

December 26, 2012

The Honorable Harry Reid
Senate Majority Leader
S-221 Capitol Building
Washington DC 20510

The Honorable John A. Boehner
Speaker of the House
H-232 Capitol Building
Washington, DC 20515

The Honorable Mitchell McConnell
Senate Minority Leader
S-230 Capitol Building
Washington DC 20510

The Honorable Nancy Pelosi
House Minority Leader
H-204 Capitol Building
Washington, DC 20515

Dear Majority Leader Reid, Minority Leader McConnell, Speaker Boehner and Minority Leader Pelosi:

On behalf of the approximately 1000 scientists, engineers, technicians, mariners and support staff employed by Woods Hole Oceanographic Institution, I want to convey our collective concern regarding the fate of federal science and education funding as “fiscal cliff” negotiations continue. This concern extends beyond our Institution to the broader ocean sciences research community and associated marine economy that continues to grow throughout our region.

While our nation’s fiscal challenges require decisive action, such action must be balanced and, more importantly, must not jeopardize the innovation that has been the foundation of our economic success. Federal investment in scientific research and education is a priority for the prosperity of current and future generations. Eroding this investment will put us all at risk.

The stakes for our Institution are particularly high because we are a non-profit entity that relies heavily on federal funding provided through the competitive, peer-reviewed process. Unlike tenured professors at academic institutions, our scientists and engineers do not have base salaries supported by tuition or state resources. Instead, they must secure grants to work full-time on research and projects that directly benefit society, grants that also help support our joint PhD program with MIT. The benefits of this institutional arrangement are numerous, including the knowledge and innovative tool development made possible by the synergies of scientists and engineers working together to understand and address the scientific and societal challenges of our ocean, including its uses and related impacts on ocean processes and health.

Examples of federally sponsored research at the Institution benefiting society and the economy include:

- The development of next generation of ocean observation and monitoring technology under the NSF sponsored Ocean Observatories Initiative, which is revolutionizing our understanding of physical and biogeochemical ocean processes;
- The application of deep sea hydrothermal vent sampling technology to analyze the flow rate of oil and gas associated with the Deepwater Horizon spill, which has provided the scientific foundation for determination of the pending multi-billion dollar settlement.
- Focused research on the oceans role in the intensification of the hydrologic cycle and its implications on storms, floods and droughts.
- The development and refinement of remotely and autonomously operated underwater vehicles supporting national security and domestic science priorities such as mine detection and under-ice observations and sampling.

In addition to federally sponsored research, the Institution has also secured substantial non-federal funds to address events of national and international significance:

- Secured \$4 million in private funding to support an international scientific cruise of the Western Pacific following the Fukushima nuclear reactor disaster to provide baseline information on the distribution of radionuclides into the water column, sediments and food chain.
- Contracted by Air France to locate the black box from the Air France Flight 447 disaster, which provided information resulting in the modification of airspeed monitors and training of pilot response under emergency stall situations.

Unfortunately, the Institution's reliance on "soft-funding" makes it vulnerable to uncertainty and fluctuations in federal competitive research funding. A significant reduction in support for R&D across the federal ocean science funding agencies, including the National Science Foundation, the Office of Naval Research, the National Oceanic and Atmospheric Administration and the National Aeronautic and Space Administration, would result in a disproportionate impact on Institution staff. Over the past five years the Institution has made substantial cost reductions due to a weak economy. Reduced federal support for competitive ocean science research funding would require additional major cuts causing a significant loss of jobs, many of which would be difficult to refill should new funding become available later.

As the second largest employer on Cape Cod, and an employer of many relatively high paying jobs, there would also be collateral impacts on communities and businesses across Cape Cod that support the Institution. Our \$200 million/year budget has a ripple effect on jobs and income across the region and state, an economic benefit further enhanced by the 15 spin-off companies generated by the Institution, most of which are located in adjacent communities. Severe reductions in federally sponsored R&D could jeopardize the future of the Institution and with it the science-based economy that has evolved on Cape Cod.

Federal research funding for the environmental sciences has remained relatively stagnant for the past decade or more. In a time when we need to make important decisions about the use

and health of our ocean it seems unwise to impose an equal share of the burden of funding reduction on research when it has made relatively little contribution to the current deficit problem. Conversely, research has been an essential contributor to ensuring the long-term economic health and viability of the U.S., Massachusetts, and Cape Cod.

We strongly support congressional efforts to protect and enhance core scientific funds as elements of the fiscal bargain are negotiated. Prioritizing R&D funding is good for our Institution, but more importantly it is essential to the future of the United States and the science-based economy that will allow our nation to address societal challenges while also putting the country on a path of economic recovery and prosperity.

Sincerely,

A handwritten signature in black ink, reading "Susan K. Avery". The signature is fluid and cursive, with the first name "Susan" being the most prominent.

Susan K. Avery

Cc: President Barack Obama
Dr. John Holdren
Governor Deval Patrick