Testimony of Michael C. Morgan
Nominee for Assistant Secretary for Environmental Observation and Prediction,
U.S. Department of Commerce
Before the United States Senate Committee on Commerce, Science and Transportation

June 8, 2022

Chair Cantwell, Ranking Member Wicker, Members of the Committee, my name is Michael Cottman Morgan, and I am honored to be nominated by President Biden for the position of the National Oceanic and Atmospheric Administration's Assistant Secretary for Environmental Observation and Prediction. I am especially grateful to Secretary Raimondo and NOAA Administrator Dr. Spinrad for their support of my nomination. I acknowledge, also, my supportive family some who are with me today, and colleagues and students at the University of Wisconsin-Madison during this process. Finally, I want to thank members of the Committee and staff for taking time to meet with me over the past several weeks to share their perspectives.

I am a resident of Madison, WI and I grew up in Baltimore, MD. My earliest interest in science was sparked by my fascination with the lunar landings of the late 1960s and early 1970s. My interest in meteorology came a bit later when the mid-Atlantic region was hit by massive snowstorms like the Presidents' Day Storm of 1979 and the remnants of hurricanes like Hurricane David later that same year. I have been fortunate to have a family supportive of my interests, dedicated public school teachers, and university faculty advisors and professors who helped hone my skills in mathematics, physics, and the atmospheric sciences. The support, education, and professional experiences I have had shaped me as a scientist, and I look forward to the opportunity to build upon this background to serve NOAA and our country.

My work with both the American Meteorological Society and the American Geophysical Union have connected me with the research, operational, academic, and private sectors of my professional community. These professional community connections and my background as a university professor, my service as the Director of Atmospheric and Geospace Sciences Division of the National Science Foundation, and my international service on the World Weather Research Scientific Steering Committee provide me with a breadth of experience to enable me to serve as NOAA's Assistant Secretary for Environmental Observation and Prediction.

One might view the very act of numerical weather prediction as one of the greatest achievements in the physical sciences in the last century. The notion that with sufficient data and a rigorous understanding of the physics and thermodynamics of the atmosphere, one could create accurate, actionable depictions of future weather that could improve public safety, protect lives and property, and ensure the more efficient conduct of commerce and transportation is a scientific success story.

The advances that have occurred over the last 100 years in numerical weather forecasting would not have been possible without research, education, and innovation in all aspects of our earth system. For our space systems, the innovations we have seen in the past decade – even in the last five years – have been tremendous for collecting new observations and applying them to our operational forecasting products in exciting ways. It should be noted however, that many of these advances would not have been as useful without partnerships with behavioral and social scientists

to guide how to communicate this information effectively to all regions of our country, both rural and urban, for all people. NOAA's Impact-based Decision Support Services benefit from this partnership.

The need for investments in these areas continue as the public and private sector requirements for accurate, timely, and detailed weather forecasts and climate projections increase. I support NOAA's mission of science, service, and stewardship including understanding and predicting changes in climate, weather, oceans, and coasts, and sharing that knowledge and information. Furthermore, I recognize the importance of scientific integrity in how NOAA's mission is accomplished. Scientific integrity builds public trust. For NOAA, a loss of trust may mean a loss of lives.

If confirmed, my priorities are to: 1) advance our Nation's predictive capacity by enhancing our modeling systems, improving our use of observations, identifying new observing technologies that will benefit our situational awareness of high impact events and improve longer-term climate projections, as well as bolstering NOAA's high performance computing technologies; 2) develop a platform for rapid access to public weather and climate data that includes data on demographics, economic activity, and infrastructure to allow for a better understanding of the impacts of weather and climate variability on communities; and 3) work to ensure that NOAA's workforce reflects the diversity of our country.

Thank you for your consideration of my nomination and the opportunity to testify before you today. I enthusiastically look forward to the prospect of working with the extraordinary, talented individuals within NOAA, if confirmed. I welcome your questions.