menhaden fisheries, it is not difficult to imagine NMFS deciding, as an additional cost-cutting measure, to forgo its role entirely.

It also should not be overlooked that Beaufort Lab is one of the few remaining scientific institutions NMFS has in the Mid-Atlantic region. Beaufort is the center of research on Southeast U.S. Continental Shelf Large Marine Ecosystem. It houses NMFS scientific and management personnel from SEFSC's Miami and Pascagoula Labs doing research on fisheries, marine mammals (such as on Northern right whales, whose calving areas are off the North Carolina coast), sea turtles, and habitats unique to the area. Beaufort is the only NMFS lab located in the breeding areas of loggerhead, green, and Kemp's Ridley sea turtles in the Northern Recovery Unit. In order to continue these lines of study, NMFS would essentially have to recreate the Beaufort Lab.

In short, the Beaufort Lab's closure would create a significant gap in our scientific understanding of the Gulf and Mid-Atlantic marine systems and fisheries. This action also unnecessarily jeopardizes America's largest fishery by volume, the Gulf and Atlantic menhaden fisheries. This is simply too much for such negligible potential savings. We strongly urge you to support its continued funding.

Sincerely,

BRET SCHOLTES,
President & CEO, Omega Protein, Inc.

GREGORY HOLT,
President, Daybrook Fisheries, Inc.

PREPARED STATEMENT OF THE PLANETARY SOCIETY

The Planetary Society has serious concerns for the future of NASA's Planetary Science Division as proposed in the fiscal year 2015 NASA budget request. For the 3rd year in a row, the White House has proposed cuts to the program that will ensure the decline of planetary exploration over the course of this decade. The core recommendation of the National Academy's planetary science decadal survey—the crucial balance of small, medium, and flagship missions, combined with steady re-

search and technology funding—is not supported by this request, which, at \$1.28 billion, is nearly \$220 million below the recommended \$1.5 billion per year needed to implement a program consistent with the intent of the decadal survey.

NASA's Planetary Science program has a clear direction provided by the *Visions and Voyages* planetary science decadal survey and has maintained a productive, successful, and unprecedented program of exploration throughout the past decade. The Curiosity rover is approaching the base of an 18,000-foot Martian mountain; the Cassini spacecraft has confirmed an underground ocean on Saturn's moon, Enceladus; New Horizons will fly by Pluto next year for the first time in human history. These are highly engaging, exciting, and compelling events delivered by NASA's planetary program. They inspire generation after generation of students and the public to embrace science and engineering. They dramatically demonstrate the United States' engineering and scientific prowess. But despite this, the White House has proposed cuts year after year that threaten the health of this program.

Previous actions by the Senate and House Appropriations Committees have mitigated the losses to planetary science that would have come about had the White House's original requests in fiscal year 2013 and fiscal year 2014 been enacted. But even with these partial restorations, the United States' scientific exploration of the solar system is approaching a nadir not seen since the 1980s. The number of new missions launching during the period covered by the current decadal survey has dropped by half compared to the previous decade [Figure 1]. When Cassini at Saturn and Juno at Jupiter end their missions in 2017, there will be no NASA missions exploring the outer planets for the first time since the 1970s. Decades of hard-earned capability and engineering know-how will be placed at risk just as Europe, India, Russia, and China are committing to solar system exploration.

Even if a new mission to the outer planets were selected tomorrow, the United States would still face a minimum 6-year gap. The “fade to black” predicted by respected NASA veterans Bobby Braun and Noel Hinners¹ has come to pass. The question facing NASA and the Congress is how long to make this period last.

The administration's budget proposal ensures a long period of darkness. Based on statements within the budget document, the number of new planetary science missions in development dwindles to two (Mars 2020 and the next small-class Discovery mission) by 2016, the lowest level in decades. While NASA officials have stated their intention to increase the cadence of the Discovery missions by the end of the decade, the budget makes no statement to this effect. It also suspends one of the major components of a balanced planetary program: the medium-class “New Frontiers” mission line. If this occurs, exactly zero of the competitively-selected medium-class missions recommended by the decadal survey for 2013–2022 will be implemented. This represents a notable change in policy, as all previous budgets anticipated a new New Frontiers opportunity in 2016.

The administration did take a tentative step towards a mission to explore Europa, which would help address the lack of outer planets exploration. The Planetary Society wishes to recognize the importance of this mission, and we are happy to see NASA and the White House take this step.

Europa, the moon of Jupiter with a vast liquid water ocean, is a destination long sought by the scientific community. It ranked as the most important flagship mission in the first decadal survey and the second-most important in the current decadal survey. Last year's discovery of likely water plumes erupting from Europa's south pole only served to increase the moon's scientific importance. These plumes significantly lower the cost of performing initial analysis of Europa's water, as a spacecraft could far more easily fly through and collect plume samples instead of landing and boring through a thick ice sheet.

But the White House requests a mere \$15 million to study a low-cost Europa mission concept, despite having received over \$140 million in the past 2 years to advance the Europa Clipper concept mission from the Jet Propulsion Laboratory and the Applied Physics Laboratory, which had already reduced the cost of a major scientific mission by over 50 percent from the original decadal concept. To reduce it further, as NASA is proposing, raises serious questions of the scientific return possible from such a mission. We are all for cost-savings, but we must ensure that this once-in-a-generation opportunity to explore Europa achieves the preponderance of scientific goals as defined in the decadal survey, and sufficiently moves our understanding of Europa to the point where NASA could subsequently attempt a landing on the surface.

The timing for the Europa mission, not mentioned in the fiscal year 2015 request but stated by NASA officials as “mid-2020s,” is also a concern. We support section 321 of H.R. 2687, the NASA Authorization Act of 2013, which sets key policies for

¹U.S. Planetary Science: *Fading to Black*. Space News, April 22, 2013.

planetary missions, including the goal to launch by 2021 a major Europa mission that is responsive to the decadal survey. A similar provision is now the 2014 NASA Authorization bill currently working its way through the House Science Committee.

The administration's budget deserves praise for funding continued operations for several existing planetary science missions, notably the popular Curiosity rover on Mars and the long-lived Cassini orbiter at Saturn. The next major mission to Mars appears to have a reasonable, if tight, budget profile that supports its launch in 2020. Additionally, the request provides adequate funding to maintain the Department of Energy's Plutonium-238 infrastructure and restart program, crucial for continued access to destinations where solar power is not feasible. We strongly support these decisions, and urge Congress to do so as well.

But the budget proposal does place the continued operation of two functioning planetary spacecraft at risk. Both the Opportunity rover and the Lunar Reconnaissance Orbiter are zeroed out in the base proposal. Instead, they are moved to the President's *Opportunity, Growth, and Security Initiative*. The Planetary Society believes in maximizing taxpayer value for NASA assets by continuing operations as long as missions remain scientifically valuable. We fully expect the upcoming senior review at NASA to validate the scientific returns of both missions, and strongly recommend that both continue operations whether or not the OGSI is passed into law.

The major NASA achievements in planetary exploration slated for fiscal year 2015—Curiosity at Mt. Sharp, New Horizons at Pluto, Dawn orbiting Ceres—represent what's great about the country. They are bold feats of engineering and scientific prowess. They are optimistic—each one faced immense challenges that were overcome by careful thought and planning. They engage the public with their bold feats of discovery. They are also all initiatives from the previous Presidential administration.

Spacecraft take time to design, build, and fly. We are not so much concerned for the health of the current set of missions (Opportunity and LRO are notable exceptions) so much as we are concerned for the health of the program going forward. NASA already faces the biggest gap in solar system exploration in decades, and has dropped its launch rate for this decade by half, but this can still change. Wise action by the Congress and a receptive administration can embrace planetary science for what it is: a unique and hard-earned capability that is worth a small investment—\$1.5 billion per year, less than 9 percent of NASA's total budget—to maintain a peerless program of exploration that inspires the country.

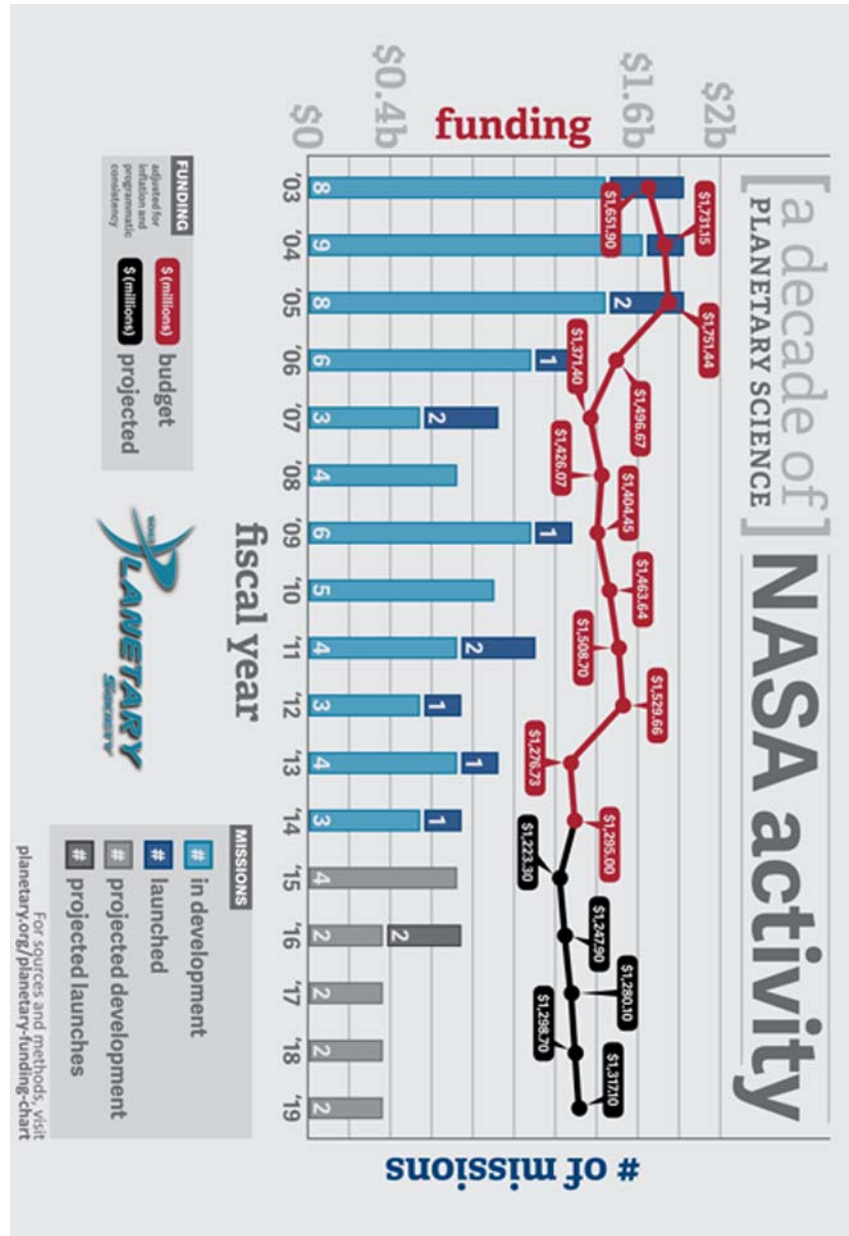


Figure 1: Funding level of NASA's Planetary Science Division from 2003–2019, adjusted for inflation and displaying the number of missions planned to be in development according to NASA Budget requests during this period. The average budget for 2003–2013 is \$1.5 billion per year. Modifications to the budget have been made to preserve programmatic consistency. Note that by the end of the decade the Division is working on only two new missions while maintaining an aging set of spacecraft and funding Pu-238 development, scientific research, NEO detection, and instruments on foreign missions. Raw data and methods are available at <http://planetary.org/planetary-funding-chart>.

Note: funding projections suggest that the Discovery 14 mission could begin development in fiscal year 2018 or fiscal year 2019, though this is unstated in the budget request and therefore not represented here.

ABOUT THE PLANETARY SOCIETY

The Planetary Society has inspired millions of people to explore other worlds and seek other life. Today, its international membership of over 40,000 individuals makes the non-governmental Planetary Society the largest space interest group in the world. Carl Sagan, Bruce Murray and Louis Friedman founded the Planetary Society in 1980. Bill Nye, a long time member of the Planetary Society's Board, serves as CEO.

PREPARED STATEMENT OF THE REGIONAL INFORMATION SHARING SYSTEMS (RISS) PROGRAM

RISS serves thousands of law enforcement and public safety agencies across the country in their effort to successfully resolve criminal investigations, apprehend and prosecute offenders, maintain security, and ensure officer safety through nationwide deconfliction. Agencies, officers, and public safety professionals turn to and rely on RISS to access intelligence systems, investigative databases, analytical support, training, and a host of other services and resources. RISS is a leader and an innovator in technology and investigative support and has enabled law enforcement to significantly improve information sharing across jurisdictions, resulting in thousands of arrests and prosecutions and millions of dollars in seizures. It is imperative that these advances continue and be built upon in order to ensure a safer Nation. Fiscal year 2015 funding for RISS is requested at \$45 million. This funding will support the continued operation of the six regional intelligence centers, the RISS Technology Support Center, and all of RISS's technology, investigative, and deconfliction services and resources.

In fiscal year 2012, RISS's funding was reduced 40 percent from \$45 million to \$27 million. RISS continued to provide the best possible service and solutions to its agencies and partners. RISS worked diligently to maintain its core services and secure infrastructure. In addition, RISS was asked by numerous agencies, including many Federal agencies, to participate in initiatives and help identify solutions. However, in some cases, agencies experienced decreases in analytical and investigative case support, training, and other investigative services. The RISS fiscal year 2013 appropriation was \$35 million, a significant increase over fiscal year 2012. Because of sequestration and administrative fees, however, RISS's net funding for fiscal year 2013 was \$29.5 million. The fiscal year 2014 appropriation included RISS at \$30 million. After administrative fees are applied, however, RISS's allocation will be \$27 million—less than fiscal year 2013. The fiscal year 2015 President's budget includes RISS at \$25 million, which at that level would exacerbate an already critical situation for the local, State, Federal, and tribal agencies RISS serves.

RISS PROVIDES SECURE INFORMATION AND INTELLIGENCE SHARING CAPABILITIES

RISS operates the RISS Secure Cloud (RISSNET)—a sensitive but unclassified (SBU) law enforcement cloud provider. RISSNET connects disparate systems, provides bidirectional sharing, and offers a federated search of connected systems. RISSNET serves as the secure infrastructure for hundreds of critical resources and investigative tools. The owners of these resources rely on RISSNET for its secure infrastructure. Currently, 84 systems are connected or pending connection to RISSNET. Without RISSNET and the hundreds of resources it supports, agencies would be greatly limited in their ability to retrieve, exchange, and use information to prevent and solve crimes.

Examples of RISS-developed resources accessible via RISSNET include the RISS Criminal Intelligence Database (RISSIntel), the RISS Officer Safety Event Deconfliction System (RISSafe), the RISS Officer Safety Web site, the RISS National Gang Program (RISSGang), the RISS Automated Trusted Information Exchange (ATIX), and the RISSLeads Investigative Website. RISS also develops secure hosted websites for partners to share information, post materials, and communicate. There are more than 30 sites housed on RISSNET, including the Assured SBU Network Interoperability Working Group, the National Interagency Fire Center, the Medicaid Fraud Control Units, the Medicaid Integrity Institute, and the Federal Law Enforcement Training Center.

The RISSIntel user interface provides for a real-time, online federated search of more than 35 RISS and partner intelligence databases, including State systems, the California gang intelligence system (CalGang), and systems connected via the Na-

tional Virtual Pointer System (NVPS). This search does not require the RISSNET user to have a separate user account with the respective partner systems. This simplified sign-on approach enables officers to save time and quickly retrieve critical information. Millions of records are available via RISSIntel and bidirectionally from connected partner systems.

The RISSGang Program consists of the RISS National Gang Intelligence Database, the RISSGang Website, and information resources. The database provides law enforcement agencies with access to gang records, including suspects, organizations, weapons, photographs, and graffiti. The website provides resources, information, and publications. RISS completed a system-to-system interface between RISSIntel/RISSGang and CalGang, enabling authorized users to initiate a federated search. RISS completed the connection to the Bureau of Alcohol, Tobacco, Firearms and Explosives' GangNet and is working to connect other gang systems.

RISS ATIX provides a secure platform for law enforcement, public safety, first responders, and the private sector involved in securing our Nation from terrorism and other disasters to share information. Community groups include local, county, State, and tribal levels of emergency management, law enforcement, and government, as well as public and private utilities, transportation, agriculture, chemical manufacturing, private security, environmental protection, banking and finance, and hospitality industries. The RISS ATIX resources include secure Web pages, secure discussion forums, a document library, and secure e-mail.

Each RISS Center maintains a secure Web site to provide users with access to RISSIntel, other RISSNET resources, and investigative systems, such as the RISS Property and Recovery Tracking System, the Cold Case Database, and the Pseudo Violator Tracking System. The number of investigative records available through these different systems exceeds 37 million. During fiscal year 2013, more than 73 million transactions occurred via RISSNET.

RISS SUPPORTS THE NATION'S PUBLIC SAFETY MISSION

RISS is a key player in Federal information sharing initiatives. RISS supports and partners with Federal agencies, such as the Law Enforcement National Data Exchange (N-DEx); the Federal Law Enforcement Training Center; the Office of the Program Manager, Information Sharing Environment (PM-ISE); the Homeland Security Information Network (HSIN); the National Criminal Intelligence Resource Center; the United States Secret Service's Targeted Violence Information Sharing System; the Medicaid Fraud Control Units; and the National Motor Vehicle Title Information System.

The N-DEx and RISS Information Sharing Partnership aims to expand the availability of case management, investigative, and intelligence data as well as critical analytical tools. Access to N-DEx will be available to authorized RISSNET users via the Law Enforcement Enterprise Portal without requiring an additional username or password. This capability enables officers to obtain needed information quickly, saves officers' time, streamlines operations, and enhances law enforcement's ability to respond to crime in their community effectively and efficiently. This effort was launched in the Rocky Mountain Information Network (RMIN), a RISS Center, and plans are under way to expand it to the other RISS Center regions throughout 2014.

RISS is the only non-Federal entity participating in the Assured SBU Interoperability Initiative under the auspices of the White House and the PM-ISE. This initiative seeks to expand federated access to resources and to provide simplified sign-on capabilities for officers to access multiple systems simultaneously. RISS is at the forefront in providing simplified, federated access. More than 18,000 users from trusted partner systems are using Federated Identity to access RISSNET resources. In addition, RISS built and hosts the NVPS Message Hub to provide access to the NVPS participant agencies and to RISS member agencies that submit records to the RISSIntel databases via RISSNET. Through these partnerships, RISS offers cost-effective and time-saving solutions while further strengthening information sharing, public safety, and officer safety.

The RISS Centers have strong partnerships with fusion centers. Almost all fusion centers have access to RISSNET. RISS intelligence analysts interact daily with staff at various fusion centers. Some analysts are collocated. RISS provides technical on-site assistance to fusion centers to integrate RISS services and resources into their daily operations and coordinates the delivery of RISS services with fusion center personnel. During fiscal year 2013, RISS initiated the Northeast Fusion Center Intelligence Project, which will connect 17 existing fusion centers' intelligence systems to RISSIntel via RISSNET. By leveraging RISSNET and RISSIntel, fusion centers can securely share intelligence data among themselves and other entities and ana-

lyze criminal and terrorism data across jurisdictional boundaries, while safeguarding privacy and civil liberties.

RISS is supported by the International Association of Chiefs of Police, the National Sheriffs' Association, the National Narcotic Officers' Associations' Coalition, the National Alliance of Gang Investigators Associations, and many others. RISS's partnerships have resulted in an unprecedented level of information and intelligence sharing.

RISS ENHANCES OFFICER SAFETY THROUGH DECONFLICTION

RISSafe is an essential component in helping to ensure officer safety. RISSafe stores and maintains data on planned law enforcement events—such as raids, controlled buys, and surveillances—with the goal of identifying and alerting affected agencies and officers of potential conflicts impacting law enforcement efforts. The interaction between RISSafe and RISSIntel provides comprehensive officer safety event and subject deconfliction services. RISSafe Mobile enables officers to access RISSafe from their smartphones and other mobile devices. RISSafe is accessible and monitored on a 24/7/365 basis and available at no cost to all law enforcement agencies regardless of RISS membership. It is impossible to put a monetary value on the number of officers that RISSafe has helped protect from harm or, worse, death.

Since its inception, more than 757,000 operations have been entered into RISSafe, resulting in more than 263,000 identified conflicts. Currently, 22 RISSafe Watch Centers are operational, 16 of which are operated by organizations other than RISS, such as State agencies, fusion centers, and High Intensity Drug Trafficking Areas (HIDTA). As of March 4, 2014, RISSafe and HIDTA's Case Explorer have been connected in the six RISS regions. Work is under way to expand connectivity with other deconfliction partners.

The RISS Officer Safety Website serves as a nationwide repository for issues related to officer safety, such as concealments, hidden weapons, armed and dangerous threats, officer safety videos, special reports, and training.

RISS PROVIDES CRITICAL INVESTIGATIVE AND CASE SUPPORT

RISS offers law enforcement agencies and officers comprehensive investigative services, from the beginning of an investigation to the ultimate prosecution and conviction of criminals. An officer can simultaneously query connected intelligence databases; retrieve information from specialized investigative databases and resources; use analytical products, such as crime scene diagrams, link-analysis charts, digital forensics, and audio/video services; solicit assistance from research staff to help sift through information, conduct research, and help identify the missing piece of the puzzle; borrow surveillance and investigative equipment; obtain training on new and emerging topics; and access critical publications and law enforcement-sensitive briefings. In fiscal year 2013, the RISS Centers developed 27,015 analytical products, loaned 4,062 pieces of specialized equipment, responded to 210,404 requests for research and technical assistance, and trained 46,579 individuals.

RISS is an excellent return on investment for our Nation. Over the last 10 years, officers leveraging RISS's services arrested almost 48,000 offenders and seized more than \$765.8 million in narcotics, property, and currency. Without RISS's services and resources, criminals, drugs, stolen property, and other contraband might still be on our streets. Every day, officers use RISS to help solve cases and stay safe. To view success stories from every State and other information regarding RISS, visit www.riss.net/Impact.

It would be counterproductive to require local and State RISS members to self-fund match requirements or to reduce the amount of Bureau of Justice Assistance discretionary funding. Agencies require more funding to fight the Nation's crime problem. RISS is unable to make up the decrease in funding that a match would cause, for it has no revenue source of its own. RISS has been instrumental in breaking down the communications barriers among the criminal justice community and providing seamless access to critical information, intelligence, and investigative resources. RISS is *A Proven Resource for Law Enforcement*. RISS's services and programs directly impact law enforcement's ability to successfully resolve investigations and prosecute criminals while providing the critical resources and officer safety deconfliction necessary to safeguard law enforcement officers and citizens. With the ongoing threats to our communities and Nation, more support for RISS is needed, not less. RISS is grateful to provide this testimony at your request and appreciates the support this committee continuously provides to the RISS Program.

PREPARED STATEMENT OF RESEARCH!AMERICA

Research!America, a public education and advocacy alliance committed to advancing medical and other scientific research and development, appreciates the Senate Committee on Appropriations Subcommittee on Commerce, Justice, Science and Related Agencies' stewardship over such a critical subset of our Nation's discretionary funding priorities. As the subcommittee begins the process of prioritizing fiscal year 2015 funding, we urge you to consider the following thoughts on the National Science Foundation (NSF) which is entrusted with sustaining our Nation's sophisticated research infrastructure, partnering with the private sector to accelerate innovation, and maintaining our global leadership. For fiscal year 2015, we request that the National Science Foundation receive at least \$7.6 billion in Federal funding to allow its continued growth as a driver for basic research.

The National Science Foundation (NSF) plays a pivotal role in advancing basic and social sciences research. The funding, or lack of it, allocated to NSF will bear on our Nation's ability to compete in key export markets within the global economy, foster business development that grows and maintains jobs across the country, utilize social sciences research for more efficient Federal spending based on advanced understanding of the use of social services, devise evidence-based strategies for empowering Americans to overcome the need for such services, meet our solemn obligations to our troops, bolster national security, and ensure top-line education for scientists and medical researchers at our Nation's colleges and universities. The stakes truly are that high.

NSF AS AN INNOVATION INCUBATOR

In fiscal year 2015, we urge you to fund NSF with at least \$7.6 billion to continue the trajectory of increased basic research which is so critical to society. NSF supports research in fundamental sciences and engineering to keep the United States at the forefront of scientific discovery. The source of approximately 21 percent of all federally funded basic research, NSF funds over 300,000 scientists, engineers, educators, and basic researchers through more than 11,000 grants annually. The fruits of NSF basic research are integral to our Nation's innovation cycle. Countless innovations that Americans depend on every day, like laser technologies and Internet search functions, are products of NSF-supported research. NSF has also supported the work of more than 200 Nobel Prize winners in the past 60 years.

NSF AS A CONDUIT TO EVIDENCE-BASED, STRATEGIC USE OF GOVERNMENT DOLLARS

NSF's support of social sciences research is grossly underestimated in its value to taxpayers, the wellbeing of children and other vulnerable populations, and the prosperity of our Nation. Designing and executing social services programs without evidence-based foundations is akin to shooting in the dark, wasting resources, and comprising the mission. When you think of child welfare programs, the need for social sciences research is crystal clear. It would be tragic if programs inadvertently created disincentives for proper foster care, for example. Social sciences research enables a better understanding of international markets, boosting the ability of businesses to succeed in our globalized economy. It is a dangerous mistake to dismiss the importance of such research.

NSF AS AN EDUCATOR

In an era when a capable scientific workforce is crucial, NSF funds the education and training of the future STEM staff and leaders through various K-12, undergraduate, and graduate education programs. The only agency with a federally-mandated mission requiring incorporation of science and engineering education in all funded research, NSF helps to develop skilled researchers who not only extend scientific innovations but also educate future generations. For more than 20 years, the Advanced Technological Education program (ATE) has offered scientific educational support and opportunities to more than 54,000 undergraduate and associate degree students via almost 300 active grants. Without sufficient Federal funding, fundamental educational programs like ATE are at risk for cutbacks which will weaken the future scientific workforce of America and hinder our country's growth as a global innovator.

THE THREAT OF SEQUESTRATION'S RETURN

The Ryan-Murray Bipartisan Budget Act provided America with 2 years of partial relief from sequestration after across the board budget cuts dramatically impacted the Nation's research capability in March 2013. Unfortunately, sequestration will go back into full effect in 2016 unless Congress takes action, and it will be in effect

for 2 years longer than originally established under the 2011 Budget Control Act. The return of sequestration's budget cuts to discretionary spending, including that for NSF, poses potentially devastating setbacks to our Nation's research. Short-changing scientific innovation and basic research is not a solution to the Federal deficit or debt. For example, neglecting medical research undercuts strategies to fight chronic disease and the multipronged Federal costs that arise from it, while squandering opportunities to increase private sector and Federal revenues through new medical innovations.

Research!America appreciates the difficult task facing the subcommittee as it seeks to simultaneously confront the budget deficit, strengthen the United States, and promote the well-being of Americans. There are few Federal investments that confer as many benefits as medical research—new cures, new businesses, new jobs, new solutions to healthcare cost inflation, and new fuel to drive U.S. leadership in a global economy shaped by the ability of countries to continuously innovate. We firmly believe that investing in NSF is a means of advancing our Nation's innovative capacity in both the short- and long-term. Thank you for your leadership and consideration; we know that your task is extraordinarily difficult, and that our Nation is fortunate to have such pragmatic, committed and gifted leaders at the helm.

PREPARED STATEMENT OF RESTORE AMERICA'S ESTUARIES

Restore America's Estuaries is a nonpartisan, nonprofit organization that has been working since 1995 to restore our Nation's greatest estuaries. Our mission is to restore and protect estuaries as essential resources for the Nation. Restore America's Estuaries is a national alliance of community-based coastal conservation organizations across the Nation that protect and restore coastal and estuarine habitat. Our member organizations include: American Littoral Society, Chesapeake Bay Foundation, Coalition to Restore Coastal Louisiana, Save the Sound—a program of the Connecticut Fund for the Environment, Conservation Law Foundation, Galveston Bay Foundation, North Carolina Coastal Federation, EarthCorps, Save The Bay—San Francisco, Save the Bay—Narragansett Bay, and Tampa Bay Watch. Collectively, we have over 250,000 members nationwide.

As you craft your fiscal year 2015 Commerce, Justice, Science and Related Agencies appropriations bill, Restore America's Estuaries encourages you to provide the funding levels below within the Department of Commerce, National Oceanic and Atmospheric Administration (NOAA) for core programs which greatly support coastal community economies:

- \$24 million for Fisheries Habitat Restoration
(CJS: NOAA: ORF: NMFS: Habitat Conservation & Restoration: Fisheries Habitat Restoration)
- \$3 million for the Coastal and Estuarine Land Conservation Program (CELCP)
(CJS: NOAA: PAC: NOS: CELCP Acquisition)
- \$22.9 million for National Estuarine Research Reserve System
(CJS: NOAA: ORF: NOS: Ocean and Coastal Management and Services: National Estuarine Research Reserve System)
- \$1.7 million for National Estuarine Research Reserve Construction
(CJS: NOAA: PAC: NOS: NERRS Construction)

These non-regulatory investments strengthen and revitalize America's communities by buffering against storms, supporting commercial fisheries, preventing erosion, protecting vital infrastructure, eliminating public safety hazards, and providing new recreational opportunities.

NOAA, FISHERIES HABITAT RESTORATION—COMMUNITY-BASED RESTORATION PROGRAM

(CJS: NOAA: ORF: NMFS: *Habitat Conservation & Restoration: Fisheries Habitat Restoration*)

NOAA's Fisheries Habitat Restoration line provides critical funding for the Community-based Restoration Program and newly transferred Estuary Restoration Program which was transferred to NMFS in fiscal year 2014 from the National Ocean Service. The request includes a modest \$3.3 million increase above fiscal year 2014 enacted levels for the Community-based Restoration Program to allow funding of new projects in fiscal year 2015, while maintaining current funding levels for the Estuary Restoration Program.

NOAA's Community-based Restoration Program (CBRP), accomplishes on-the-ground projects to restore the Nation's coastal, marine, and migratory fish habitat. The program provides technical expertise—including engineering, construction, and

monitoring—as well as funding to regional and national partners, and directly to local communities to carry out science-based restoration projects. Federal investments in restoration are highly leveraged with local, State, and private funds to provide long-lasting benefits to communities and economies.

The community-engagement aspect of the program is critical to long-term restoration efforts because restoration projects occur over time and require long-term community support. To date, the program has been highly successful at improving the health of coastal habitats across the Nation, benefiting both the environment and the economy through partnerships involving community members in direct, hands-on service. By working collaboratively with more than 1,500 organizations, the program has restored over 97,000 acres of habitat and involved more than 290,000 volunteers, contributing more than 1 million volunteer hours.

We also request the committee include report language strongly encouraging NOAA to implement programmatic enhancements in fiscal year 2015 to ensure inclusion of a broader, ecosystem-based management philosophy and expand their selection criteria. We would strongly support the following *report language* and urge the committee to include the following:

The Committee maintains strong support for the Community-based Restoration program. The committee recognizes the importance of fish habitat restoration for threatened and endangered species. The Committee also recognizes the importance of habitat restoration activities for protecting communities, preventing species from being listed, and providing enhanced tourism and recreational opportunities. Moving forward, the committee urges NOAA to implement the following recommendations: (A) Expand criteria for project selection to include a broader ecosystem-based management philosophy and expand criteria to recreationally important species, managed commercial species, and their forage species; (B) Select diversity of project sizes based on watershed impact and prioritize proposals that include multiple projects in single watersheds, in addition to individual large projects; (C) Encourage public and direct community engagement: from training seminars to volunteer engagement; (D) Support overarching science investments to advance monitoring, improve techniques, and advance valuation.

In the fiscal year 2014 omnibus appropriations, the Estuary Restoration Program was transferred from the National Ocean Service to the National Marine Fisheries Service under the Fisheries Habitat Restoration line without additional funding. The Estuary Restoration Act established a comprehensive interagency organization, the Estuary Habitat Restoration Council, which is comprised of five key Federal restoration agencies and leads a coordinated approach to enhance estuary habitat restoration. Under the Act, NOAA is responsible for maintaining the National Estuaries Restoration Inventory (NERI).

In November 2012, the Estuary Habitat Restoration Council approved the 2012 Estuary Habitat Restoration (EHR) Strategy and 5-year action plan. The action plan identifies outcomes and milestones to ensure that restoration efforts are coordinated, evaluated, and tracked across agencies with the goal of ensuring efforts are effective and efficient. Without modest funding, cross-agency collaboration will be disrupted, causing duplicative and potentially clashing efforts.

Restore America's Estuaries urges your continued support of the Estuary Restoration Council and NOAA's Estuary Restoration Program and asks that you provide no less than \$500,000 within requested funding for fiscal year 2015.

NOAA, COASTAL AND ESTUARINE LAND CONSERVATION PROGRAM (CELCP)

(CJS: NOAA: PAC: NOS: CELCP Acquisition)

The Coastal and Estuarine Land Conservation Program (CELCP) was created in 2002 to provide State and local governments with matching funds needed to protect the most significant coastal and estuarine areas under threat of development and not presently protected through regulatory mechanisms. CELCP is the only Federal land protection program with an explicit focus on coastal lands and natural resources.

The program is implemented cooperatively with willing sellers and matched with State and local funds, often playing a key role in uniting local, State and Federal efforts to protect an area. While our Nation's coastal protection need is far greater, Restore America's Estuaries respectfully requests \$3 million in funding for the program in fiscal year 2015 to ensure the future of this critical tool for coastal habitat conservation. This investment will allow the program to continue to address our Nation's most pressing coastal resource needs, especially in an age of increasing extreme weather and other coastal hazards.

NOAA, NATIONAL ESTUARINE RESEARCH RESERVE SYSTEM (NERRS)

(CJS: NOAA: ORF: NOS: *Ocean and Coastal Management and Services: National Estuarine Research Reserve System*)/(CJS: NOAA: PAC: NOS: *NERRS Construction*)

The National Estuarine Research Reserve System (NERRS) is comprised of 28 protected reserves that support long term research, education, training, and stewardship. Through an effective partnership between NOAA and coastal States, the NERRS plays a critical role in sustaining resilient coasts and coastal communities.

The States have been entrusted to operate and manage NOAA's program in 22 States and Puerto Rico, where over 1.3 million acres of land and water are protected in perpetuity.

Restore America's Estuaries respectfully requests \$22.9 million for NERRS operations in fiscal year 2015. At this funding level, the 28 existing reserves will maintain level funding and provide support for the addition of the 29th reserve in Hawaii. The designation of a Hawaii NERR will fill an unrepresented bio-geographic region in the NERR system.

NERRS assists our coastal communities, industries and resource managers to enhance coastal resiliency in a changing environment. As severe weather events become more common, Federal, State, and local officials are recognizing that estuaries have the capacity to provide green resilience infrastructure. Through NERRS, NOAA can tailor science and management practices to enable local planners to use estuarine habitat as a tool for resilience and adaptation.

Through science and science-based management of more than 1.3 million acres of protected land, NERRS provides numerous benefits to communities that result in improved water quality, increased upland flood and erosion control, and improved habitat quality that support local fisheries and provide storm protection to coastal communities.

CONCLUSION

Restore America's Estuaries greatly appreciates the support this subcommittee has provided in the past for these important programs. These programs help to accomplish on-the-ground restoration work which results in major benefits:

- Jobs*.—Coastal habitat restoration projects create between 17–33 jobs per \$1 million invested. That's more than twice as many jobs as the oil and gas sector and road construction industries combined.
- More fish*.—Traditional fisheries management tools alone are inadequate. Fish need healthy and abundant habitat for sustainable commercial and recreational fisheries.
- Resiliency*.—Restoring coastal wetlands can help knock down storm waves and reduce devastating storm surges before they reach the people and property along the shore.
- Leverage*.—Community-based restoration projects leverage 3–5 times the Federal investment through private matching funds, amplifying the Federal investment and impact.

Thank you and we greatly appreciate you taking our requests into consideration as you move forward in the fiscal year 2015 appropriations process. We stand ready to work with you and your staff to ensure the health of our Nation's estuaries and coasts.

PREPARED STATEMENT OF ROFFER'S OCEAN FISHING FORECASTING SERVICE, INC.

APRIL 22, 2014.

Dear Senators: I am president of Roffer's Ocean Fishing Forecasting Service, Inc. I am writing this testimony to ask you to keep the Beaufort, North Carolina National Marine Fisheries Laboratory open.

This lab has a long history of cooperative research with the Duke University, North Carolina State University, and University of North Carolina-Chapel Hill, among many others. We have had positive experiences working with staff at this lab over many years. While being well known for working with Atlantic menhaden, sea grasses, red tide, and salt marshes they are integrated in the stock assessment process of many species from king mackerel to snappers and groupers, triggerfish and other coral reef species, shrimp, as well as, turtles and marine mammals. See <http://www.sefsc.noaa.gov/labs/beaufort/> for more details on their important work in-

cluding their work with the Chevron fishery independent survey. They work with the head boat fisheries as well.

National Oceanic and Atmospheric Administration (NOAA) had recently invested in approximately \$14 million in upgrades. It has been estimated that this lab affects \$58 million into the local economy (<http://www.newsobserver.com/2014/04/01/3750561/false-savings-in-cutting-beaufort.html>) and it seems to us that this investment should be allowed to generate intellectual profit.

These are critical times in fisheries management and we need the contributions from these scientists and staff. This important research laboratory has had a renowned history since its origin in 1899. It is the second oldest marine laboratory in the United States. It presently employs approximately numerous people, including scientists who are recognized both internationally, nationally and regionally for the excellent quality work they do to support objective ecosystem based fisheries management. They may not be seen as a high profile lab. as is the Miami Laboratory, but they are the only Federal Fisheries lab between Miami, Florida, and Sandy Hook, New Jersey. In my opinion we don't need less labs studying fish and our fisheries for improved management, we need more. Present employees at other National Marine Fisheries Service (NMFS) labs are already over subscribed and stretched thin.

It seems to me that this laboratory may be being closed more for political reasons rather than objective ones.

Bottom line: Keep this laboratory open. Perhaps assign it completely to NOAA NMFS and not NOAA National Ocean Service (NOS). Also more money should be invested in fisheries independent research, advanced procedures in stock assessment, fisheries oceanographic research, and for ocean observations.

Sincerely,

MITCHELL A. ROFFER, PH.D.,
President.

PREPARED STATEMENT OF THE SAC AND FOX NATION

Chairman Wolf and distinguished members of the subcommittee, I am George L. Thurman, Principal Chief of the Great Sac and Fox Nation. Thank you for accepting this written testimony which presents to you our tribal priorities for funding programs with the Office of Justice Services, Department of Justice.

We understand the fiscal constraints of the country but feel that there is budget inequity for tribal program funding which has been further impacted with the cuts we incurred due to the 2013 sequester. Tribes should not be unfairly targeted for reductions and rescissions and forced to bear the fiscal constraints of this country alone. A key intent of the Murray/Ryan budget deal was to soften the blow of the sequester for Indian Country but unfortunately that was not the case.

As you consider the 2015 appropriations for the Office of Justice Programs, we ask that you exempt tribes from any further sequestration.

1. Fully fund the Tribal Law and Order Act as authorized.
2. Fully fund the Violence Against Women Act.
3. Tribal Grants—Utilize the Department of Justice (DOJ) appropriations as base funding with tribes setting own priorities.
4. Tribal set-aside from all discretionary Office of Justice programs.

The Sac and Fox Nation also support the appropriations requests of the National Congress of American Indians.

ABOUT THE SAC AND FOX NATION

The Sac and Fox Nation is headquartered in Stroud, Oklahoma, and our tribal jurisdictional area covers Lincoln, Payne, and Pottawatomie Counties. Of the 4,000 enrolled tribal members, 2,600 live in Oklahoma. We are proud to pay tribute to a Sac and Fox descendent and Great Native American, Jim Thorpe. One of the most revered Olympic athletes who has ever represented the United States; Mr. Thorpe won the pentathlon and decathlon in the 1912 Olympics.

FULLY FUND TRIBAL LAW AND ORDER ACT AS AUTHORIZED

The Tribal Law and Order Act (TLOA) had 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 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 various Federal agencies. DOJ recognizes the importance of completing the circle when it issued the "Proposed Statement of Principles", in which is referenced that a stable funding at sufficient levels for essential tribal justice functions is critical to the long-term growth of tribal institutions.

FULLY FUND VIOLENCE AGAINST WOMEN ACT AS AUTHORIZED

We applaud the work of Indian Country and Congress to successful get a comprehensive Violence Against Women Act reauthorized. Prior to this bill Native women were denied equal access to justice. Thank you for helping us to protect our mothers, daughters, sisters and wives from jurisdictional gaps or safe havens for criminals. But without appropriations, this is an idle victory. We urge you to fully fund at the authorized amount.

TRIBAL GRANTS—UTILIZE DOJ APPROPRIATIONS AS BASE FUNDING WITH TRIBES SETTING OWN PRIORITIES

Eliminate the competitive grant funding process and utilize Justice Department appropriations as base funding where tribes and tribal courts themselves determine their own priorities.

Competitive funding for tribal priorities is a no win situation that continues to pit tribe against tribes. One of the biggest issues with DOJ funding is that it is competitive. In order to obtain the funding—on behalf of their tribal courts—tribes must compete against each other based on DOJ's priorities and guidelines rather than identifying their own priorities to best serve their citizens at the local level.

Instead the approach should be to utilize DOJ appropriations as base funding so that tribes are encouraged to determine their priorities. It appears that DOJ understands this concept inasmuch as it posed the idea of base funding in the form of a block grant during tribal consultation on the Office of Violence Against Women (OVW). We propose that DOJ not merely propose this for OVW but consider this for appropriations across the board.

TRIBAL SET-ASIDE FROM OFFICE OF JUSTICE PROGRAMS

Create a 7 percent tribal set-aside from all discretionary Office of Justice programs funding. Ensure that they are allocated as flexible base funding. Also, provide funding above the fiscal year 2010 level for each formerly separate program area including tribal courts, jail construction, legal assistance, juvenile delinquency prevention and substance abuse prevention.

The 7 percent set-aside was cut in the passage of the fiscal year 2012 Consolidated and Further Continuing Appropriations Act. As a result tribal justice programs were cut across the board and continue to struggle to address the increasing need of these funds which were further impacted by the sequestration.

Again, thank you for this opportunity.

PREPARED STATEMENT OF ZEB SCHOBENND, MOREHEAD CITY, NORTH CAROLINA

Dear members of the subcommittee,

I am writing to strongly urge the subcommittee to reject the proposal in the President's fiscal year 2015 budget to close the National Oceanic and Atmospheric Administration (NOAA) laboratory in Beaufort, North Carolina, and to instead fund this facility so that the crucial work being done there can continue on into the future. This laboratory is uniquely located to address key marine science issues throughout the east coast of the U.S., and its loss would represent a devastating blow to the fisheries interests in the region. The decision to try and close the Beaufort facility represents a narrow-minded approach to a temporary funding concern that is dwarfed in comparison by the potential damage done to the research con-

ducted on the marine resources in the southeast. While I am addressing the subcommittee as a private citizen concerned about this issue and not representing the interests of any Federal agency or my employer, I have been a contractor for NOAA for most of the past decade and can attest to both the quality of the research done at this facility and the harm that would be caused by its closing.

The financial reasons given by the leadership of the National Ocean Service (NOS) for closing the Beaufort facility and have been misrepresented and overblown. In their justification for closing the lab, NOS cited only the NOS employees that would be impacted, grossly underestimating the total number of workers at the site. In addition to NOS, the lab also houses National Marine Fisheries Service (NMFS) and National Estuarine Research Reserve System (NERRS) programs; between the three groups there are 108 Federal, State, and contract employees at the facility, a much larger disruption of staff than initially claimed. Additionally, NOS cited a cost of future maintenance repairs to the facility that was outdated and did not take into account recent work that has been done to upgrade the laboratory and its infrastructure. Since 2006, approximately \$14 million in repairs and upgrades have been accomplished, including the replacement of multiple buildings. The closure of this facility, after so much has been invested in its improvement in recent years, seems like a clear waste of taxpayer money, especially given that a 2014 report showed that the facility is structurally sound.

Beyond the financial considerations, however, the closure of the Beaufort lab would be a grave error because of the loss of high-quality science and scientists associated with the facility. Located at the intersection of two distinct marine environments, the NOAA laboratory in Beaufort is uniquely situated to study one of the most diverse ecosystems in the country. The lab is an international leader in studies of harmful algal blooms (HABs) and the invasion of lionfish into the waters of the Atlantic Ocean, both of which are currently having a significant impact on the fisheries resources of the United States. The NMFS programs at the lab are responsible for the assessment of the major marine fisheries stocks in the southeast, including menhaden (the largest fishery along the Atlantic coast as well as in the Gulf of Mexico) and the commercially and recreationally important snapper and grouper fisheries. NMFS in Beaufort also provides the only up-to-date information on the currently-closed red snapper fishery along the southeast coast through its SouthEast Fishery-Independent Survey. All of these programs would suffer irreparable damage were the lab to close because NOAA would be unlikely to retain the world-class scientists performing this research in the event their Federal positions were transferred to other NOAA facilities in the southeast; the NOAA lab is part of a unique conglomeration of research facilities in the Beaufort area, and the majority of employees would very likely try and remain in the area at a different institution rather than relocate to a less desirable location. Thus, NOAA (and NMFS in particular) would be forced to rebuild these programs from scratch, programs that are required to meet congressional mandates laid out in the Magnuson-Stevens Fishery Conservation and Management Act. Just as importantly for NMFS, the closure of the Beaufort facility would mean that the Fisheries Service would not have a presence along the coast between Sandy Hook, New Jersey and Miami, Florida—an extent that covers over two-thirds of the United States east coast. It is difficult for the agency to claim they are interested in conserving the marine resources of the southeast with such a large spatial gap in representation, especially compared to five NMFS research facilities in the Gulf of Mexico and another five in the northeast.

In summary, the closing of the NOAA facility in Beaufort is bad policy—it is a squandering of taxpayer funds, it is a major detriment to the science being conducted in the southeast, and it makes it more difficult for NMFS to maintain the quality of the work it is federally mandated to achieve. The laboratory in Beaufort has been operating continually since 1899 and was sited here specifically because of its advantageous position so close to so many of our Nation's valuable marine resources; Congress owes it to our country to make sure the high-quality work done here continues on for the next 115 years.

PREPARED STATEMENT OF DR. AMY M. SCHUELLER, RESEARCH FISHERY BIOLOGIST

I am writing the following letter as a private citizen on behalf of myself during off-duty hours using only personal resources. I am not speaking for the Federal Government or any of its agencies in any capacity.

I am writing to specifically discuss the proposed closure of the National Oceanic and Atmospheric Administration (NOAA) Beaufort Laboratory located in Beaufort, North Carolina. The lab is part of the Department of Commerce, National Oceanic and Atmospheric Administration and houses employees of the National Marine

Fisheries Service (NMFS), National Ocean Service (NOS), and National Estuarine Research Reserve (NERR).

I urge the proposed closure of NOAA's Beaufort Laboratory be removed from the NOS budget. Currently, the lab houses 108 employees from NMFS, NOS, and NERR. The costs associated with upkeep and maintenance of the lab were inaccurate and outdated in the NOAA explanation of budgetary items. There were mistakes in the number of employees at the facility and incorrect calculations used to detail the budget item. In the past several years, several activities have been completed to keep the facility in good working condition including the replacement of the administration building and maintenance building, replacement of the bridge to the facility, seawall repair, improvements to the air conditioning, and other improvements, which totaled approximately \$14 million. Finally, an updated engineering report (2014) documents that the facility is NOT structurally unsound.

Closing the Beaufort Lab would be a tragedy. The Beaufort Lab is a stalwart of fisheries and oceanic science that has produced many well known scientists. The Beaufort Lab has a good reputation for advancing science in population dynamics and stock assessments; Gulf and Atlantic menhaden biology, movement, and assessments; harmful algal blooms; hypoxia; pathogens; and snapper and grouper species. NOAA has repeatedly recognized individual researchers, research teams, and the Laboratory as a whole for the outstanding quality of scientific work completed. Several of the area fisheries labs have located in Beaufort due to the NOAA lab including Duke Marine Lab, North Carolina Division of Marine Fisheries, CMAST, and the Institute of Marine Science. The NOAA Beaufort Laboratory is the center of productive fisheries science informing fisheries management for the Atlantic and Gulf coasts and is currently the only NMFS lab between Sandy Hook, New Jersey, and Miami, Florida.

Specific items of note from each line office include:

NMFS

Stock Assessment Science

—The NOAA Beaufort Laboratory provides the stock assessment science that determines how many fish can be caught in the southeast United States.

The stock assessment science of the NOAA Beaufort Laboratory focuses on marine fish populations that are ecologically and economically vital to the region and Nation, including snapper-grouper and pelagic species managed by the South Atlantic Fishery Management Council, Atlantic menhaden managed by the Atlantic States Marine Fisheries Commission, and Gulf menhaden managed by the Gulf States Marine Fisheries Commission. Commercial landings from the South Atlantic have been valued at \$176.5 million, supporting a centuries-old cultural way of life, and salt-water recreational fishing in this region tops the Nation for its economic impact on sales and jobs (East Florida and North Carolina generate \$5.3 billion and 47,000 jobs). Atlantic menhaden support the largest fishery on the U.S. east coast, and Gulf menhaden support the largest fishery in the Gulf of Mexico, with a combined value of \$127.7 million.

Fishery-Independent Surveys

—Fishery-independent surveys collect data on fish populations for stock assessments and research, using standardized sampling gears and methodologies.

The Southeast Fishery-Independent Survey (SEFIS), run out of the NOAA Beaufort lab, collects annual information on the abundance, distribution, sizes, and ages of economically-important reef fish species like groupers and snappers on the U.S. East Coast between North Carolina and Florida. Using fish traps and underwater video, SEFIS determines whether reef fish species are increasing or decreasing in abundance so fish stocks can be managed with much greater certainty. The SEFIS staff has developed a close working relationship with fishermen in the Carolinas due to their co location in Beaufort, North Carolina. NOAA's Beaufort Lab is ideally situated, centered in the middle of substantial commercial and recreational fishing industries and a thriving marine science community. If the SEFIS staff was forced to move out of their survey region, ties with the fishing industry and the marine science community would be effectively severed, ultimately resulting in a significant disconnect between the National Marine Fisheries Service and the communities to which they serve.

NERR

Impacts of Closure to the Reserve-Strategic Location and Facility for the Reserve:

- North Carolina Coastal Reserve and National Estuarine Research Reserve staff (7) are currently located at the NOAA Beaufort Lab, which serves as the headquarters office for the program.
- In 2002, Congress provided NOAA with “. . . \$5,000,000 for the Beaufort Laboratory for necessary repairs to existing facilities and to construct a joint laboratory, dock, and other facilities in collaboration with the Rachel Carson National Estuarine Research Reserve.” (Public Law 107–77, See S.Rept. 107–42, p. 106–108.) \$1.32 million was invested in NOAA (\$1.28 million) and State funds (\$42,046) for the construction of a joint building at the NOAA Beaufort Lab to serve the Reserve’s mission.
- The joint building was completed in 2007 and was constructed specifically with the Reserve’s education programs in mind: the auditorium regularly hosts coastal training program workshops and the teaching classroom hosts school groups, teacher workshops, field trips, and lectures to support K–12 Estuarine Education Program activities.
- The NOAA Beaufort Lab is a 5-minute boat ride from the Rachel Carson component of the Reserve; this close proximity is essential for conducting Reserve activities efficiently to conduct mission-critical programming including educational programs, water quality and habitat monitoring and research programs, and stewardship of the site including species monitoring, debris clean-ups, feral horse management, and access point maintenance.

Reserve Activities at the NOAA Beaufort Lab, 2008–2013

Education

K–12 field trips

- 177 educational programs
- 4947 participants

Teacher workshops

- 28 teacher workshops
- 412 participants

Summer camps

- 109 camp sessions
- 921 participants

Summer public field trips

- 96 field trips
- 1123 participants

Stewardship

Volunteer service at the Rachel Carson Reserve

- 1170 volunteers
- 2873 volunteer hours

Site management

- The NOAA Beaufort Lab provides an ideal base from which to manage the Rachel Carson Reserve due to its close proximity to the Reserve site, location on calm inland waters, and boat launching facilities. Additionally, many NOAA staff conduct or have conducted research at the Rachel Carson Reserve and are able to provide professional perspectives that are valuable to Reserve research and management.

Research

Research permits

- 31 research permits issued for research conducted at the Rachel Carson Reserve

Water quality monitoring

- Water quality inventory and monitoring stations at Middle Marsh and Shackleford Banks, in partnership with the National Park Service

Coastal Training Program

Coastal Training Program workshops

- 31 workshops
- 1076 participants

NOS

NOAA’s HAB program was initiated at the Beaufort Laboratory from the work conducted in North Carolina in 1987 during the “red tide” that affected the central coast for more than 6 months. The Beaufort Lab continues to provide essential re-

search and field data that inform Ecological Forecasting of HABs in Alaska, North Carolina, Florida, Guantanamo Bay, Cuba, Bay of Fundy, Gulf of Maine, Gulf of Mexico, and the Caribbean. Additionally, Beaufort Laboratory staff were recognized for conducting award winning science in elucidating the life history of *Pfiesteria*, a HAB species that inhabits estuaries and river systems up and down the eastern seaboard. The threat of *Pfiesteria* caused economic damages of ~\$35 million a month to the seafood industry following publicity of local fish kills. Beaufort laboratory staff provided expertise and knowledge to local and State resource managers and University partners to educate the public about the real facts concerning *Pfiesteria* and the safety of their seafood. Beaufort staff have continued to provide their expertise and knowledge to the North Carolina River Keeper Alliance and North Carolina Department of Natural Resources, Division of Water Quality when fish kill events have occurred in local estuaries. This has helped to alleviate public anxiety regarding seafood safety.

In conclusion, closure of the NOAA Beaufort Laboratory would be a poor choice scientifically, economically, and would leave a large part of the east coast without the science that they deserve. The numbers used to estimate the costs of maintaining the facility in good working order were incorrectly estimated and inaccurate numbers of current employees were provided for the budget. In addition, the Federal Government has invested in this laboratory over the long-term, and to close it now would be a gross misuse of Government resources.

PREPARED STATEMENT OF SCIENTIFIC DIVING INTERNATIONAL®

Dear Chairwoman Mikulski: I am a marine scientist who has had extensive experience in marine bivalve fisheries. I write to offer my opinion regarding the proposed closing of the National Oceanic and Atmospheric Administration (NOAA) Beaufort laboratory in Beaufort, North Carolina. This laboratory has a long and storied history and a reputation for excellence within the scientific community. It is also positioned in an excellent place to conduct needed research on marine finfish and shellfish populations. As these populations come under increasing pressure from both commercial and recreational interests the work of fisheries scientists become vastly more important.

The National Marine Fisheries Service (NMFS) has an unparalleled staff of scientists that perform critical and necessary work on fish and shellfish stocks. Their work has allowed populations of many animals to recover and become stable along a number of regions of the U.S. coast. NMFS scientists have a completely unforgiving task and that is to prevent the collapse of fisheries stocks and thereby to prevent the degradation of coastal marine ecosystems. I say unforgiving because although this seems like an honorable goal it means that NMFS scientists have to say no to a lot of people, there simply are not enough fish to go around.

Electronics and the Internet have made adequate fishers out of people who would have starved in the past. I once visited the small town of Cortez in Florida and spoke with a member of one of the original Cortez fishing families. When they arrived in Cortez a fisherman could feed his family using a row boat or a small sailing skiff. The area in front of this gentleman's home he called "the kitchen" because they could reliably get a family meal from there if all else failed. This is not the case any longer nor has it been for decades, however in many areas fisheries management has prevented the complete collapse of coastal ecosystems. Despite their valiant effort fish and shellfish stocks are under constant attack from development and overzealous fishers whose only understanding of fisheries management boils down to some scientist in a white lab coat taking "our" fish.

The United States put a lot of effort and financial resources into the NMFS and NOAA in the 1960s-1980s but, like any issue, people lose interest in issues that are still relevant. Marine research, not just for exploitation of resources, is an area that has and will pay dividends to our Nation and also to the environment. It is not a time to retrench and look only to the bottom line, it is time to renew our commitment to a healthy marine environment and ecosystems that can sustain reasonable harvest. Please keep the Beaufort Lab open, we cannot afford to lose it.

Sincerely,

DAN C. MARELLI, PH.D.,
President and Diving Officer.

PREPARED STATEMENT OF THE SEA GRANT ASSOCIATION

Madam Chair and members of the subcommittee, my name is LaDon Swann and I am the director of the Alabama-Mississippi Sea Grant Consortium. I submit this testimony in my capacity as president of the Sea Grant Association (SGA). The SGA appreciates very much the steadfast support this subcommittee has provided the National Sea Grant College Program over the years. As a result, Sea Grant has been able to deliver a number of quantifiable benefits to the residents of our ocean and coastal communities, which are documented below.

To continue to achieve a high rate of return on Federal investment and to produce meaningful and quantifiable benefits to coastal residents in the future, the SGA recommends that the National Sea Grant College Program within National Oceanic and Atmospheric Administration (NOAA) be funded in fiscal year 2015 at \$80 million. The request is consistent with the guidance provided in the fiscal year 2012 conference report that said:

The Committee recognizes the important role the Sea Grant program plays in connecting coastal and Great Lakes communities with practical research and results, and encourages the growth of this program in future budget requests.

The National Sea Grant College Program addresses national priorities at the local level, by identifying citizens' needs in order to help guide State and national research agendas. Sea Grant funds the best competitive science at our Nation's colleges and universities. The scientific discovery is effectively delivered through Sea Grant's robust extension, outreach and education programs to inform public and private decisionmaking in order to enhance the practical use and conservation of coastal, marine, and Great Lakes resources while also expanding economy and maintaining a sustainable environment.

The administration's fiscal year 2015 request for the National College Sea Grant Program is a total of \$63.4 million of which \$2 million is for marine aquaculture. This represents a total reduction from last year's appropriation of \$4 million (from \$67.4 million to \$63.4 million). After reviewing the detailed NOAA budget request sent to the Congress, it is clear that important changes to the Sea Grant program proposed by the administration are obscured within the bottom line requested for the program.

The Sea Grant Association is deeply concerned with several of the proposed changes and believes they are inconsistent with NOAA's own strategic plan and reduces Sea Grant's effectiveness at delivering important research, education and extension to its State, local, and regional partners.

First, within the budget request NOAA is proposing to terminate funding within Sea Grant for all State Sea Grant Program STEM activities such as K-12 teacher training, curricula development, and education; and Sea Grant/National Marine Fisheries Service (NMFS) Graduate Fellowships. This proposal is part of the administration's fiscal year 2015 proposal to reorganize Federal funding for STEM education, where a total of 31 STEM education programs at nine key R&D mission agencies (including NOAA, National Science Foundation (NSF), and National Aeronautics and Space Administration (NASA)) will be terminated. The Sea Grant Association strongly opposes the termination of the education programs both within Sea Grant and elsewhere in NOAA.

It is important for mission agencies to help support the next generation of scientific and technical talent—much of which will be needed by these agencies in future years. Education (particularly STEM education) within the Sea Grant program is explicitly authorized in the legislation enacted by Congress to create the Sea Grant Program. The Sea Grant statute recognizes and reinforces the linkage between research, education and extension by relying on the land-grant college and university model of research and education in service to the public. We urge the subcommittee to reject these particular consolidation proposals and support the continuation of these programs within their current agencies.

Second, within the budget request for Sea Grant, the administration is proposing a \$1 million reduction (from last year's level) in research funding available for competitively awarded projects under two specific focus areas: Healthy Coastal Ecosystems; and Resilient Coastal Communities and Economies. This proposed reduction is inconsistent with NOAA's stated priorities and strategic plan. Because of Sea Grant's prior accomplishment (detailed elsewhere in this testimony) NOAA should be strengthening Sea Grant's role in coastal resiliency as a way to help make the Nation's ocean, coastal, and Great Lakes economies more productive.

Third, within the budget request for Sea Grant, the administration is proposing to reduce marine aquaculture research by \$2.5 million; down to a total of \$2 million.

This funding decrease is shortsighted and will reduce the number of external grants NOAA provides for decision support tools and technology transfer related to sustainable domestic marine aquaculture. It will also reduce base-funded sustainable seafood industry research performed for NMFS.

The SGA's proposal for fiscal year 2015 is \$80 million, which includes a specific enhancement of the Resilient Coastal Communities and Economies focus area. Funding Sea Grant at \$80 million would also allow for the restoration of funding for STEM education, healthy coastal ecosystems, and marine aquaculture at levels at least equal to fiscal year 2014 levels.

THE RETURN ON INVESTMENT TO THE NATION THROUGH SEA GRANT

The rationale behind the SGA's proposed growth for Sea Grant is related to the specific metrics developed that can be used to assess the value of this program. In fiscal year 2013, Sea Grant returned the following quantifiable benefits to the Nation in return for the Federal investment:

- \$485 million in direct economic benefits to the Nation, which represents a 7 to 1 return on the Federal investment;
- 3,400 new businesses were created or retained, and more than 15,000 jobs were created or retained due to Sea Grant efforts;
- 600 communities across the Nation have adopted more sustainable economic or environmental development practices and policies;
- Sea Grant expanded the Nation's workforce by supporting more than 900 undergraduate and more than 980 graduate students, resulting in 335 graduate or undergraduate degrees awarded; and
- Nearly \$100 million annually in additional public and private sector investments in Sea Grant supported activities are leveraged by the subcommittee's annual appropriation for the Sea Grant program.

Approximately 95 percent of the Federal funding provided to Sea Grant leaves Washington and goes primarily to State university-led programs where it is used to conduct research, carry out extension, and education programs, and deliver valuable services to States that participate in this program. In addition, Federal funding through the Sea Grant program has a significant leveraging impact with every Federal dollar invested attracting more than two additional dollars in matching funds and other public and private sector resources.

THE ROLE OF SEA GRANT IN SUPPORTING THE NATION'S COASTAL COMMUNITIES—INCREASING COASTAL RESILIENCY

In addition to the annual positive scientific and economic impacts delivered by the National Sea Grant College Program summarized above, the relationships formed in coastal communities and with local stakeholders have proved extremely beneficial and supportive in disaster response. Beginning with hurricane Katrina and including the major disasters of the *Deepwater Horizon* oil spill and most recently hurricane Sandy, the Sea Grant network has provided substantial and much needed "boots-on-the-ground" assistance to affected communities. Following each of these disasters, it was often Sea Grant extension, outreach and education programs that brought the first response to these impacted communities.

Sea Grant works with Federal and State agencies to provide critical information following natural and man-made disasters. In the wake of these events, Sea Grant programs assist affected communities and States by facilitating community planning and capacity building by working with Department of Commerce Disaster Response Teams, Federal Emergency Management Agency (FEMA) mitigation assessment teams, State resource agencies for fishery and aquaculture impacts, local governments, industry groups, as well as others in addressing coastal impacts.

Immediately following every event, Sea Grant extension professionals and scientists were there, helping communities assess impacts to coastal businesses including commercial fishing, tourism, local marinas, and aquaculture businesses. Sea Grant also helped determine the extent of changes in coastal geology, barrier islands, beach erosion, and sand dune migration. Sea Grant capabilities allows the program to provide expertise and experience in assessing other environmental impacts such as marine debris and changes to water quality and communicating the results to affected coastal communities. Sea Grant adds to its ongoing efforts of providing coastal communities with technical assistance, helping to prepare community recovery plans, long-term resilience plans, and explaining the consequences of future mitigation choices ranging from seawalls to green infrastructure. Sea Grant has expanded its role to include the development of tools and programs that address the long-term health impacts of disasters on coastal residents and help these communities to be better prepared for these disasters.

CONCLUDING THOUGHTS

America must use its coastal resources wisely to increase the economic development and resilience of our coastal communities and U.S. working waterfronts while sustaining the health and productivity of the ecosystems on which they depend.

With the SGA's fiscal year 2015 request of \$80 million for Sea Grant, the National Sea Grant College Program will be uniquely positioned to continue to make significant contributions to improve the lives and livelihoods of the Nation's coastal communities and economies. We hope the subcommittee will be able to support this request and restore funding for Sea Grant STEM and other NOAA education activities, the NMFS Fellowship program, research in the key Sea Grant focus areas, and marine aquaculture.

Thank you for the opportunity to present these views. The SGA would be happy to answer questions or provide additional information to the subcommittee.

PREPARED STATEMENT OF THE NATIONAL CONSORTIUM FOR JUSTICE INFORMATION
AND STATISTICS

INTRODUCTION

Thank you, Madam Chair and members of the subcommittee, for the opportunity to submit testimony on the Department of Justice (DOJ) funding to be provided for in the fiscal year 2015 Commerce, Justice, Science, and Related Agencies appropriations bill. In particular, SEARCH recommends that the National Criminal History Improvement Program (NCHIP) receive an appropriation of \$50 million, and the National Instant Criminal Background Check System (NICS) Act Record Improvement Program (NARIP) receive an appropriation of \$5 million.

SEARCH, The National Consortium for Justice Information and Statistics (SEARCH), is a nonprofit membership organization created by and for the States. SEARCH's Governor-appointed, dues-paying members from the States and territories have the responsibility, among other things, to oversee both NCHIP and NARIP within their States.

Over the years, States have made great strides in meeting their criminal history record improvement goals under both programs. Last year's increase in funding for these programs as reflected in the fiscal year 2014 Commerce, Justice, Science and Related Agencies appropriations was welcomed by the States who continue to use the funding to modernize, enhance and more effectively share data for critical criminal justice and public safety decisions.

With recent NCHIP and NARIP funding, for example, the Kentucky State Police (KSP) has created a firearms application database which collects and houses mental health records, judgments and citations used for supporting documentation when entering denied persons in NICS Index. Funding also allowed for an interface with the State Department of Corrections to obtain offender records and update criminal history dispositions, as well as focus on NICS Index entries. With these efforts, over 22,500 State criminal histories were reviewed, resulting in over half being entered into NICS Index, ultimately keeping guns out of the hands of persons prohibited from receiving or possessing firearms. Kentucky anticipates applying for future funding to improve upon their demonstrated success in enhancing records in these databases.

Maryland has used NCHIP and NARIP funding over the past 2 years to focus on missing disposition issues, completing thousands of incomplete records, and now over 90 percent of arrests in the State database have a final disposition. This updated information is available for critical decisions like gun sales, employment for persons working with vulnerable populations, and overall criminal justice business on the State and Federal level.

Georgia is actively using NCHIP funding to ensure synchronization of State and Federal criminal history files and to provide accurate and complete criminal history record information for both criminal justice and public safety decisionmaking.

There is still work to be done to realize a truly complete and accurate national criminal history background check system. That system not only informs a variety of critical public safety decisions, but also noncriminal justice decisions, such as those regarding applicants for employment and licensing, to volunteers who work with children and other vulnerable populations, to individuals purchasing firearms. In light of recent, tragic events due to gun violence, and the simultaneous demand for accurate, complete and timely criminal records for a range of decisions, a priority placed on NCHIP and NARIP funding is essential.

The States are eager to leverage fiscal year 2014 and new funds in fiscal year 2015 funding to engage in broad-scale initiatives and partnerships with other State

agencies to improve and enhance criminal history record information collection and sharing.

SEARCH appreciates the subcommittees' recognition that while both NCHIP and NARIP each focus on improvements to the efficiency, effectiveness, timeliness and accuracy of criminal history record and associated data for decisionmaking purposes, each program emphasizes specific and distinct goals. NARIP funding has been heavily focused on enhancing decisionmaking for firearms purchases, such as increasing the number of disqualifying mental health records available to the system. NCHIP is focused on a broader range of criminal history improvements that individual States have prioritized (improving arrest and disposition matching, increasing conviction record availability in the Federal systems, etc.). Perhaps most significantly, by current law, still less than half of the States qualify for NARIP funding to improve their contributions to NICS.¹ Thus, the majority of the States rely on NCHIP for criminal history record and repository improvements related to all criminal and non-criminal justice decisionmaking. As such, SEARCH makes two key recommendations:

1. *Support NCHIP funding for improvements to State criminal history record information so that States can effectively exchange information with other States and the FBI.*

The NCHIP program has been successful in helping States to improve the accuracy, reliability and completeness of their automated, criminal history record systems. It is important to note that information stored in the State's criminal history record repositories is the same information that is used for criminal justice decisionmaking (such as at arrest, filing of charges, sentencing and inmate housing) as well as for other public safety and civil decisions (such as decisions regarding firearms transfers, or for individuals applying for employment or volunteer work with vulnerable populations).

Unlike the NARIP, all States qualify for funding under NCHIP to improve their criminal history record systems. States who cannot qualify for NICS funding will be significantly hampered in their efforts to help improve the Nation's criminal history record system if they cannot access sufficient resources via NCHIP.

NCHIP's broad objective is to enhance the criminal justice capabilities of State governments by improving the accuracy, completeness and timeliness of criminal history records. These State systems support Federal records systems, including the Federal Bureau of Investigation (FBI) Interstate Identification Index (III).² Indeed, 70 percent of all III records are maintained by the States and 30 percent are maintained by the FBI.³

Indeed States have used NCHIP funding to solve a variety of information sharing problems. Virginia used the funding to provide electronic access to criminal history records on-site at gun shows, ensuring a rapid check to prevent the transfer of firearms to prohibited persons.

States have used NCHIP widely to improve the completeness and accuracy of criminal history record as well as to create links with the courts to allow automated updates and disposition reporting. In Florida, such work over the past several years resulted in updates to over 2.5 million dispositions.

The increase in funding for NCHIP in fiscal year 2014 and, hopefully, in fiscal year 2015, will reinvigorate a program that had suffered in years past from considerably reduced funding. Because State criminal history records are the primary source for the FBI III database, any constraints on the States weakens the ability of many State and Federal programs to identify threats and keep our Nation safe.

2. *Continue to invest in background screening for firearms purchases.*

One of the key tools in keeping firearms out of the hands of those who should be prohibited from having them is a robust National Instant Criminal Background Screening System (NICS). Given the tragedies of recent years, significant focus has been placed on our Nation's background screening system for firearms purchases.

¹NARIP has two main requirements: States must (1) establish a process where those adjudicated as "mentally defective" can seek to reinstate their right to purchase a firearm, and (2) comply with a process to estimate the number of NICS disqualifying records they maintain. Only 20 States have met requirement #1.

²The Interstate Identification Index is the national system designed to provide automated criminal history record information of Federal offenders and records of offenders submitted by all States and territories.

³Survey of State Criminal History Information Systems 2010, Bureau of Justice Statistics, U.S. Department of Justice, Office of Justice Programs (November 2011) (<https://www.ncjrs.gov/pdffiles1/bjs/grants/237253.pdf>).

Approximately 90 percent of records used to make firearms transfer determinations are records maintained and made available by the States. And, therefore, the overwhelming majority of firearms transfer denials are based on State records. Continued funding to improve the system's effectiveness for existing requirements related to background screening for firearms purchases is essential.

For example, in New York, NARIP grant funds have significantly improved the records that New York State makes available to the NICS Index. New York built and deployed the NICS Transmission System to allow New York State to efficiently transmit mental health involuntary admissions records, civil guardianships and order of protections to provide better safeguards that prevent firearms from getting into the wrong hands. The State also completed system changes to collect and report Misdemeanor Crimes of Domestic Violence (MCDV) convictions to NICS as firearm permit prohibitors so that vulnerable spouses, children and intimate partners are further protected. The State also completed analysis and significant system enhancements to improve the accuracy and completeness of disposition data made available to NICS via New York's Criminal History Reports.

Today, the accuracy, completeness and reliability of the Nation's criminal history record system is more important than ever before, for law enforcement investigations; officer safety; sentencing and other criminal justice purposes; for expungement and other reentry strategies; for homeland security and anti-terrorism purposes; for public non-criminal justice purposes, such as security clearances and employment suitability; and for research and statistical programs that provide critical guidance for justice assistance decisions and for shaping law and policy. Without an adequate level of funding for the States, the quality of criminal records available nationwide will continue to be negatively impacted.

As you can see from the examples above, for both of NICS and NCHIP, SEARCH encourages Congress to allow States to use funding at their discretion to address the specific challenges each State faces in making more records available to the national system. Funding should also encourage adherence to performance metrics and accountability measures. SEARCH supports that Congress should expect, and States should define, specific and measurable goals for which they will use the funding to demonstrate progress and impact. SEARCH also encourages Congress to fund technical assistance and technology investments for States to improve automated information sharing systems in support of NICS.

CONCLUSION

SEARCH thanks the Chairman and members of the subcommittee for their steadfast support of these programs in the face of daunting budget challenges. Given the reliance on criminal history record systems for critical decisions that keep our citizens safe from guns, predators, terrorists and other criminals, it is a worthwhile and needed investment.

We urge Congress to continue the investment in the Federal-State criminal background screening partnership that comprises NICS. NICS is a critical tool in the fight against gun violence, but funding for its improvement must envision a national scope that is inclusive of all the States. As Florida representatives noted, their successes with information sharing would not have been possible without the support of NARIP and NCHIP funding.

Meaningful NCHIP funding will more broadly improve this Nation's criminal justice information sharing backbone. And the Federal investment can be leveraged many times over by contributing to the ability of State and local criminal justice agencies to provide timely, accurate and compatible information to Federal programs such as III. As Kentucky representatives stated, none of the improvements they had made would be possible without this funding.

On behalf of SEARCH's governor's appointees, and the thousands of criminal justice officials who participate in the SEARCH network and who benefit from SEARCH's efforts, we thank you for your consideration.

PREPARED STATEMENT OF DR. KYLE SHERTZER, MOREHEAD CITY, NORTH CAROLINA

Dear Subcommittee on Commerce, Justice, Science, and Related Agencies: I am gravely concerned about the proposal in the 2015 President's budget to close the National Oceanic and Atmospheric Administration (NOAA) Beaufort Laboratory located in Beaufort, North Carolina. This lab is part of the National Oceanic and Atmospheric Administration; it is administered by the National Ocean Service (NOS), but also houses the National Marine Fisheries Service (NMFS) and National Estuarine Research Reserve System (NERRS). Although I am writing this letter as a private citizen, and the views expressed are not intended to represent those of any gov-

ernment agency, I am a scientist at the NOAA Beaufort Lab and therefore have firsthand knowledge regarding the value of this laboratory to the Nation, in terms of its contributions toward marine science, natural resource management, and public outreach. The proposal to close this laboratory is a short-sighted reaction to a short-term problem.

Closing the Beaufort Lab would be a tragedy. The Beaufort Lab is a stalwart of fisheries and oceanic science, with an outstanding national and international reputation for advancing science in numerous areas: population dynamics and stock assessments; Gulf and Atlantic menhaden biology, movement, and assessments; harmful algal blooms; hypoxia; sea grass; pathogens; and snapper and grouper monitoring and ecology. NOAA and the President have repeatedly recognized individual researchers, research teams, and the Laboratory as a whole for its outstanding quality of scientific work. Furthermore, this lab is the originator and nexus of an internationally esteemed consortium of marine science institutions, including the marine laboratories of Duke University, North Carolina State University, the University of North Carolina, and the North Carolina Division of Marine Fisheries. Beaufort was chosen because it is a prime location where northern and southern marine ecological communities intersect, and as such this lab provides the only Federal access to the most diverse marine ecosystem in the United States. There is no other location where these opportunities can be accessed as easily or as cheaply. It is the only NMFS facility on the Atlantic coast between Sandy Hook, New Jersey and Miami, Florida, a stretch of over 1200 miles of coastline.

The request to close the laboratory was based on current funding allocation to NOS, but inaccurate and outdated information that overstated the costs of maintaining the facility was used in the analysis that led to this request. Currently, the lab houses 108 employees from NOS, NMFS, and NERRS. The NOS initiated the proposed closure, but the request understated the number of NOS employees and did not account at all for employees from NMFS or NERRS. In effect, this mistake excluded more than half the staff of the lab. Furthermore, the request was based on estimated costs for the lab's upkeep and maintenance that were in error. Since 2006, several activities have been completed to keep the facility in good working condition, including replacement of the administration building, replacement of the maintenance building, replacement of the chemical storage building, replacement of the bridge to the facility, repair of the seawall, and other improvements (air conditioning, electrical, storm water runoff), which totaled approximately \$14 million. After such investments, closing the lab now would represent a conspicuous waste of tax-payers' money. Finally, contrary to previous claims, an updated engineering report (2014) documents that the facility is NOT structurally unsound. Based on mistakes both in the number of staff at the facility and in the costs associated with its upkeep, the budgetary calculations used to justify the proposed closure were fundamentally flawed.

I highlight below, by line office, the critical role that the NOAA Beaufort Laboratory has played in helping NOAA achieve its Strategic Mission (1) to understand and predict changes in climate, weather, oceans, and coasts, (2) to share that knowledge and information with others, and (3) to conserve and manage coastal and marine ecosystems and resources.

NOS

While the National Ocean Service is calling for the closure of the Beaufort North Carolina laboratory, it is requesting an increase of \$4 million to another center to support Ecological Forecasting of Harmful Algal Blooms (HABs), Hypoxia, pathogens, and Species Distributions. These areas of research are the bread and butter of NOS at the Beaufort Lab. In fact, NOAA would not have the strength it currently has in forecasting HABs if it were not for the lab's seminal and award-winning work that has been ongoing from the 1980s to this day. Furthermore, the Beaufort Lab initiated the first-ever study of the invasive lionfish in the U.S. South Atlantic, and it has continued to play a pivotal role in monitoring the distribution and abundance of this invasion throughout the South Atlantic, Gulf of Mexico, and Caribbean, providing information that has been critical for mitigation and management strategies. It is ironic and perplexing that the fiscal year 2015 President's budget requests increased research funding for coastal ocean issues, including harmful algal blooms, hypoxia, and coastal ecosystem management while at the same time proposing to close an existing facility that already has both well-established expertise and facilities required to address many of those very same issues.

NMFS

The Beaufort Laboratory provides the stock assessment science that allows NOAA to fulfill its obligation toward the Magnuson-Stevens Fishery Conservation and Management Act, as mandated by Congress. The stock assessment science of the NOAA Beaufort Laboratory focuses on marine fish populations that are ecologically and economically vital to the region and Nation, including snapper-grouper and pelagic species managed by the South Atlantic Fishery Management Council, Atlantic menhaden managed by the Atlantic States Marine Fisheries Commission, and Gulf menhaden managed by the Gulf States Marine Fisheries Commission. Atlantic menhaden support the largest fishery on the U.S. Atlantic coast, and Gulf menhaden support the largest fishery in the Gulf of Mexico. To enable robust stock assessments, sampling of the Atlantic and Gulf menhaden fisheries has been conducted by the Beaufort Lab for decades, and monitoring of snapper-grouper species has been accomplished by the lab's Southeast Fishery-Independent Survey. Removing this sampling and monitoring from the Beaufort Lab would not only result in a significant disconnect between NOAA and the communities that it serves, but would also degrade the quality of stock assessments at a time when Congress is rightly calling for improvements.

NERRS

NERRS is partnered with the North Carolina Coastal Reserve, with program headquarters at the NOAA Beaufort Lab. This program supports long-term research, water-quality monitoring, education, and coastal stewardship. In 2002, Congress provided NOAA with “. . . \$5,000,000 for the Beaufort Laboratory for necessary repairs to existing facilities and to construct a joint laboratory, dock, and other facilities in collaboration with the Rachel Carson National Estuarine Research Reserve.” With this funding, NOAA invested \$1.28 million and the State of North Carolina invested \$42,000 for the construction of a joint building at the NOAA Beaufort Lab to serve the Reserve's mission. The joint building was completed in 2007 and was constructed specifically with the Reserve's education programs in mind: the auditorium regularly hosts coastal training program workshops and the teaching classroom hosts school groups, teacher workshops, field trips, and lectures to support K–12 Estuarine Education Program activities. The NOAA Beaufort Lab is a 5-minute boat ride from the Rachel Carson component of the Reserve, and this close proximity is essential for performing Reserve activities efficiently to conduct mission-critical work, including educational programs, water quality and habitat monitoring, research programs, and stewardship of the site, which involves species monitoring, debris clean-ups, feral horse management, and access point maintenance. In short, NERRS activities in education, training, and stewardship have been extensive, and they would not be feasible from any other Federal laboratory.

In conclusion, closure of the NOAA Beaufort Laboratory would be devastating scientifically and economically. It would cripple NOAA's ability to accomplish its own Strategic Mission and to meet its obligations toward such congressional mandates as the Magnuson-Stevens Fishery Conservation and Management Act. As I understand it, the only argument for closing the laboratory was financial, but that argument was based on flawed estimates of maintenance costs and an outdated engineering report, which has since been revised with opposite conclusions regarding the lab's structural integrity. To be blunt: Relative to NOAA's budget, cost savings associated with closing the lab, if any, would be trivial; however the loss to the Nation would be monumental.

PREPARED STATEMENT OF THE SOCIETY FOR INDUSTRIAL AND APPLIED MATHEMATICS
(SIAM)

Summary.—This written testimony is submitted on behalf of the Society for Industrial and Applied Mathematics (SIAM) to ask you to continue your support of the National Science Foundation (NSF) in fiscal year 2015 by providing NSF with \$7.5 billion. In particular, we urge you to provide strong support for key applied mathematics and computational science programs in the Division of Mathematical Sciences and the Division of Advanced Cyberinfrastructure.

Full Statement.—We are submitting 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 on behalf of the Society for Industrial and Applied Mathematics (SIAM).

SIAM has approximately 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.

First, we would like to emphasize how much SIAM appreciates your subcommittee'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 2015 and beyond. In particular, we join with the research and higher education community and request that you provide NSF with \$7.5 billion.

As we are reminded every day, the Nation's economic strength, national security, and public health and welfare are being challenged in profound and unprecedented ways. Addressing these challenges requires that we confront fundamental scientific questions. Computational and applied mathematical sciences, the scientific disciplines that occupy SIAM members, are particularly critical to addressing U.S. competitiveness and security challenges across a broad array of fields: medicine, engineering, technology, biology, chemistry, computer science, and others. SIAM recognizes the challenging fiscal situation; however, we also face an "innovation deficit," the widening gap between the actual level of Federal Government funding for research and what the investment needs to be if the U.S. is to remain the world's innovation leader. Federal investments in mathematics, science, and engineering remain crucial as they power innovation and economic growth upon which our economy and fiscal health depend.

NATIONAL SCIENCE FOUNDATION

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, analysis and control of risk, 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. 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.

Below are highlights of the main budgetary and programmatic components at NSF that support applied mathematics and computational science.

NSF DIVISION OF MATHEMATICAL SCIENCES

The NSF Division of Mathematical Sciences (DMS) in the Directorate for Mathematical and Physical Sciences (MPS) provides the core support for all mathematical sciences. DMS supports areas such as algebra, analysis, applied mathematics, combinatorics, computational mathematics, foundations, geometry, mathematical biology, number theory, probability, statistics, and topology. In addition, DMS supports national mathematical science research institutes; infrastructure, including workshops, conferences, and equipment; and postdoctoral, graduate, and undergraduate training opportunities.

The activities supported by DMS and performed by SIAM members, such as modeling, analysis, algorithms, and simulation, provide new ways of obtaining insight into the nature of complex phenomena, such as the power grid, software for military applications, the human body, and energy efficient building systems. SIAM strongly urges you to provide DMS with the highest possible funding level to reverse the damaging cuts of recent years and enable critical mathematical research and related mathematical education and workforce development programs.

In particular, 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, the environment, and public health. NSF, with its support of a broad range of scientific areas, plays an important role in bringing U.S. expertise together in interdisciplinary initiatives that bear on these challenges. DMS has traditionally played a central role in such cross-NSF efforts, with programs supporting the interface of mathematics with a variety of other

fields. SIAM endorses DMS participation in NSF-wide initiatives such as Cyber-enabled Materials and Manufacturing for Smart Systems (CEMMSS), to develop computational tools for transforming materials discovery, and BioMaPS, to advance research at the intersection of biology, mathematical and physical sciences, and engineering.

NSF DIVISION 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 Division of Advanced Cyberinfrastructure (ACI) 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 urges you to provide ACI with the highest possible level of funding to invest in the computational resources and science needed to solve complex science and engineering problems. In addition, SIAM strongly endorses ACI's role as steward for computational science across NSF, strengthening NSF support for relevant activities and driving universities to improve their research and education programs in this multidisciplinary area.

SIAM strongly supports ACI data activities, including data infrastructure, tools, and repositories, as well as the NSF-wide Big Data initiative. The explosion in data available to scientists from advances in experimental equipment, simulation techniques, and computer power is well known, and applied mathematics has an important role to play in developing the methods and tools to translate this shower of numbers into new knowledge. The programs in ACI that support work on software and applications for the next generation of supercomputers and other cyberinfrastructure systems are also very important to enable effective use of advances in hardware, to facilitate applications that tackle key scientific questions, and to better understand increasingly complex software systems.

SIAM continues to support the agency-wide initiative Cyberinfrastructure Framework for 21st Century Science and Engineering (CIF21). This program works to develop comprehensive, integrated, sustainable, and secure cyberinfrastructure to accelerate research and capabilities in computational and data-intensive science and engineering.

SUPPORTING THE PIPELINE OF MATHEMATICIANS AND SCIENTISTS

Investing in the education and development of young scientists and engineers is a critical role of NSF and a major step the Federal Government can take to ensure the future prosperity and welfare of the U.S. SIAM strongly supports significant funding for the Graduate Research Fellowship (GRF) program and the Faculty Early Career Development (CAREER) program. Strong investments in these programs will support thousands of new graduate students, which will help develop the country's next generation of scientists.

Before reaching the graduate and early career stage, young mathematicians and scientists gain critical interests and skills as undergraduates. SIAM supports efforts by NSF to improve undergraduate science, technology, engineering, and mathematics (STEM) education, and notes the key role that mathematicians play in training for these fields.

MATHEMATICS AND INTERNATIONAL SCIENCE AND ENGINEERING

Science knows no borders, and nowhere is this truer than in mathematics. Mathematical research typically advances through the close collaboration of small groups of researchers, without the need for expensive equipment and using universal mathematical notation to minimize language obstacles. In addition, mathematics, as an enabling discipline for all of science and technology, and as a foundation for science education, plays a key role in addressing many of the most challenging problems that the world faces, such as infectious disease and sustainable energy generation. International scientific cooperation is not just good science, however; it can also foster understanding and goodwill between societies more broadly. Mathematical and scientific activities can aid in promoting United States international policy goals by building relationships and trust with other countries, enhancing the global image of America, and spurring global development.

SIAM believes strongly in the Federal Government's support of international science and technology initiatives that help advance U.S. foreign policy and security, including cooperative research programs that further scientific knowledge applicable to major societal challenges, promote development of research and education capa-

bilities abroad, and introduce U.S. students to global issues and collaborative relationships.

CONCLUSION

We would like to conclude by thanking 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 the health, security, and economic strength of the United States. NSF needs sustained annual funding 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 2015.

We appreciate the opportunity to provide testimony to the subcommittee on behalf of SIAM. SIAM looks forward to providing any additional information or assistance you may ask of us during the fiscal year 2015 appropriations process.

PREPARED STATEMENT OF THE SOCIETY FOR NEUROSCIENCE

Mr. Chairman and members of the subcommittee, my name is Carol Ann Mason, Ph.D. I am a professor of pathology and cell biology, neuroscience, and ophthalmic science at Columbia University. I study the development of visual pathways in mammalian brains, with a focus on how neurons in the eye are encoded to project to the correct side of the brain, setting up the circuit for binocular vision. This statement is in support of increased funding for the National Science Foundation (NSF) for fiscal year 2015. I am pleased to submit this testimony in my capacity as president of the Society for Neuroscience (SfN). On behalf of the nearly 40,000 members of SfN, thank you for your past support of neuroscience research at NSF.

The Society stands with others in the research community in requesting at least the President's budget request of \$7.3 billion for NSF for fiscal year 2015. Sequestration has taken an enormous toll on the research enterprise, coming on top of recent years when funding has failed to keep pace with the cost of research—let alone the scientific opportunities that are available. SfN urges Congress to reverse the current course and find ways to invest more in scientific discovery. Let's work to put research on a trajectory of sustained growth that recognizes its promise and opportunity as a tool for economic growth and, ultimately to advancing the health and well-being of Americans.

NEUROSCIENCE: AN INVESTMENT IN OUR FUTURE

Even in the face of the difficult funding situation, the last several years have been a tremendously exciting and productive time for neuroscience discoveries. Major research advances on brain development, imaging, genomics, circuits, computational neuroscience, neural engineering, and many other disciplines are leading to new tools, new knowledge, and greater understanding that were unimaginable even a few years ago.

All told, there are more than 1,000 debilitating neurological and psychiatric diseases that strike over 100 million Americans each year, costing an estimated \$760 billion a year. Advances made possible by publicly-funded research will help us maintain and restore healthy brain function. Now more than ever, it is time to fan the flames of research in order to ensure life-changing breakthroughs continue.

Resources provided to NSF will support the Nation's best and brightest researchers at the forefront of promising discoveries, graduate students at the start of their careers, and the development of advanced scientific tools and infrastructure that will be broadly available to the research community. These researchers are the ones who will be answering some of the vexing questions facing the field of neuroscience: how do the genetic, molecular, and cellular elements of the brain interact to allow for brain function and behavior? How will new tools such as brain-machine interfaces, computational models, and advanced imaging techniques deepen scientific capacity for inquiry, and contribute to better health and quality of life in the years ahead? NSF is uniquely positioned to address questions of this kind because of its emphasis on integrative and interdisciplinary research and its long history of funding research that leads to the development of life-changing neurotechnologies.

NSF funding is an investment in America. Funding for research supports quality jobs and increases economic activity. In fiscal year 2012 alone, NSF supported 39,862 senior personnel, 4,596 postdoctoral fellows, and 25,550 graduate students through 11,524 awards. Ninety percent of the NSF budget goes right back to fund extramural research in every State. Many of my colleagues can point to their first NSF grant as the launching pad for a career in science.

Finally, without robust, sustained investment, America's status as the preeminent leader in biomedical research is at risk. Other countries are investing heavily in biomedical research to take advantage of new possibilities. Even with the growing philanthropic support, private sector cannot be expected to close the gap. The lag time between discovery and profitability means that the pharmaceutical, biotechnology, and medical device industries need federally-funded basic (also known as fundamental) research to develop products and treatments. The foundation that basic research provides is at risk if federally-funded research declines.

THE BRAIN INITIATIVE

The Brain Research through Application of Innovative Neurotechnologies (BRAIN) Initiative—announced by the President last April—will enable NSF and other Federal agencies to develop tools and plans that will help accelerate fundamental discoveries in neuroscience. The scientific community is providing direction through diverse workshops being held throughout the country.

The overarching goal of the BRAIN Initiative is to integrate across scales (genes to behavior) and disciplines (engineering and life sciences) to establish predictive theories of brain structure and function, and the use of these theories to maintain and restore the healthy brain. The Initiative has a strong focus on technology and cyber tool development and the training of new generations of scientists to use the resources that emerge from the BRAIN Initiative, both of which have the potential to benefit all of neuroscience and even non-neuroscience research.

BRAIN—as with all the neuroscience research that takes place with Federal support—can only be successful if it is part of a broad effort by Congress and the administration to prioritize biomedical research so that it can reach its full potential. Such an investment will also help ensure the U.S. remains a global leader, even as other nations ramp up their investments in neuroscience research.

CROSS-DISCIPLINARY NEUROSCIENCE

NSF-funded basic research continues to be essential for discoveries that will inspire scientific and medical progress for generations. The work supported by NSF has led to the development of new technologies that have revolutionized neuroscience research. The following examples are just a few of the many basic research success stories in the science of the brain emerging now thanks to interdisciplinary research funded by a strong historic investment in NSF and other research agencies.

GREEN FLORESCENT PROTEINS

Basic research funded by NSF creates revolutionary advances in science, such as green fluorescent protein (GFP)—a transformative tool in cellular biology which allows scientists to look at the brain in unprecedented detail. The works that lead to its discovery and development for use in research received the Nobel Prize in Chemistry in 2008.

The discovery of GFP revolutionized scientists' view of the nervous system allowing them to add an incredible range and depth to images of the brain. With this protein and others like it, researchers are applying colors to brain cells to look at under the microscope. This enables them to map intricate details of brain cells, in particular, how brain cells connect to each other. Understanding these connections and their susceptibility to change help researchers better understand the healthy brain and how they might be damaged in a variety of disorders.

More than 100 years ago, scientists got their first glimpse at brain cells under a microscope after successfully staining cells with dark pigment. This and similar techniques are limited because they can't be used in living cells and they can only stain in a single color. GFP is a molecule that glows green under blue or ultraviolet light. Since its discovery, scientists have developed similar molecules that glow many different colors. Moreover, GFP can be used to visualize activity of a living cell. These light-emitting proteins have been used to illuminate the inner workings of brain cells by letting scientists track the movement of molecules inside the cells or watch how neurons react to environmental stimulation in living brains. Scientists have also used GFP to help answer questions about brain structure by using it to identify specific cells in specific areas and trace connections between two brain areas.

Recently, GFP has been adapted to help trace many brain regions at a time. In 2007, researchers found a way to make brain cells emit one of nearly 100 colors. They genetically engineered mice to carry multiple copies of a chain of three or four genes for different colored fluorescent proteins. In each cell, the combination of the colors emitted from each chain led to unique color blends. Just as a television pro-

duces a wide spectrum of colors by mixing red, green, and blue pixels, this so-called “rainbow” technique casts neighboring cells in colors from aquamarine to magenta. This technique allows scientists to map many pathways in the brain to a much larger extent than before and has allowed for a deeper understanding of brain circuits. GFP is now widely used to track everything from how nerve cells develop to how cancer spreads through the body to how HIV travels from infected to non-infected cells. In the field of neuroscience specifically, this technology will continue to evolve and will be instrumental in our efforts to understand brain structure and function.

BRAIN-MACHINE INTERFACE

The brain is in constant communication with the body in order to perform every minute motion from scratching an itch to walking. Paralysis occurs when the link between the brain and a part of the body is severed, and eliminates the control of movement and the perception of feeling in that area. Almost 2 percent of the U.S. population is affected by some sort of paralysis resulting from stroke, spinal cord, or brain injury, or other cause. Basic research funded by the NSF has provided fundamental understanding of how the brain controls movement, which in turn has led to advances in next-generation prosthetics.

In the 1990s, scientists developed an array of electrodes that allowed them to study an unprecedented number of nerve cells at once—almost 50 at a time. This research demonstrated that brain cells communicate in clusters, not in isolation. In other words, cells work together to direct complex behaviors. Since then, scientists have found ways to translate messages from clusters of neurons into a language that an artificial device can understand and convert into movement. Fundamental research in humans and animals led to the discovery that thinking of a motion activates neurons in the same way that actually making the movement would—opening the possibility for thought to operate robotic devices.

Thanks to successes in animal research, brain-controlled prosthetics are now being piloted in humans. Paralyzed humans implanted with electrodes can learn to guide a machine to perform various motor tasks such as picking up a glass of water. These advances, while small, enable substantial improvements in the quality of life for people suffering from paralysis. As deeper understanding of the language of the brain occurs in concert with advances in biomaterials, neurotechnologies, and computational power, scientists hope to eventually broaden the abilities of such devices to include thought-controlled speech and more.

UNDERSTANDING THE DEVELOPMENT OF VISION

My own area of research is the development of the circuits underlying vision. For binocular vision to function, the brain must receive information from both eyes. Nerve fibers from each retina grow to the ‘optic chiasm,’ at the midline of the bottom of the brain. Here, nerve fibers from each eye cross to the other side of the brain. Other axons, however, are repelled at the midline and project to the same side of the brain. These connections underlie binocular vision which enables animals, including humans, to calculate how far objects lie in the distance.

One area of my research focuses on this question and the molecular mechanisms that prompt some growing nerve fibers to “stop in their tracks” and reroute to the same side. These two groups of cells in the eye, each taking different routes, are endowed with distinct genes that direct their time of birth and their growth to the regions where they make their synaptic connections. Understanding their genetic “signatures” and growth helps us to learn how to encourage stem cells to be integrated into the diseased eye and injured nerve fibers to regrow in the correct circuits. We also investigate how the retinal pigment epithelium (RPE) surrounding the eye, directs retinal development. Perturbations in the RPE occur in albinism and in juvenile forms of macular degeneration, the latter leading to blindness, and our gene identification efforts are important for gene therapy at early stages of the disease. Moreover, understanding how tracts are laid down is essential for unraveling the basis of defects in fiber pathways and synapse formation in neurodevelopmental disorders such as autism. This research is made possible with support primarily from NIH, especially the National Eye Institute and with a team of innovative and collaborative scientists and trainees in my lab and in our community, and provides a foundation for future discovery and new understanding about diseases of the eye and other neurodevelopmental conditions.

THE FUTURE OF AMERICAN SCIENCE

As the subcommittee considers this year’s funding levels, please consider that significant advancements in the biomedical sciences often come from young investigators. The current funding environment is taking a toll on the energy and resilience

of these young people. America's scientific enterprise—and its global leadership—has been built over generations. NSF alone has awarded over 46,500 Graduate Research Fellowships since 1952. Many young scientists receive their first grants from NSF on their way to having careers as independently-funded investigators. Without sustained investment, we will quickly lose that leadership. The culture of entrepreneurship and curiosity-driven research could be hindered for decades.

We live at a time of extraordinary opportunity in neuroscience. A myriad of questions once impossible to consider are now within reach because of new technologies, an ever-expanding knowledge base, and a willingness to embrace many disciplines. To take advantage of the opportunities in neuroscience we need an NSF appropriation that allows for sustained, reliable growth. That, in turn, will lead to improved health for the American public and will help maintain American leadership in science worldwide. Thank you for this opportunity to testify.

PREPARED STATEMENT OF THE UNIVERSITY CORPORATION FOR ATMOSPHERIC
RESEARCH

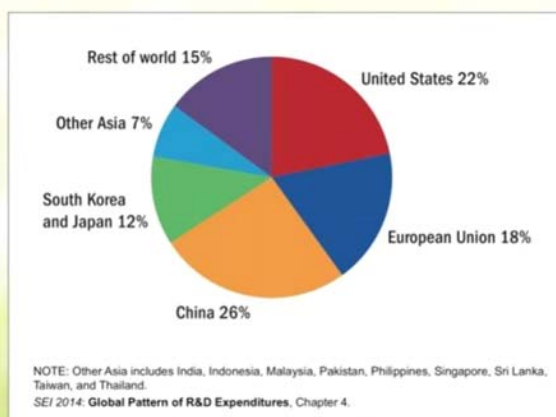
On behalf of the University Corporation for Atmospheric Research (UCAR), I am pleased to submit this testimony to the Senate Appropriations Subcommittee on Commerce, Justice, Science and Related Agencies. UCAR is a consortium of over 100 research institutions, including 77 doctoral degree granting universities, which manages and operates the National Center for Atmospheric Research (NCAR) on behalf of the National Science Foundation (NSF).

I urge the subcommittee to provide the maximum amount of support possible for the vital research and education programs administered by the NSF, the National Aeronautics and Space Administration (NASA), and the National Oceanic and Atmospheric Administration (NOAA) in fiscal year 2015.

On February 6, the National Science Board (NSB) released its latest report entitled "Science and Engineering Indicators 2014". The biennial report makes it increasingly clear that the United States' predominance in science and technology (S&T) eroded further during the last decade, as several Asian nations—particularly China and South Korea—rapidly increased their innovation capacities. According to the NSB report, the major Asian economies taken together now perform a larger share of global research and development (R&D) than the U.S., and China performs nearly as much of the world's high-tech manufacturing as the U.S.

The NSB report makes it increasingly clear that the U.S., Japan, and Europe no longer monopolize the global R&D arena. Since 2001, the share of the world's R&D performed in the U.S. and Europe has decreased, respectively, from 37 percent to 30 percent and from 26 percent to 22 percent. In this same time period, the share of worldwide R&D performed by Asian countries grew from 25 percent to 34 percent. China led the Asian expansion, with its global share growing from just 4 percent to 15 percent during this period. Recognition on the part of national leaders that S&T innovation contributes to national competitiveness, improves living standards, and furthers social welfare has driven the rapid growth in R&D in many countries.

**Contributions of selected countries/regions/economies
to growth of worldwide R&D expenditures: 2001–11**



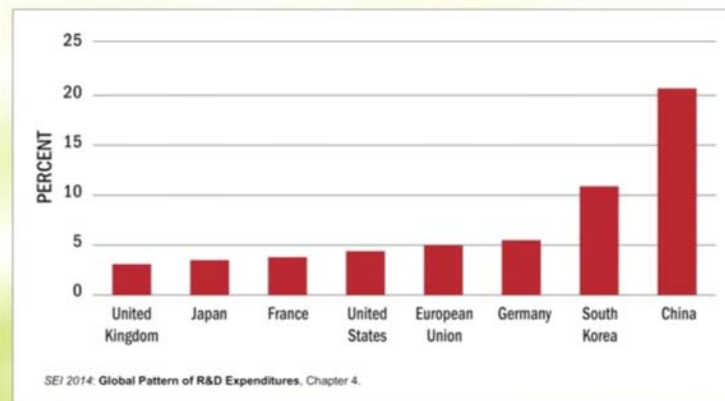
Science and Engineering Indicators Digest 2014



China and South Korea have catalyzed their domestic R&D by making significant investments in the S&T research enterprise and enhancing S&T training at universities. China tripled its number of researchers between 1995 and 2008, whereas South Korea doubled its number between 1995 and 2006. And there are indications that students from these nations may be finding more opportunities for advanced education in science and employment in their home countries.

In addition to investing in their research and teaching enterprises, these countries have focused their attention on crucial sectors of the global economy, including high-tech manufacturing and clean energy. The size of China's high-tech manufacturing industry increased nearly six-fold between 2003 and 2012, raising China's global share of high-tech manufacturing from 8 percent to 24 percent during that decade, closing in on the U.S. share of 27 percent. In addition, emerging economies now invest more in clean energy—a critical 21st century industry—than advanced economies do. In 2012, emerging economies invested nearly \$100 billion in clean energy, primarily wind and solar, with China serving as the “primary driver of investment” with \$61 billion. China's investment is more than double the \$29 billion spent in the U.S.

**Average annual growth in domestic R&D expenditures
of selected countries/economies: 2001–11**



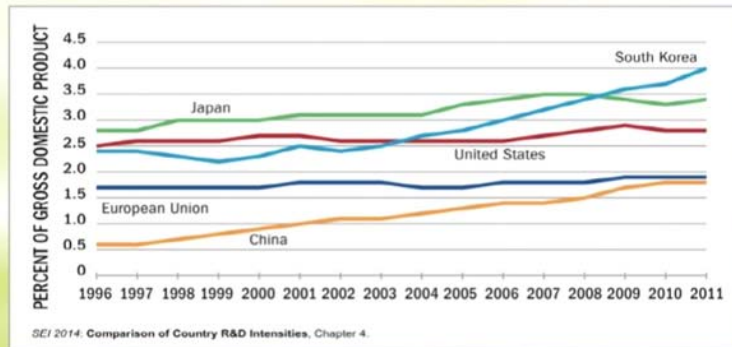
Science and Engineering Indicators Digest 2014



One of the most notable S&T trends of the last decade has been the increased innovation capacity of emerging economies as they narrowed many gaps with the West. However, the U.S. S&T enterprise remains the global leader. For example, the U.S. invests twice as much as any other single nation in R&D, despite slipping to tenth in world ranking of the percentage of its GDP it devotes to R&D. In 2011, the U.S. spent \$429 billion on R&D, compared to China's \$208 billion and Japan's \$146 billion. Among other S&T metrics, the U.S. leads in high quality research publications, patents, and income from intellectual property exports.

While the U.S. remains the world's leader in science and technology, there are numerous indicators showing how rapidly the world is changing and how other nations are challenging our predominance. As other countries focus on increasing their innovation capacities, we can ill afford to stand still. We now face a competitive environment undreamt of just a generation ago as indicated in the chart entitled *R&D Expenditures as a Share of Economic Output for Selected Countries/Economies: 1996–2011*.

R&D expenditures as a share of economic output for selected countries/economies: 1996–2011



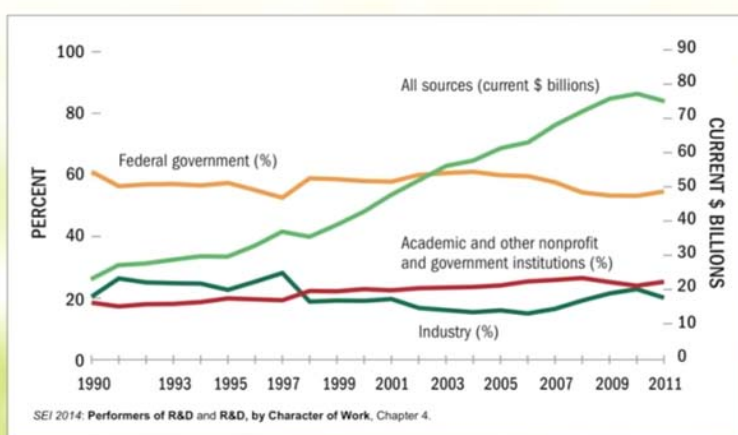
Science and Engineering Indicators Digest 2014



The Federal Government has a critical role in funding R&D. To a large extent, the Federal Government devotes resources to R&D to fund projects that, despite their potential for improving economic growth and people's well-being, would be unattractive for businesses to pursue. Businesses tend to underinvest in R&D because the returns from their investment are often smaller than the returns to the economy as a whole.

The knowledge generated from a basic research project can often be used—without compensation—by other firms within and outside their industry. To make up for this underinvestment, the Federal Government has played a major role in funding R&D. Federal support for basic research is particularly crucial because the lack of direct commercial applications from basic research projects—as well as the uncertainty of project success—can deter businesses from performing basic research even though some studies have shown that it is this form of R&D that generates the greatest economy-wide returns.

Funding sources for U.S. basic research: 1990–2011



Science and Engineering Indicators Digest 2014



Economists studying the link between science funding and economic growth have found that innovation through R&D is the primary driver of growth over the long run. Nobel prize winning MIT economist Robert Solow famously found that over half of increases in economic productivity can be attributed to new innovations and technologies. Another similar study that attempted to quantify the impact of R&D on economic growth found that increases in the level of research intensity in the U.S. and four other developed countries may have accounted for close to 50 percent of U.S. economic growth between 1950 and 1993.

The return on investments in the atmospheric sciences exemplifies how Federal R&D drives economic growth. The commercial weather industry leverages U.S. investments in weather observation, atmospheric research, and computer modeling to produce tailored products for a wide variety of clients, including the general public. There are now more than 350 U.S. commercial weather companies, and they are estimated to generate nearly \$3 billion in annual revenues. The growth rate of this industry is estimated to be about 10 percent per year.

This entire weather industry is directly dependent on the Federal scientific infrastructure, and most of its tools and technologies were developed in universities and laboratories with Federal R&D dollars. In fact, a nationwide survey indicates that the U.S. public obtains several hundred billion forecasts each year, generating \$31.5 billion in benefits compared to costs of \$5.1 billion, a 6 to 1 direct return on investment.

Even though Federal support for research—particularly basic research—is inextricably linked with long term economic growth, Federal funding for basic research has dropped since 2004. In real dollars, the Federal Government spends less on non-defense R&D than it did 10 years ago, even as Asian R&D investments have ballooned. R&D is no longer prioritized in the Federal budget as it once was. As a percent of GDP, U.S. Federal R&D has been cut by over one third from 1.3 percent to 0.8 percent since 1976. Many of these cuts have fallen on the atmospheric and geospace sciences, and universities and laboratories including NCAR have been forced in recent years into difficult layoffs of researchers and other staff. This comes at a steep cost to our future.

This subcommittee—with its oversight for the NSF, NOAA, and NASA—is singularly responsible for determining over 50 percent of the annual Federal investment in non-biomedical non-defense research—the very research portfolio so critical to long term economic growth and international competitiveness. For all of these reasons—though confronted by extreme constraints in overall spending—it is vitally important for the future health and well-being of our citizens that the Congress do

all it can to support this subcommittee's ability to fully fund its R&D portfolio as exemplified in the funding decisions you will be making regarding NSF, NOAA, and NASA. The University Corporation for Atmospheric Research and its more than 100 member institutions respectfully urge the subcommittee to maintain its strong priority commitment for research and education as it moves to develop its fiscal year 2015 appropriations recommendations.

We appreciate very much the opportunity to provide these views and stand ready to provide whatever assistance we can to the subcommittee and its members.

Thank you.

PREPARED STATEMENT OF BRIAN VANDERSEA, VICE PRESIDENT, ORAL & MAXILLOFACIAL SURGERY ASSOCIATES

Dear members of the subcommittee,

I want to express my strong opposition to President Obama's 2015 budget proposal to close the National Oceanic and Atmospheric Administration (NOAA) National Ocean Service (NOS)/National Marine Fisheries Service (NMFS) lab in Beaufort, North Carolina, and urge the subcommittee to help reinstate funding for this essential resource. This laboratory is a vital part of the local, national, and international marine science community. It has partnerships with academic institutions such as North Carolina State University, University of North Carolina-Chapel Hill, Duke University, East Carolina University and University of North Carolina-Wilmington. Without collaboration with the NOAA NOS/NMFS Beaufort Lab, each of the marine science programs at these institutions will suffer. Additionally, the laboratory's partnerships with economic development activities such as the North Carolina Marine Science and Education Partnership, North Carolina Biotechnology Center, and Marine Biotechnology Center of Innovation are important to the Morehead City/Beaufort/eastern North Carolina economies. This laboratory has served North Carolina and the Nation for 115 years by executing top-notch, award winning, marine science.

The NOAA Beaufort Laboratory is situated in a prime location, between tropical and temperate waters, and provides the only Federal access to one of the most diverse marine ecosystems in the United States. It is unthinkable that the U.S. Government would give up on a facility that is located in such a strategic position on our national coastline.

A prime example of research ongoing at the NOAA Beaufort Lab that is important to me is their ongoing work on harmful algal blooms. Having grown up in New Bern, North Carolina, the Neuse River, which is literally in my parents' back yard, experiences periodic algal blooms and fish kills. After a fish kill, the NOAA Beaufort Lab tests water samples and dead fish to determine the cause(s) for these kills. This gives local residents ease of mind regarding the health of our river ecosystems and the seafood that we purchase from local commercial fishermen. In the early 1990's there was an extensive fish kill that was supposedly caused by the algae "Pfiesteria". This caused a lot of people to stay off of and away from the local rivers and made them anxious about buying local seafood. Needless to say, this resulted in major economic damage to eastern North Carolina. The Beaufort Lab's tireless efforts led to a better understanding of the Pfiesteria lifecycle and helped ease the fears of the local communities affected by these types of fish kills. The Beaufort Lab is able to investigate problems of this nature world-wide. This gives me a sense of security in the seafood that I purchase and confidence in the water quality where my seafood originates.

In conclusion, the NOAA NOS/NMFS Laboratory in Beaufort, North Carolina is home to critical research that can only be conducted at this unique location, and my family members and I are direct benefactors of all of their hard work. The science that is conducted at the Beaufort is of the highest quality and has won national and international recognition all being done on a limited budget for quite some time.

Why would the Government want to close down a facility that produces high quality products at a minimal cost to the United States public? I urge you to please restore full funding for this important Federal laboratory.

PREPARED STATEMENT OF DR. HAROLD VANDERSEA, NEW BERN, NORTH CAROLINA

Dear Committee members,

Acting as a private citizen on my own time, I would like to submit testimony for the record.

I have recently been informed that the President's fiscal year 2015 budget proposal includes plans to close down the National Oceanic and Atmospheric Administration (NOAA) Beaufort Laboratory in Beaufort, North Carolina. This is a misguided decision. To learn why, I would like the Senate Subcommittee of Commerce, Justice, Science, and Related Agencies to consider the following testimony.

Issue presented in budget.—Long term cost of maintaining the NOAA Beaufort Laboratory (NOAA, National Ocean Service, National Centers for Coastal Ocean Science, Center for Coastal Fisheries and Habitat Research)

“To strengthen NOAA’s coastal science in the long run, NOAA proposes to reduce its physical footprint and fixed costs by closing the Beaufort, North Carolina laboratory . . .”

On this budget item, a NOAA spokesperson in Silver Spring was quoted saying: “this aging facility requires infrastructure repairs and improvements exceeding agency budget resources. . . .”

Response.—Urge proposed closure of NOAA’s Beaufort Laboratory be removed from the NOS budget.

Inaccurate, outdated information that overstated the costs of maintaining the NOAA Beaufort Laboratory was used in the analysis that led to the request to close this facility. An updated engineering report (2014) documents the condition of the facility is not structurally unsound. Additionally, there have been substantial improvements to the facility:

Facilities Upgrades:

- 2006—Administration Building replaced (with North Carolina National Estuarine Research Reserve System (NERRs))
- 2007—Bridge replaced—cost shared with Duke University
- 2008—Maintenance Building replaced
- 2009—Air conditioning/Air handler replacement and mold abatement
- 2009—Sample Storage/Chemical Storage/Haz-Mat buildings consolidated and replaced
- 2014—Seawall repair, electrical upgrade and State of North Carolina funded storm water control

Additionally, the National Ocean Service (NOS) initiating the closure request understated the NOS staff and did not account for the more than 40 National Marine Fisheries Service staff or the 6 staff members of the North Carolina National Estuarine Research Reserve (Rachel Carson) co-located at the facility. In total 108 staff and contractors will be directly affected by this closure.

Issue.—While the National Ocean Service, NOAA is calling for the closure of the Beaufort North Carolina laboratory, it is requesting an increase of \$4 million to another center to support Ecological

Forecasting of Harmful Algal Blooms (HAB), hypoxia, pathogens and Species Distributions.

Response.—NOAA should not close the facility that has a proven track record with successful and effective research conducted on harmful algal blooms (HAB) and species distributions.

NOAA’s HAB program was initiated at the Beaufort Laboratory from the work conducted in North Carolina in 1987 during the “red tide” that affected the central coast for more than 6 months. The Beaufort Lab continues to provide essential research and field data that inform Ecological Forecasting of HABs in Alaska, North Carolina, Florida, Guantanamo Bay, Cuba, Bay of Fundy, Gulf of Maine, Gulf of Mexico, and the Caribbean. Additionally, Beaufort Laboratory staff were recognized for conducting award winning science in elucidating the life history of *Pfiesteria*, a HAB species that inhabits estuaries and river systems up and down the eastern seaboard. The threat of *Pfiesteria* caused economic damages of ~\$35 million a month to the seafood industry following publicity of local fish kills. Beaufort laboratory staff provided expertise and knowledge to local and State resource managers and University partners to educate the public about the real facts concerning *Pfiesteria* and the safety of their seafood. Beaufort staff have continued to provide their expertise and knowledge to the North Carolina River Keeper Alliance and North Carolina Department of Natural Resources, Division of Water Quality when fish kill events have occurred in local estuaries. This has helped to alleviate public anxiety regarding seafood safety.

In regards to species distribution research, Beaufort Laboratory staff initiated the study of the invasive lionfish in the U.S. South Atlantic Bight, providing timely in-

formation on distribution, abundance and ecology to inform mitigation and management strategies throughout the southeast U.S., Florida Keys, Gulf of Mexico and the Caribbean.

Additional Impacts of the Beaufort Lab Closure:

- North Carolina Coastal Reserve and National Estuarine Research Reserve staff are currently located at the NOAA Beaufort Lab which serves as the headquarters office for the program.
- The joint building was completed in 2007 and was constructed specifically with the Reserve's education programs in mind: the auditorium regularly hosts coastal training program workshops and the teaching classroom hosts school groups, teacher workshops, field trips, and lectures to support K–12 Estuarine Education Program activities.
- The NOAA Beaufort Lab is a 5-minute boat ride from the Rachel Carson component of the Reserve; this close proximity is essential for conducting Reserve activities efficiently to conduct mission-critical programming including educational programs, water quality and habitat monitoring and research programs, and stewardship of the site including species monitoring, debris clean-ups, feral horse management, and access point maintenance.

The NOAA Beaufort Lab provides an ideal base from which to manage the Rachel Carson Reserve due to its close proximity to the Reserve site, location on calm inland waters, and boat launching facilities. Additionally, many NOAA staff conduct or have conducted research at the Rachel Carson Reserve and are able to provide professional perspectives that are valuable to Reserve research and management.

Request.—The Senate Subcommittee of Commerce, Justice, Science, and Related Agencies decline to endorse the recommendation to close the Beaufort Laboratory and request current and accurate information from the Beaufort Laboratory leadership on costs for maintaining the Laboratory.

Desired Outcomes:

- NOAA's Beaufort Laboratory closure proposed in the 2015 President's Budget Request should not be included in the NOS budget.
- Congress should inform NOAA that requests for closure of NOS laboratories will not be entertained in the future.
- Congress should direct NOAA to restore staffing, operational support and funding for science to full operational levels to utilize the capacity of the NOAA Beaufort Laboratory.
- NOAA should provide a report and a timeline to Congress with a strategy to address these concerns.

IN SUMMARY

Inaccurate, outdated information that overstated the costs of maintaining the NOAA Beaufort Laboratory was used in the analysis that led to the request to close this facility. The request understated the number of staff housed at this facility, and did not include NMFS or North Carolina NERRs employees. For 115 years, the NOAA Beaufort lab has had a rich history of involvement in local, national, and international marine science issues. The laboratory has produced award winning science in Fisheries and Harmful Algal Bloom research and is respected for the expertise and knowledge of the staff working there. The programs that NERRs conducts at the facility are clear evidence of the Beaufort lab's commitment to education and outreach—closing the facility would disrupt and greatly increase the hardships of running a successful marine science educational program. The lab originated in Beaufort, North Carolina because of its unique position, being at the edge of two biogeographic regions (*i.e.*, Cape Hatteras), and at the cusp of expanding tropical regions. It is critical that a NOAA lab of this strength continues in this location given the imperative to understanding fisheries management, coastal ecosystem management, climate impacts, coastal pollution, and harmful algal bloom issues in the mid and south Atlantic regions. Closing the Beaufort lab would leave a NMFS “facilities-based-gap” from Sandy Hook, New Jersey to Miami, Florida. This fact alone reveals the shortsightedness of the President's proposal. I hope the committee carefully considers this testimony and the testimonies of others that voice similar opinions against the President's proposal to close the Beaufort NOAA Laboratory.

Thank you for your consideration in this matter. The closing of this facility will impact greatly the entire eastern coast of the United States as well as all the other areas that this lab collaborates with to assist with fishery issues.

PREPARED STATEMENT OF VOR

PROTECTING THE INTERESTS OF RESIDENTS OF MEDICAID-LICENSED FACILITY HOMES FOR PERSONS WITH INTELLECTUAL DISABILITIES IN ACTIONS CONDUCTED BY THE DEPARTMENT OF JUSTICE'S CIVIL RIGHTS DIVISION THAT AFFECT THEIR CHOICE OF RESIDENCY

I. INTRODUCTION

VOR, a national advocacy organization for people with intellectual and developmental disabilities (I/DD) and their families, express gratitude to Chairwoman Barbara Mikulski and members of the Subcommittee on Commerce, Justice, Science and Related Agencies for this opportunity to submit testimony for the record in consideration of fiscal year 2015 appropriations for the Department of Justice.

VOR's members look forward to working with Senators and their staff to ensure the civil rights of our most fragile citizens with I/DD.

II. SUMMARY: LEGISLATIVE CHOICE LANGUAGE PROPOSAL

As explained in detail below, VOR asserts that legal proceedings and related actions, such as investigations, brought against States by the Department of Justice's Civil Rights Division under the Americans with Disabilities Act (ADA) have caused significant financial and emotional hardships, and sometimes harm, to individuals with developmental and intellectual disabilities and their families. The concern is widespread: the Department of Justice has filed more than 40 actions in more than 25 States. VOR views these "*Olmstead* enforcement" actions to violate the spirit and even, at times, the letter of the *Olmstead* decision, especially with regard to the requirement of individual choice [*Olmstead v. L.C. ex rel. Zimring*, 527 U.S. 581 (1999)]. To correct for this injustice, VOR urges the Senate to adopt the following choice language relating to Department of Justice appropriations:

"No funds appropriated for any Department of Justice program shall be expended to promote any law or policy that limits the choices of individuals with intellectual and developmental disabilities (or, if an individual has a legal representative, the legal representative), seeking living arrangements they believe are most suitable to their needs and wishes."

III. RATIONALE

A. *Background on Forced Deinstitutionalization*

There is a national trend towards deinstitutionalization, whereby individuals are encouraged and sometimes forced to move out of Medicaid-licensed care facilities (including Intermediate Care Facilities for Persons with Intellectual and Development Disabilities, "ICFs/IID") and into residential settings.

However, there are significant concerns among the family members and legal guardians of individuals residing in State-run and private ICFs/IID regarding the adequacy of opportunities for residents to make their views and preferences known throughout the process. They are also concerned about whether State-run and private facilities are being closed before adequate community placements are available; whether Medicaid reimbursements rates are adequate to facilitate the services necessary in such community placements for residents to lead safe and fulfilling lives; whether, due to a lack of adequate local community placements, some residents are being placed in community facilities too far from family members sometimes to meet the goals of integration into the community; the pace of transfers; and the pressure being put on legal representatives to move residents from their ICF/IID homes and other specialized facilities.

B. *The U.S. Department of Justice's Olmstead Enforcement*

As stated above, legal proceedings and related actions, such as investigations, brought against States by the Justice Department's Civil Rights Division under the ADA have caused significant financial and emotional hardships, and sometimes harm, to individuals with I/DD and their families. VOR views these "*Olmstead* enforcement" actions to violate the spirit and even, at times, the letter of the *Olmstead* decision [*Olmstead v. L.C. ex rel. Zimring*, 527 U.S. 581 (1999)].

In particular, the Supreme Court in its *Olmstead* decision establishes the right to community-based housing and care *only* when the "State's treatment professionals have determined that community placement is appropriate", "transfer is not opposed by the affected individual" and "the placement can be reasonably accommodated, taking into account the resources available to the State and the needs of others with mental disabilities" [*Olmstead* at 587].

The Court clarified its holding as follows:

“We emphasize that nothing in the ADA [Americans with Disabilities Act] or its implementing regulations condones termination of institutional settings for persons unable to handle or benefit from community settings . . . Nor is there any Federal requirement that community-based treatment be imposed on patients who do not desire it.” 527 U.S. 581, 601–02 (1999) (*see also*, Justice Kennedy’s concurring opinion, “It would be unreasonable, it would be a tragic event, then, were the Americans with Disabilities Act of 1990 (ADA) to be interpreted so that States had some incentive, for fear of litigation to drive those in need of medical care and treatment out of appropriate care and into settings with no assistance and supervision”).

It is not the Justice Department’s place to substitute its ideological view that all residents of ICFs/IID and similar facilities are better served in community placements for the Supreme Court’s specific tests for community placement, which includes the judgments of the legal representatives of behalf of incapacitated residents.

Yet, *Olmstead* investigations and actions by the Justice Department against States have been pursued with the express intent of “Community Integration for Everyone” [DOJ Olmstead Enforcement website, 2014], have rarely included consultation with families and legal guardians, and have led to settlements requiring deinstitutionalization without regard to assessments of individual needs and choices. As recognized by U.S. District Judge J. Leon Holmes in his order dismissing the Justice Department’s case against the State of Arkansas:

“Most lawsuits are brought by persons who believe their rights have been violated. Not this one. The Civil Rights Division of the Department of Justice brings this action on behalf of the United States of America against the State of Arkansas and four State officials in their official capacities alleging that practices at Conway Human Development Center [a Medicaid-licensed ICF/IID] violate the rights of its residents guaranteed by the Fourteenth Amendment, the Americans with Disabilities Act, and the Individuals with Disabilities Education Act. All or nearly all of those residents have parents or guardians who have the power to assert the legal rights of their children or wards. Those parents and guardians, so far as the record shows, oppose the claims of the United States. *Thus, the United States is in the odd position of asserting that certain persons’ rights have been and are being violated while those persons—through their parents and guardians—disagree.*” [U.S. v. Arkansas (June 8, 2011, dismissal order) (*emphasis added*); *see also*, *Olmstead: Community Integration for Everyone—Olmstead Enforcement*, U.S. Department of Justice Civil Rights Division (website) (*emphasis added*): detailing the Division’s *Olmstead* enforcement efforts in more than 40 matters in more than 25 States in the past 5 years].

In *United States v. Virginia* (2012), families and legal guardians were conspicuously absent from the long list of stakeholders interviewed by the Justice Department prior to settlement and families spent \$125,000 to overcome Justice Department and Commonwealth opposition to secure intervention of right [*see*, *United States v. Virginia*, Memorandum Order Approving Motion to Intervene (May 9, 2012): “[T]he Petitioners have a significant, protectable interest in receiving the appropriate care of their choice and protecting their rights under the ADA. *See Olmstead v. L.C. ex rel. Zimring*, 527 U.S. 581, 602 (1999) (‘Nor is there any Federal requirement that community-based treatment be imposed on patients who do not desire it.’) . . . The Petitioners are all [ICF/IID] Training Center residents who wish to continue receiving institutional care in their current settings. As such, their interests are certainly affected by a lawsuit alleging deficiencies in their care and a consent decree whose stated purpose is to prohibit the unnecessary institutionalization of Virginians with ID/DD . . . The parties’ [Justice Department and Commonwealth] desire to phase out the residential Training Centers and transition all Virginians with ID/DD to community-based care is readily apparent.”].

In *United States v. Georgia* (2010), the Department did not consult with families and legal guardians before entering a settlement that requires that the closure of Georgia’s ICFs/IID and forces all residents from these homes. The Settlement does not provide families and legal guardians any decisionmaking authority except in the context of community transition. As discussed next, significant harm to affected individuals has followed transitions in Georgia and other States.

C. The Human Consequences

VOR is also deeply concerned by the many reported outcomes of abuse, neglect and death of individuals with intellectual and developmental disabilities in community settings [see e.g., Letter from U.S. Senator Chris Murphy to Daniel R. Levinson, Inspector General, U.S. Department of Health and Human Services (March 4, 2013): “I write to you today to request that you undertake an immediate investigation into the alarming number of deaths and cases of abuse of developmentally disabled individuals in group homes. In particular, I would like you to focus on the prevalence of preventable deaths at privately run group homes across this Nation and the widespread privatization of our delivery system.”; “In State Care, 1,200 Deaths and Few Answers,” *New York Times* (November 5, 2011): investigation finding that more than 1,200 deaths in State-run group homes in the past decade have been attributed to either “unnatural or unknown causes”; and Bagenstos, Samuel R., *The Past and Future of Deinstitutionalization Litigation*, 34 *Cardozo L. Rev.* 1, 15, 21 (2012), which raises serious questions about the adequacy of community-based placements; notably, Mr. Bagenstos is a former Principal Deputy Assistant Attorney General in the Obama Justice Department’s Civil Rights Division and was a key litigator in deinstitutionalization cases.]

In Georgia, where a Justice Department Settlement Agreement with the State in *U.S. v. Georgia* calls for the transition of nearly 1,000 individuals with IDD and the closure of all State-operated ICFs/IID and the transition of 9,000 individuals with mental illness from facility-based care, the Georgia Department of Behavioral Health & Developmental Disabilities’ Office of Quality Management released its Annual Quality Management Report (February 2014) finding that in 2013 there were 82 unexpected deaths, 1,200 hospitalizations, 318 incidents requiring law enforcement services, 305 individuals who were expectantly absent from a community residential or day program, and 210 alleged instances physical abuse of mentally ill and developmentally disabled individuals. Similar concerns, including some mortalities, were confirmed in a March 23, 2014 report from Elizabeth Jones, the Independent Reviewer in *U.S. v. Georgia*. In report, Jones cites an “urgent need to ensure competent and sufficient health practitioner oversight of individuals who are medically fragile and require assistance with most aspects of their daily lives.” [see, “Report: Developmentally Disabled Need Better Care,” *Georgia Health News* (April 10, 2014); see also, “Widespread Abuse, Neglect and Death in Small Settings Serving People with Intellectual Disabilities,” VOR (rev. February 2014)].

IV. CONCLUSION

Given these concerns, VOR respectfully request that language be added to appropriations legislation to require individual choice, nothing more or less, as follows:

“No funds appropriated for any Department of Justice program shall be expended to promote any law or policy that limits the choices of individuals with intellectual and developmental disabilities (or, if an individual has a legal representative, the legal representative), seeking living arrangements they believe are most suitable to their needs and wishes.”

Thank you for your consideration. For more information please contact Tamie Hopp, VOR Director of Government Relations & Advocacy at thopp@vor.net.

PREPARED STATEMENT OF JAMES R. WATERS, MOREHEAD CITY, NORTH CAROLINA

The Honorable Barbara Mikulski, Chair, and other members of the subcommittee, I am a retired Federal employee. I spent most of my professional career at the Beaufort Laboratory as an employee of National Oceanic and Atmospheric Administration (NOAA’s) National Marine Fisheries Service, and was disappointed and saddened to learn of the recent proposal to close the lab.

The Beaufort Laboratory, located in Beaufort, North Carolina, has a history of more than 100 years of research about fisheries and the marine environment. The history of publications in professional journals attests to this research. Within the past 35 years or so, the focus of research has evolved to reflect the requirements and mandates of major Federal legislation, including the Magnuson-Stevens Fishery Conservation and Management Act, the Marine Mammal Act, and the Endangered Species Act. In particular, fishery scientists at the Beaufort Lab collect data, perform biological analyses and develop models with which to evaluate the status of important recreational and commercial species, especially for reef fishes that often are slow-growing, long-lived and vulnerable to overfishing and depletion, and for menhaden, which supports a major industrial fishery that produces fishmeal and oil. The Beaufort Laboratory works with stakeholders and fishery managers at the

South Atlantic Fishery Management Council, Gulf of Mexico Fishery Management Council, NOAA's Southeast Regional Office, Atlantic States Marine Fisheries Commission, Gulf States Marine Fisheries Commission, and various State fisheries agencies to evaluate the effects of existing and proposed methods of achieving sustainable fisheries for these species.

I urge the Senate subcommittee to question whether a closure of the Beaufort Laboratory is in the best interests of the American taxpayer. If the Beaufort Lab were closed, taxpayers would incur major expenses to relocate personnel to other Federal facilities. These facilities probably are inadequately sized to accommodate the influx of transferred employees, and as a result taxpayers would incur additional major expenses to either lease office/laboratory space or expand existing facilities. These costs could be minimized if Federal employment was terminated for some or all staff at the Beaufort Lab, but then taxpayers would lose the benefits of the data and analyses that would no longer be forthcoming with which to meet the mandates of major Federal legislation. In my opinion, taxpayers would suffer a net loss if the Beaufort Lab were closed.

Thank you for the opportunity to comment on this important issue. I hope that NOAA's Beaufort Laboratory will continue to be the source of productive research about fisheries and the marine environment for many years to come.

PREPARED STATEMENT OF DR. MICHAEL P. WEINSTEIN, SENIOR SCIENTIST, CENTER FOR NATURAL RESOURCES DEVELOPMENT AND PROTECTION, NEW JERSEY INSTITUTE OF TECHNOLOGY

The National Marine Fisheries Laboratory at Beaufort, North Carolina has played a critical role in developing science to inform policy for more than a century. It is the only Federal facility between Miami and New Jersey Atlantic that is heavily invested in applied science to comply with the "bottom up" provisions of the Magnuson Stevens Fishery Conservation and Management Act. Its scientists were among the first to recognize the linkage between coastal wetlands and seagrass meadows as primary nurseries for the early life stages of finfish and shellfish including seatrout, menhaden and many other species that contribute to the U.S.-wide \$50 billion commercial and recreational fishery. The facilities location on Pivers Island, adjacent to the Duke Marine Laboratory and near the University of North Carolina and North Carolina State University marine science laboratories is ideal for catalyzing Federal-university partnerships in cooperative marine research.

I wholeheartedly concur with North Carolina's congressional effort to keep the lab open, and similarly agree that "the NOAA Beaufort Laboratory is a prime location and provides the only Federal access to the most diverse marine ecosystem in the United States," as noted by Dr. David B. Eggleston, a professor at North Carolina State University. The Federal-university complex employs 500 staff, and hosts more than 160,000 square feet of research buildings and 40 laboratories. These facilities supports a \$58 million economy, according to the county's economic development council.

If this facility is closed, a gaping hole would be left in the continuity of Federal research along the Atlantic Coast; one that serves as the direct liaison between university basic research and its application through practical "use inspired" research of the sort that is conducted at NMFS Beaufort. The lab should remain open.

PREPARED STATEMENT OF DOUGLAS A. WOLFE, PH.D. NOAA (RETIRED), BEAUFORT, NORTH CAROLINA

My statement is in direct opposition to the closure of the National Oceanic and Atmospheric Administration (NOAA) marine science laboratory located in Beaufort, North Carolina, as presently proposed in the President's fiscal year 2015 budget for the National Ocean Service (NOS), Coastal Science, Assessment, Response and Restoration: National Centers for Coastal Ocean Science (NCCOS) (NOAA Blue Book, page 8).

This facility, identified in the budget request as the Beaufort, North Carolina laboratory, has a long tradition of: (1) excellence in marine science and research, (2) fisheries management, (3) marine environmental restoration, and (4) collaboration with regional university programs in marine science research and education. Originally founded in 1899 by the U.S. Fisheries Commission, the Beaufort Laboratory is the second-oldest (after Woods Hole) Federal marine science facility in the United States. Its closure is not at all justified in the budget documents cited above and I respectfully request this subcommittee to:

1. direct NOAA's National Ocean Service not to close the Laboratory, and
2. recommend full funding for staffing and operations at the Beaufort Laboratory in fiscal year 2015 and subsequent years.

The balance of my statement will provide greater detail and justification for this position.

In the NOAA Bluebook: fiscal year 2015 Budget Summary, the National Ocean Service proposes (on page 8) "to reduce its physical footprint and fixed costs by closing the Beaufort North Carolina laboratory . . ." A NOAA spokeswoman in Silver Spring, Ciaran Clayton (Director of Communications and External Affairs), was further quoted in our local newspaper: "this aging facility requires infrastructure repairs and improvements exceeding agency budget resources." This appears to form the entire basis for the NOAA/NOS/NCCOS request for lab closure. But in fact, NOAA has routinely been maintaining and improving this facility. The two-story laboratory, originally constructed in 1963, was renovated in 1994 to remove the outdated seawater systems from the building and to correct the structural damage caused by that flaw in the original design. A new (2014) engineering report found no residual structural problems in this building. More recently, a new administration building was constructed in 2007 at a cost of \$7 million to house administrative and support staff offices, new library and conference room facilities, and the Offices of the North Carolina Estuarine Research Reserves (NERRS). In 2008 the maintenance building was replaced at a cost of \$960,000. In 2009 a chemical storage and hazmat building was constructed at a cost of \$1 million. Bridge renovation/replacement (2007) and seawall repairs (2014) were performed at a cost of \$3.5 million. Several smaller aging structures were demolished and removed from the premises. The total cost of facility upgrades within the past 7 years exceeds \$14 million, including a \$1 Million cost-sharing contribution from NERRS, \$500,000 of North Carolina State funds for stormwater runoff management, and a shared cost with Duke University for the bridge work. The present facility is modern in appearance and houses state-of-the art scientific instrumentation and equipment in support of the research programs conducted by the staff.

While the request for closure of the Beaufort Laboratory is presented in the NOAA/NOS/NCCOS budget statement, the Beaufort Laboratory in fact is occupied by programs and staff of three different NOAA components: NCCOS employs a permanent staff of 31; the National Marine Fisheries Service (NMFS) has a permanent staff of 40 at the facility, and NERRS—a program funded cooperatively by NOAA and the State of North Carolina—supports a permanent staff of 8 (all State employees of North Carolina). The Center employs 33 additional personnel—most of them science-related—on a temporary or contract basis. The ramifications of laboratory closure are not reflected in the budgets shown for either NMFS or NERRS. Nor have the impacts to the employees and their families and to the local community been carefully evaluated.

The Beaufort Laboratory has established an extraordinary record for scientific excellence in its research. NOAA and the Department of Commerce have repeatedly recognized individual researchers, research teams, and the Laboratory as a whole for the outstanding quality of the work performed there (with Commerce Gold Medals, Career Achievement Awards, Technology Transfer Award, etc.). Staff members at the Laboratory have also received major recognition and awards from professional scientific societies, including the Phycological Society of America and the Geochemical Society.

The laboratory's excellent research capabilities and reputation also attract support—both from other branches of NOAA and from other outside agencies which have recognized potential benefits of the Laboratory's studies, and have augmented the base-level program support provided by NOAA. For example, the Office of Aquaculture provided nearly \$1 million in fiscal year 2014 to conduct a feasibility study for sustainable aquaculture on the U.S. Atlantic coast, Gulf of Mexico, Caribbean (U.S. possessions), the Pacific west coast, and the Hawaiian archipelago. Other recent research initiatives of the NCCOS staff at the Beaufort Laboratory include (a) ecology of and responses to harmful algal blooms; (b) restoration of injured habitats including seagrass, saltmarsh, and reef systems; (c) ecosystem responses to climate change; and (d) population dynamics and spread of invasive species, such as lionfish. The current focus of the NMFS staff at the Beaufort Laboratory is on: (a) studies of population dynamics and stock assessments in support of fisheries management, especially of Atlantic menhaden and the offshore snapper/grouper and other reef fisheries; (b) population dynamics and health of protected and endangered species, including sea turtles and marine mammals; (c) densities of coral and the reproduction and life histories of reef fish; and (d) ecological studies on the ecosystem structure and function of the southeastern U.S. continental shelf system that supports

these fisheries and protected species. The responsibility of NERRS staff at the Beaufort Laboratory is direction and management of the four major Estuarine Research Reserves in North Carolina, one of which—the Rachel Carson Reserve—is located directly across the navigation channel from the Beaufort Laboratory, which provides a most convenient and economical logistics base for field research, training and educational programs at their reserve.

It is ironic (to the point of giving an impression of fiscal irresponsibility) that the NOS/NCCOS budget initiative for fiscal year 2015 requests increased research funding for coastal ocean issues, including harmful algal blooms, hypoxia, and coastal ecosystem management at the same time it is proposing to close the Beaufort Laboratory, which has well-established expertise and the facilities required to address many of those very same issues.

The Beaufort Laboratory is strategically located for temperate and subtropical marine and estuarine habitat studies on the east coast of North America. It was no accident that Beaufort, North Carolina was selected by the U.S. Bureau of Fisheries as the location for this laboratory, and not surprising that several Universities and State agencies have also located marine research facilities in the same area. North Carolina has one of the longest coastlines and greatest estuarine areas of any State on the east coast; and the Gulf Stream approaches the coast more closely at Cape Hatteras and Cape Lookout than at any other point north of Cape Kennedy, Florida—accounting for the occurrence of tropical corals and reef habitats just at and beyond the edge of the broad continental shelf. Laboratory scientists at the Beaufort Laboratory have developed academic affiliations with several nearby universities, especially with North Carolina State University, University of North Carolina-Wilmington, and East Carolina University, and have helped to sponsor graduate student research on many topics related to NOAA's initiatives. Close ties and research collaboration also exist between laboratory scientists and the faculty at the adjacent Duke University Marine Laboratory, and the University of North Carolina Institute of Marine Sciences in nearby Morehead City. The Beaufort Laboratory is an excellent living example of a truly effective Federal-Academic Partnership. The NERRS facility at the Beaufort Laboratory also provides educational experience and opportunities to thousands of elementary and secondary school students every year.

The Beaufort Laboratory also provides administrative support and scientific direction for a field laboratory at Kasitsna Bay, Alaska, where researchers are quantifying ecosystem change and studying variability in ocean acidification in nearshore subarctic Alaskan habitats. In partnership with the University of Alaska, Native corporations and marine conservation groups, the Kasitsna Bay facility provides training in diving for scientific objectives, marine ecology and oceanography; conducts field science camps for high school students; and offers field housing for visiting researchers and students including NOAA undergraduate and graduate student interns. The implications of Beaufort Lab closure on the operation of the Kasitsna facility appear not to have been considered.

In conclusion I will repeat my earlier recommendation and request the Honorable Members of the Senate Appropriations Subcommittee on Commerce, Justice, Science and Related Agencies to formulate appropriate strategies to:

1. direct NOAA/NOS not to close the Beaufort Laboratory as currently proposed, and remove all references to such closure in the final appropriation; and
2. direct NOAA to restore full funding for operations, staffing and research at the Beaufort Laboratory in fiscal year 2015 and subsequent years.

Thank you for your consideration.