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## HEARING ON

# THE FUTURE OF THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) AS AN INDEPENDENT SCIENTIFIC AGENCY IN STATUTE

# COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY. U.S. HOUSE OF REPRESENTATIVES

### APRIL 18, 2023

Chairman Lucas, Ranking Member Lofgren, and Members of the Committee, thank you for the opportunity to testify today regarding the future of the National Oceanic and Atmospheric Administration (NOAA) as an independent scientific agency in statute. Having served as the acting and Deputy Administrator for nearly three and a half years, I witnessed first-hand the world class science, service, and stewardship of America's top ocean, weather, climate, and environmental agency. The employees of NOAA positively impact every American life every day through activities such as lifesaving weather and water warnings and forecasts, climate information and services, and space weather predictions that support our nation's critical infrastructure. NOAA is also a leader in advancing America's growing blue economy through the scientific study and management of our national marine fisheries, updates to the nautical charts of our exclusive economic zone, precision navigation and physical oceanographic data for U.S. seaports, support to a thriving outdoor tourism and recreation industry with NOAA's National Marine Sanctuaries and Coral Reef Conservation Program, and discovery of the largely unknown underwater part of America by mapping, exploring, and characterizing our oceans, coasts, and Great Lakes. NOAA's team of top-notch scientists, staff, uniformed officer corps, and contractors do all this with an impressive array of assets, including oceanographic ships, cutting edge scientific research aircraft, satellites, supercomputers, and increasingly transformational

technology such as uncrewed systems, artificial intelligence, bioinformatics and 'omics, and cloud-based services and high-performance computing.

I am grateful to the members of this committee for your support of NOAA, and I wish to thank you, Chairman Lucas, for your singular leadership in drafting a bill to enshrine NOAA in law as an independent agency.

Codifying NOAA's authority in legislation is necessary because the agency presently owes its existence to an executive order signed by President Nixon in 1970. While NOAA has enjoyed bipartisan support since then, executive orders are not guaranteed to endure over successive Administrations.

Due to Nixon's animus towards his Secretary of the Interior Wally Hickel, he ignored NOAA's synergies with the natural resource programs in the Department of the Interior and arbitrarily placed NOAA in the Department of Commerce, where NOAA comprises over half the Department's budget and staff. This past year, millions of dollars of the agency's portfolio was once-again transferred to the Commerce Department's \$300 million Working Capital Fund for Shared Services, and the FY 2024 President's Budget requests an increase of nearly 20 percent. The Department's Inspector General found the program to have significant weaknesses, yet Commerce is racing forward with a massive \$353 million consolidation of its agencies' budget and grant management functions that have already experienced numerous delays and cost overruns.

Commerce's egregious lack of focus on NOAA funding is most evident every ten years when the Department comes up short on its funding for the Decennial Census. Costs for the 2020 Census were over \$3 billion above initial estimates, while the assessed cost of the 2010 Census was unreliable and ultimately resulted in a last-minute Congressional request to reprogram funds to fill the gap. In these situations, the Commerce Department also lowered its internal budget guidance to NOAA and reallocated funding to the Census Bureau. Given the large, disproportionate cost of the Decennial Census, the only way NOAA could cope with such huge budget cuts was to delay critical upgrades to environmental satellites and other major projects.

Paying the Department of Commerce to ineptly duplicate NOAA's own management system makes no business sense, but the central problem is a lack of shared priorities between the two layers of government. The absence of collaboration from the political level down to career staff has produced chronic conflict, with NOAA on the receiving end of poorly crafted and sometimes damaging decisions. I have worked with NOAA staff for nearly 15 years, and I have personally witnessed this dysfunctional dynamic the entire time.

In terms of improving NOAA's services to the American people, there are two lenses through which I see the benefits of making NOAA independent. The first is NOAA's weather and climate services for the nation. Here I see the following positive results:

1) Stabilizing the management and budget of America's weather satellite programs.

NOAA's Joint Polar Satellite System and Geostationary Operational Environmental Satellite (GOES) are multi-year, multi-billion-dollar programs that provide critical

essential data for NOAA weather forecasts and warnings. An independent NOAA will be able to continue its recent record of outstanding satellite program management by ensuring that funding for these vital, public safety systems will not be cut from the agency to support other budget priorities of the Department of Commerce,

2) Ensuring continuity of essential support to emergency managers.

In addition to feeding the numerical weather models used to generate storm warnings, NOAA satellite data is used for disaster response. A dramatic example occurred in 2017 when Hurricane Harvey hammered Southeast Texas. High resolution GOES image loops of the eye of the storm were used by NOAA forecasters to guide rescue efforts during the relative calm between the passage of the leading and trailing eyewalls. Making NOAA independent will minimize the risk of programmatic and developmental disruptions in these capabilities from other priorities within the Commerce Department.

3) Accelerating the influx of innovation from public private partnerships.

While I was with NOAA, we advanced a redesign of the agency's satellite architecture, as well as other novel data and advanced technology partnerships with the private sector to modernize NOAA's weather and climate services. Erratic and inconsistent budget profiles do not inspire confidence in industry for initiatives like these, and a NOAA set free from the Department of Commerce will more effectively move them forward.

The other lens through which I see the benefits of making NOAA independent is the agency's maritime missions. As NASA and SpaceX grab headlines for their crewed space flights, it might surprise most Americans that less is known about the seafloor of the world's oceans than the surfaces of the Moon and Mars. This is concerning because the marine environment is more essential than space to the everyday lives of U.S. citizens. A critical conduit for global supply chains, the dominant domain for our great power competition with China, a growing source of economic security through commercial fishing and offshore energy, and a significant source of solutions for combatting climate change, our ocean is center stage for both challenge and opportunity in the 21st century. NOAA is the leading U.S. agency for marine science, protection, and management, and making it independent will have the following effects:

1) Improving the management and budgeting of America's ocean and coastal programs.

NOAA provides enormous contributions to the economies, natural resources, and safety along America's coasts and Great Lakes. An independent NOAA will ensure that funding for ocean, weather, and climate research will not be siphoned from the agency to support inefficient management and other budget priorities of the Department of Commerce.

2) Expanding our understanding of America's oceans, coasts, and Great Lakes.

Less than 50 percent of the U.S. Exclusive Economic Zone has been mapped to modern standards. Significantly less has been fully characterized, meaning that these resources remain poorly understood and undefined. While I was with NOAA, I initiated and

oversaw the development of the National Ocean Mapping, Exploration, and Characterization Strategy and Implementation Plan, which NOAA is continuing to lead. NOAA will be even more effective in this effort to fill the knowledge gap in our oceans if the agency's leadership is freed from the everyday deluge of distracting data calls and analysis from the Commerce Department.

3) Accelerating the recovery of America's imperiled marine species.

Currently, protection of endangered species and marine mammals is split between NOAA and the U.S. Fish and Wildlife Service (USFWS), with over 90% of the species managed by USFWS within the Department of the Interior. Chairman Lucas's draft bill directs a feasibility study on combining them, but I recommend strengthening the language to move NOAA's protected species responsibilities to USFWS outright. A single program will ensure more efficient and effective protection of at-risk wildlife in our oceans, coasts, and Great Lakes.

In my view, NOAA has never been a good fit in the Commerce Department. The disparate goals of the Department and its largest subordinate agency has had a demonstrably adverse impact on the NOAA's budget and management. An independent NOAA will not only ensure that America can better weather the storms in our future, but it will also put NOAA's ocean missions on par with those of NASA for space and therefore more effectively address the dominant role of the maritime domain in our national, natural, and economic security.

Thank you and your staff for your work to support NOAA. I look forward to your questions.