WRITTEN STATEMENT OF
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ON THE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION'S
FY 2020 BUDGET REQUEST

BEFORE THE
HOUSE COMMITTEE ON SCIENCE, SPACE AND TECHNOLOGY
SUBCOMMITTEE ON ENVIRONMENT

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Chairwoman Fletcher, Ranking Member Marshall, and Members of the Committee, thank you for the opportunity to testify today regarding the President's FY 2020 budget request. The Department of Commerce's National Oceanic and Atmospheric Administration (NOAA) appreciates the continued support of Congress, the Administration, and our broad and diverse base of stakeholders. The President's FY 2020 budget request continues to emphasize core programs while making targeted investments to innovate across NOAA's line offices. We continue to monitor major milestones and accomplishments of our programs and activities to evaluate progress and demonstrate success.

FY 2020 BUDGET REQUEST

NOAA's FY 2020 budget request of approximately $4.5 billion is focused on supporting NOAA's mission and advancing NOAA's highest priorities, which are: 1) To reduce the impacts of extreme weather and water events to save lives and protect property by implementing the Weather Research and Forecasting Innovation Act, 2) To maximize the economic contributions of ocean and coastal resources, and 3) To advance space innovation.

Reduce the Impacts of Extreme Weather and Water Events

The President's FY 2020 budget request will accelerate the advancements in the U.S. global weather modeling program, which is a top priority for the Administration, the Department of Commerce, and NOAA. In 2018, NOAA exceeded its target of transitioning research and

development products, moving 24 products to application or operations. However, despite these advancements, significant impediments exist within the current structure of weather research to operations. The internal and external strategy is fractured, the procurement process for high-performance computing capacity is cumbersome, and the funding process disincentivizes collaboration, and does not support innovation, sustained computing capacity, and competition. The FY 2020 request addresses many of these challenges with an increase $12.3 million for a total of $15.0 million for the Earth Prediction Innovation Center (EPIC).

Building on the tenets of the *Weather Research and Forecasting Innovation Act of 2017* (P.L. 115-25 and recently authorized in the *National Integrated Drought Information System Reauthorization Act of 2018* (P.L. 115-423), EPIC is a virtual center that will serve as the core research-to-operations-to-research hub for building and maintaining a community modeling framework. EPIC's innovative structure will link world-class scientists and software engineers in academia, the private sector, and partner agencies with the research, development, and operational activities inside the agency. EPIC will significantly amplify NOAA's ability to access expertise on a national scale, reestablishing preeminence of the U.S. operational forecast skill and enhancing its ability to provide accurate warnings of weather-based threats.

Maximizing the Economic Contributions of Ocean and Coastal Resources

Our nation's blue economy—comprised of fishing, shipping, tourism, energy development, and other industries tied to the ocean—is a critical contributor to the nation's overall economy. Thus, maximizing the economic contributions of ocean and coastal resources is a high priority for NOAA and the FY 2020 budget makes the necessary investments for strong coastal communities and economies. This Administration's Ocean Policy to Advance the Economic, Security, and Environmental Interests of the United States (Executive Order 13840), established a National Ocean Policy focused on making available data so that states, coastal communities, and industry can make informed decisions to sustainably manage their offshore waters. The budget includes an additional $4 million for regional ocean data portals, building on innovative tools being developed by NOAA's National Ocean Service to improve siting for offshore activities such as aquaculture, fishing, and energy development.

The FY2020 budget also makes investments in our fishermen and seafood production. The budget includes an investment for regional fishery management councils to analyze and remove outdated, unnecessary or ineffective regulations. To further help level the playing field for U.S. commercial fishermen in the global seafood marketplace, the budget includes an additional $1.6 million to enforce the Seafood Import Monitoring Program and prevent the importation of seafood caught using fishing practices that are illegal in the United States. Finally, the budget includes an investment to support aquaculture production by assisting industry with regulatory compliance and conducting priority research to ensure that American farmed seafood is healthy, safe and sustainable.

In addition, NOAA has made great strides in the past two years to reduce the amount of time needed for our environmental reviews. In comparison to pre-2018, the time to complete informal Endangered Species Act (ESA) consultations was reduced by over 65 percent; formal ESA consultations by 22 percent; incidental harassment authorizations under the Marine Mammal Protection Act (MMPA) by 25 percent; and the time to get a research permit for ESA-listed species by 29 percent. The FY 2020 budget builds on this success by investing to reduce the timeline for consultations and permits under the ESA and the MMPA.
Other sectors in the blue economy aided by increases in this budget include marine transportation through a centralized portal for data that can inform non-Federal development of precision navigation tools and products; unmanned systems, increased efforts to reduce marine debris; accelerating the economic benefits of new and expanded marine sanctuaries; and reducing the backlog of Natural Resource Damage Assessment cases.

Finally, this budget includes $5 million for the National Oceanographic Partnership Program. We intend to use these funds to leverage other internal NOAA funds as well as leverage investments from other federal agencies, private industry, and philanthropic organizations that have shared interest in advancing the highest priority ocean research. These funds can be used for a wide variety of partnerships including ranging from ocean exploration to new technology development to detect and protect marine mammals.

Space Innovation

The FY 2020 request also supports the Department of Commerce and NOAA's Space Innovation priority and begins the multi-year process of innovating the architecture of NOAA's space based earth observations. Since the launch of the first operational satellite in 1970, satellite observations have been central to meeting NOAA's mission to understand and predict changes in climate, weather, oceans and coasts. Today, NOAA relies on satellites to monitor and forecast changes in terrestrial and space weather, the state of the oceans and coastlines, and the regional and global climate. Evolving to a more mission-effective, integrated, adaptable, agile, and affordable architecture of NOAA's space based earth observations will allow NOAA to respond to changing technology, emerging partnerships, and evolving observation requirements. The NOAA Satellite Observing System and Architecture Study (NSOSA) analyzes various innovative approaches to better meet NOAA's mission requirements, with greater flexibility and responsiveness to evolving technologies, and leveraging new business relationships with the private sector. Congress recognized the importance of NSOSA, codifying the program in the *National Integrated Drought Information System Reauthorization Act of 2018*.

The President's FY 2020 budget supports the implementation of NSOSA by proposing to restructure NOAA's satellite budget organized around observation portfolios rather than individual missions, an approach that will better leverage partnerships, be more agile to user

needs, and manage risks across portfolios to lower risks and ultimately reduce costs. The FY 2020 Budget also proposes investments to test and evaluate innovative space based solutions and partnerships in the polar and geostationary orbits ($12.3 million). The FY 2020 budget request continues the important Commercial Weather Data Pilot program ($3 million), as well as requesting funds to purchase data after successful testing ($5 million). It is critical to begin now to design a more affordable and more effective data acquisition strategy and to minimize risk of potential observation shortfalls after the currently planned polar and geostationary satellite fleets. For the United States to remain a world leader, NOAA must be innovative, leverage new technology, and develop broader partnerships, while demonstrating organizational agility to adjust to changing needs, risks, and opportunities. To address this, NOAA's initial steps are focused on implementing NSOSA through greater use of new technologies, smaller satellites, and partnerships to meet its mission requirements.

CONCLUSION

NOAA's FY 2020 budget request reflects the commitment Secretary of Commerce Wilbur L. Ross Jr. and I have made to the President to advance national security and the economy. NOAA contributes to those priorities every day by putting data in the hands of those who need it to protect our communities and grow the economy.

America relies on NOAA to know when floods, wildfires, hurricanes, and severe weather threaten our communities. The growing maritime industry looks to NOAA data to safely and efficiently maximize the value of United States. ports, fisheries, and coastal economies. All of these are enabled by NOAA's supercomputers, satellites, ships, aircraft, laboratories, facilities, and most importantly, our world-class workforce. In my short time at NOAA, it is clear to me that we have the most competent and committed people across the entire Federal Government. This FY 2020 budget request includes the core infrastructure and capabilities that these superior professionals at NOAA need to provide the critical services that the American people require.

NOAA's services touch every American, every day. I believe this budget request meets NOAA's core mission, while also positioning the agency to be more efficient and effective moving forward.

Thank you for the opportunity to present NOAA's FY 2020 budget request. I look forward to working with the members of this Committee and our partners and constituents to achieve our Weather & Water, Blue Economy, and Space Innovation goals. I am happy to respond to any questions.

National Oceanic and Atmospheric Administration
U.S. Department of Commerce

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Dr. Neil Jacobs is the Assistant Secretary of Commerce for Environmental Observation and Prediction, performing the duties of Under Secretary of Commerce for Oceans and Atmosphere. Dr. Jacobs is responsible for the strategic direction and oversight of over $5.54 billion in annual spending, including key investments in developing a community model framework to advance U.S. weather modeling and prediction, space innovation, streamlining unmanned systems research to provide critical data across NOAA's mission areas, and unlocking the partnership potential of non-governmental and private organizations to study our nation's oceans and promote a blue economy.

Previously as the Chief Atmospheric Scientist at Panasonic Avionics Corporation, he directed the research and development of both the aviation weather observing platform and weather forecast model programs. He was previously the Chair of the American Meteorological Society's Forecast Improvement Group, and also served on the World Meteorological Organization's aircraft-based observing systems expert team.

Dr. Jacobs holds a bachelor degree in mathematics and physics from the University of South Carolina and masters and doctoral degrees in atmospheric science from North Carolina State University.