I appreciate the opportunity to submit, for the record, testimony in support of the National Oceanic and Atmospheric Administration (NOAA)’s Environmental Literacy Program (ELP). Building community resiliency through environmental stewardship and informed decision making is a critical component of keeping our nation and its citizens safe and secure. ELP, operated by NOAA’s Office of Education, provides support for national-scale projects that do exactly that, while also creating a public capable of understanding and interpreting forecasts as well as safety and preparedness instructions. I respectfully request the subcommittee fund the Environmental Literacy Program at $8 million in Fiscal Year (FY) 2019. I also request that you fund the Office of Education base account separately to adequately support staff without diminishing the grant program.

Environmental Literacy Program (ELP)
The two goals of NOAA’s agency-wide education strategic plan required by the America COMPETES Act are workforce development and environmental literacy, where formal and informal education and outreach in ocean, coastal, Great Lakes, weather, and climate sciences support an environmentally literate society. Additionally, report language accompanying America COMPETES cites the agency’s principal education grant programs, the Bay-Watershed Education and Training and the ELP.

At the core of the ELP is the grants competition, which, since 2005, has supported 124 grants totaling more than $70 million. The 2017 competition focused on helping communities become more resilient to extreme weather and other environmental hazards by building environmental literacy. The overwhelming response—170 applications requesting more than $77 million—highlights the need to continue building resilience through education.

Also in 2017, the unprecedented damage from the 7th most active Atlantic hurricane season since 1851 made last year the most expensive hurricane season to date. The estimated $200 billion in damage easily surpassed the previous record of $159 billion, which occurred in 2005, when Hurricane Katrina made landfall. On average, weather, water, and climate events cause approximately 650 deaths, $15 billion in damage, and 90 percent of presidentially declared disasters each year. The importance of building community resilience through education and informed decision-making cannot be understated. It’s increasingly important that federal efforts support these endeavors to build a resilient, ocean-literate, weather-ready nation.
Value of Education to NOAA’s Mission

ELP does more than improve environmental literacy. In doing so, it grows the science, technology, engineering, and math (STEM) workforce, strengthens our economy, and ensures our national security, all while advancing NOAA’s mission of science and service.

In 2017 alone, more than 200,000 youth and adults participated in ELP-supported informal education programs (with another 9,000 preK-12 students participating in ELP-supported formal education programs) and more than 46 million visited institutions with ELP-supported exhibits. The 150 institutions using ELP-supported formal and informal education initiatives reached at least 37 states, 110 congressional districts, and 574 counties.

As the longest-standing and most comprehensive national grants program with a focus on environmental literacy, ELP grants have and will continue to keep our coastal communities, and therefore our nation as a whole, safe, secure, and prosperous. Adequately funding ELP will allow programs such as the National Ocean Sciences Bowl (NOSB), a quiz-bowl style ocean science competition for high schoolers that has received ELP funding during its 21-year history, to flourish. The NOSB, alone, has graduated tens of thousands of students from high school with a solid ocean science foundation who go on to careers that advance our nation and keep it secure. NOSB alums have diverse careers, including coordinating NOAA Exploration and Research expeditions, enforcing port security with the U.S. Coast Guard, and developing software for Bloomberg LP.

A diverse, well-educated, ocean-literate workforce provides the necessary base from which innovation grows. A 12.5 percent projected growth of science, technology, engineering, and math (STEM) jobs in the U.S. is expected from 2012 to 2022, with a 14 percent projected increase in U.S. geoscience jobs in that same period. Coupled with the greying of America’s geoscience workforce (47 percent of American geoscientists in the private sector and 43 percent in the federal government were over the age of 55 in 2016), it is clear that our nation will experience major changes with our innovation workforce. NOSB and other ELP programs help to ensure the U.S. has the intellectual resources to take full advantage of new knowledge, as well nurture those who will train the following generation and those whose work supports novel and emerging science solutions. A dynamic workforce moves our nation forward. From business professionals who can commercialize scientific advances to technicians who maintain observing infrastructure and employees trained in scientific principles, our nation’s future depends upon how we will meet these demographic and educational challenges. ELP rises to this challenge through innovative, time-tested programs like the NOSB.
I consider investments in ELP to be investments in our future and request you include $8 million for the program in FY 2019. I also request that you fund the Office of Education base account separately to adequately support staff without diminishing the grant program.
The National Ocean Sciences Bowl (NOSB) includes 25 regional competitions that reach students in 33 states:

- Aloha Bowl (serving the students of Hawaii)
- Bay Scallop Bowl (serving the students of New York)
- Blue Crab Bowl (serving the students of southern Virginia)
- Blue Heron Bowl (serving the students of North Carolina and Tennessee)
- Blue Lobster Bowl (serving the students of Massachusetts)
- Chesapeake Bay Bowl (serving the students of northern Virginia, Maryland, the District of Columbia, Delaware, and central Pennsylvania)
- Dolphin Challenge (serving the students of northern Texas and Arkansas)
- Garibaldi Bowl (serving the students of southern California – San Diego and surrounding area)
- Great Lakes Bowl (serving the students of Michigan)
- Hurricane Bowl (serving the students of Mississippi, Louisiana, Alabama, and northwest Florida)
- Lake Sturgeon Bowl (serving the students of Wisconsin and Illinois)
- Loggerhead Challenge (serving the students of southern Texas)
- Los Angeles Surf Bowl (serving the students of southern California – Los Angeles and surrounding area)
- Manatee Bowl (serving the students of Florida’s east coast)
- Nor’easter Bowl (serving the students of New Hampshire and Maine)
- Orca Bowl (serving the students of Washington)
- Penguin Bowl (serving the students of Ohio, Kentucky, and western Pennsylvania)
- Quahog Bowl (serving the students of Connecticut and Rhode Island)
- Salmon Bowl (serving the students of Oregon and Idaho)
- Sea Lion Bowl (serving the students of northern California)
- Shore Bowl (serving the students of New Jersey and eastern Pennsylvania)
- Southern Stingray Bowl (serving the students of Georgia and South Carolina)
- Spoonbill Bowl (serving the students of Florida’s Gulf coast)
- Trout Bowl (serving the students of Colorado)
- Tsunami Bowl (serving the students of Alaska)