

Testimony for the Record
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Before the
Commerce-Justice-Science Appropriations Subcommittee
Committee on Appropriations
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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 NOAA be funded in FY 2014 at the President's request of \$72.7 million. The request is consistent with the guidance provided in the FY 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 decision-making 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.

As part of the Administration's proposal to consolidate the various Science, Technology, Engineering, and Mathematics (STEM) education programs within various agencies, the Administration has proposed the termination of the John A. Knauss Marine Policy Fellowship Program, the Sea Grant-NMFS Fellowship program and Sea Grant's formal K-12 and informal public education programs in Sea Grant. The Sea Grant Association strongly opposes the termination of the education programs within the National College Sea Grant Program and asks the Congress to restore \$4 million worth of funding for these Sea Grant education programs.

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.

Sea Grant has been a leader in workforce development opportunities through two very important fellowship programs. The Sea Grant Knauss Fellowship Program provides a unique education experience to students who have an interest in ocean, coastal, and Great Lakes resources and in the national policy decisions affecting those resources. The program matches highly qualified graduate students with "hosts" within relevant federal agencies and the Congress for a one year paid fellowship. The Sea Grant Knauss

Fellowship Program is an integral part of the Sea Grant program because it integrates research, education, and public policy in a unique, highly effective way. Since the start of the Sea Grant Knauss Fellowship Program in 1979 more than 900 graduate students have participated in this program. Many former Fellows have obtained public and private sector leadership positions in marine policy, marine science and technology.

The Sea Grant-NOAA Fisheries fellowship program responds to increasing legislative and management demands on NOAA for better understanding of fish populations as well as social and economic conditions in fishing communities. A National Research Council report and 2008 report to Congress highlight the growing and unmet need for federal experts in fisheries stock assessments and economics. They discuss the critical national role of such experts in maintaining healthy marine population stocks and the \$42 billion commercial fishing industry. The Sea Grant-NOAA Fisheries fellowship program encourages Ph.D. candidates to pursue careers in population dynamics, stock assessment and marine resource economics. Co-funded by the two agencies, the program makes a unique contribution to Federal workforce capacity and builds scientific collaboration between academic and NOAA Fisheries scientists.

Over the longer-term Sea Grant's support of formal K-12 Education has helped thousands of students to pursue careers in STEM. Sea Grant sponsored education programs are aligned with national and state education standards and in many states have been the cornerstone to K-12 marine science curricula. Sea Grant's informal education programs through its association with marine labs, aquaria, and coastal ecosystem learning centers have proved valuable in effecting positive behavior changes on youth and adults.

The federal cost for these two fellowship programs and other vital Sea Grant education activities is estimated at \$4.0 million. The SGA strongly believes that what the nation gets back over time in formal and informal STEM education and the training of marine policy and fisheries professionals is well worth the modest investment as an integral part of the National Sea Grant College Program. We hope the Subcommittee will support the reinstatement of these effective fellowship programs and highly targeted STEM education activities in Sea Grant as it reviews the Administration's proposal.

The Return on Investment to the Nation through Sea Grant

To those who ask if this federal program is delivering value and results to the taxpayer – we believe the answer is a resounding “yes.” Highlights from the National Sea Grant Advisory Board's 2012 Biennial Report to Congress clearly demonstrates Sea Grant's important benefits to the Nation and the high return on its federal investment:

- \$170M in direct economic benefits to the Nation, which represents nearly a 2.5 to 1 return on the federal investment;
- 630 new businesses were created or retained, and more than 3,800 jobs were created or retained due to Sea Grant efforts;
- 900 communities across the nation have adopted more sustainable economic or environmental development practices and policies; and
- Sea Grant expanded the Nation's workforce by supporting more than 1000 undergraduate and more than 950 graduate students, resulting in 350 graduate or undergraduate degrees awarded.

Approximately 95% 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 outreach activities, 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 two federal dollars invested attracting at least an additional dollar in non-federal resources in matching funding.

For more than 40 years, the National Sea Grant College Program has worked with its university partners to create and maintain a healthy coastal environment and a robust and productive coastal economy. The Sea Grant network includes more than 30 programs based at top universities in every coastal and Great Lakes state, Puerto Rico, and Guam. Sea Grant brings the robust intellectual capacity that we have within our universities to bear to solve important societal problems and expand our Nation's work force. The programs within the Sea Grant network help citizens and businesses understand, conserve, and better utilize America's coastal, ocean and Great Lakes resources. Through a partnership between universities and the NOAA, Sea Grant directs federal resources to pressing problems in local communities. The partnership with universities is a great source of efficiency, which differentiates it from other NOAA coastal programs. By drawing on the experience of more than 3,000 scientists, engineers, public outreach experts, educators and students from more than 300 institutions, Sea Grant is able to make an impact at local and state levels, and serve as a powerful national force for change.

The Economic Importance of the Nation's Coastal Communities

It is important to recognize that 52% of the nation's total population lives in coastal watershed counties. The Nation's coastal population increased by nearly 51 million people from 1970 to 2010 and by 2020, the coastal population is expected to grow by another 10% or 15.6 million. According to NOAA, the coastal economy contributed \$8.3 trillion to the Nation's Gross Domestic Product resulting in 66 million jobs and wages worth an estimated \$3.4 trillion.

Recreational coastal fishing contributed about \$73 billion in total economic impact supporting over 320,000 jobs. For commercial fishing, the average annual value of all U.S. marine fisheries from 2008 to 2010 is estimated at \$4 billion providing about 1 million jobs and generating over \$32 billion in income.

Our nation's ports, often located in the heart of sensitive coastal ecosystems, are an essential driver of the U.S. economy. About \$1.9 trillion worth of imports came through U.S. ports in 2010 supporting an estimated 13 million jobs.

Over 50% of the total energy produced domestically occurred in coastal states including natural gas production, electricity generation, and oil and gas production. Coastal areas are providing opportunities for renewable energy development with projects that seek to extract energy from the movement of ocean water due to tides, currents, or waves; from the temperature differential between hot and cold ocean water; and from strong winds in offshore ocean environments.

In 2010 over 13.5 million people in the U.S. were employed in the tourism industry in coastal states and communities (transportation, lodging, food services, entertainment, and retail) in over 750,000 business establishments, earning combined wages of \$266 billion. The total economic value generated by the U.S. coastal tourism industry in 2010 has been estimated at \$531 billion.

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, 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 impacted 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, 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 local marinas, aquaculture businesses and commercial fishing. 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. 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 for addressing the long-term health impacts of disasters on coastal residents.

The funding in the President's FY 2014 request for Sea Grant will allow the program to strengthen its focus on the development of more resilient coastal communities. Specific areas of competitive research to be supported within this focus area will include:

- Marine-related energy sources and efficiency;
- Wise use of water resources;
- Climate adaptation;
- Coastal processes studies;
- Resilience from natural hazards;
- Technology development; and
- Resilient coastal businesses and industries, including fisheries and tourism.

Concluding Thoughts

America must use its coastal resources wisely to increase the economic development and resilience of our coastal communities while sustaining the health and productivity of the ecosystems on which they depend.

With the Administration's FY 2014 request of \$72.7 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. We hope the Subcommittee will be able to support this request plus restore the \$4 million the Administration eliminated from Sea Grant STEM education programs, including the Sea Grant Knauss Fellowship Program and the joint Sea Grant-NMFS Fellowship Program.

Thank you for the opportunity to present these views. The SGA would be happy to answer questions or provide additional information to the Subcommittee.