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RDML Timothy Gallaudet (USN, ret), Acting Under Secretary of Commerce for Oceans and Atmosphere/NOAA Administrator
National Oceanic and Atmospheric Administration
Herbert C. Hoover Building, Room 6811
14th Street & Constitution Avenue, NW
Washington, DC 20230

Dear Rear Admiral Gallaudet:

On behalf of the NOAA Science Advisory Board (SAB), I am pleased to transmit to you a report from the SAB on the *Potential for Citizen Science in Support of Data Needs for Ecosystem-Based Science*. The SAB approved this report at its November 1-2, 2018 meeting. The purpose of the report was to examine the role of citizen science as a way to augment NOAA's data collection needs in ecosystem research and explore best practices for the use of Citizen Science.

The report includes conclusions and suggestions made by the Ecosystem Sciences and Management Working Group (ESMWG) of the SAB. To develop the report, the workgroup members reviewed NOAA's current use of Citizen Science programs and federal websites developed to encourage best practices. The topic was discussed at ESMWG meetings in May 2017, November 2017, and May 2018, with input from multiple experts in Citizen Science, including those from within various NOAA line offices. The report focuses primarily on Citizen Science efforts that are designed by scientists to collect data that can be used for monitoring and evaluating biological, physical, and social processes.

The report provides a number of key findings. For example, although NOAA has a history of successful use of Citizen Science, it may be an underutilized tool for environmental data collection and monitoring in coastal systems. Well-designed Citizen Science programs have potential to contribute cost-effective information that can be used in scientific investigations when the programs are carefully designed, monitored, and sustained. The report also concludes that further review of existing programs that already have valuable data for ecosystem monitoring is warranted, and additional support, standardization of data storage and sharing, and enhancement of data collection protocols or training in those programs may improve their utility.

Another key conclusion is that the success of Citizen Science as a data collection tool depends on intention; consideration of community and participant needs, interests and abilities; and careful planning to ensure data quality and control. Citizen Science efforts must be developed carefully and intentionally with regard to their intended goals. The report also notes that commitment of resources and expertise from NOAA Regional and Science Centers can improve the quality and integration of data generated by Citizen Science with data collected by agency scientists and

instruments. Importantly, Citizen Science contributes to participatory research that enhances public awareness of science and its value to coastal communities.

The report also includes a list of support needs that could enhance the use of Citizen Science within NOAA ecosystem research and suggests ways that researchers can use Citizen Science as a way to engage communities and broaden participation in science.

The SAB encourages NOAA to provide feedback, as you deem appropriate, at the first opportunity. Please let me know if you have any questions, comments or concerns.

Sincerely,

A handwritten signature in black ink, appearing to read "Lynn Scarlett". The signature is written in a cursive style with a long horizontal flourish extending to the right.

Lynn Scarlett
Chief Policy & Government Relations Officer

cc: File