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**WRITTEN TESTIMONY OF  
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ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICES  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION**

**“From Orbit to Operations: How Weather Satellites Support the National Security  
Mission”**

**BEFORE THE  
SUBCOMMITTEE ON THE ENVIRONMENT  
COMMITTEE ON SCIENCE, SPACE AND TECHNOLOGY  
U.S. HOUSE OF REPRESENTATIVES**

**JANUARY 13, 2026**

Chairman Franklin, Ranking Member Amo, and members of the Subcommittee, thank you for the opportunity to testify about the National Oceanic and Atmospheric Administration’s (NOAA) work and its support to U.S. national security. I am Irene Parker, Deputy Assistant Administrator for Systems for National Environmental Satellite, Data, and Information Services (NESDIS).

NOAA acknowledges and appreciates the ongoing work with this Subcommittee to enhance successful observation infrastructure essential to supporting the Nation’s economy and national security. I look forward to discussing this topic further with you today.

**Introduction**

NOAA’s mission is to collect and analyze data, to monitor the global environment to protect lives and property from severe weather events, and to share that information with our partners and local decision makers. Our mission also supports U.S. economic prosperity, and national and homeland security. NOAA’s operational environmental satellites provide data that are foundational to its mission and are provided to the national and homeland security sectors. Through interagency agreements, we ensure that NOAA’s satellite-derived data, products, and services are made available 24/7, 365 days per year to meet NOAA’s operational mission needs. Additionally, key partnerships such as those with commercial data providers, with international partners, and interagency partners—such as the national security sector—provide additional data and information to offset, augment, and complement the data that we generate ourselves.

**NOAA and U.S. National Security collaboration**

Historically, collaboration among NOAA and the national security agencies has been a force multiplier to the benefit of the U.S. taxpayer. Examples of areas where NOAA satellites support U.S. national security include:

- **Operational Space-based Requirements.** NOAA and the Department of War (DOW) routinely coordinate needs for space-based and in-situ data and services. NOAA uses this information to ensure that its next generation satellites can satisfy the broadest range of national needs. Similarly, NOAA communicates how it wishes to utilize DOW environmental satellite data and services. These collaborative activities have been beneficial to both entities by avoiding duplication of satellite acquisitions worth billions of dollars.
- **Satellite Operations.** The national security sector depends on NOAA satellites to provide space-based Earth and Sun observed data for national security purposes. NOAA's Geostationary Operational Environmental Satellites (GOES) supports the Western hemisphere's civilian and national security weather nowcasting needs. NOAA has historically transferred GOES satellites that have completed their primary weather mission or exceeded their design life from NOAA to DOW for DOW's specific data requirements. NOAA's operational polar-orbiting Joint Polar Satellite Systems (JPSS) and partner systems provide nearly 90 percent of the data that are ingested into civilian, military, and international numerical weather prediction models. DOW's legacy Defense Meteorological Satellite Program (DMSP) and the next-generation Weather Satellite Follow-on Microwave provide unique microwave imagery, and NOAA operates the DOW's DMSP on a reimbursable basis.

Space weather data observed by NOAA GOES, Deep Space Climate Observatory (DSCOVR), and the soon-to-be operational Space Weather Follow On Lagrange 1 satellite are ingested into the space weather models. The model output is used by forecasters to issue early warnings to satellite operators and other stakeholders regarding potential impacts to the electrical power grid, telecommunications, and aviation from incoming space weather events. The national security sector uses these data to inform planning and operations. NOAA and national security partners work together to ensure timely solar weather warnings protect both civil and defense assets.

- **Global Partnership Strategies.** NOAA's operational Earth and Sun observing readiness strategy relies in part on collaborations with international satellite operators who provide data essential to NOAA's mission. NOAA's civil weather and environmental monitoring responsibilities leverage in-situ global data from over 190 countries and from over 70 satellite systems worldwide. In addition, the national security sector leverages these data for their specific uses.
- **Joint Operational Partnerships.** NOAA and DOW have been involved in a number of long-term partnerships that use our respective satellite data and services to meet shared and specific needs, for example:
  - The Satellite-assisted Search and Rescue (SARSAT) is a joint partnership among DOW/US Air Force and Space Force, US Coast Guard, NOAA, NASA, and international partners. SARSAT alerts have been used to rescue over 11,000 people in the U.S. since 1982. All U.S. troops carry SARSAT personal alert devices to aid rescue on the battlefield. Furthermore, US Navy GPS satellites are

increasingly being used to improve SARSAT geolocation capabilities to shorten the time to rescue people in distress.

- NOAA and DOW/US Navy jointly collect the majority of the world's marine observations that are used for weather forecasting, transoceanic shipping, and national security. Marine observation capabilities rely on NOAA's sensors in the water, but also on NOAA's ability to transmit the data collected via NOAA satellites and commercial satellites and then on to operational centers.
- NOAA, DOW/US Navy, and the US Coast Guard monitor Arctic sea ice formation and melting. Arctic observations rely on a combination of satellite, ocean, ice-tethered, and international data sources, with NOAA satellites often providing the most consistent wide area coverage in a data-sparse region.
- NOAA and the DOW/US Air Force operate Hurricane Hunter aircraft that use NOAA satellite data to develop flight patterns to safely collect data used by forecasters at NOAA's National Hurricane Center and the Central Pacific Hurricane Center, and DOW's Joint Typhoon Warning Center. NOAA's Hurricane Hunters also validate satellite data and calibrate flight surveys for surface wind readings from NOAA satellites.
- DOW and NOAA provide substantial support using GOES, JPSS, and Fireguard satellite systems in support of U.S. wildland fire management and suppression activities. This satellite-derived support includes monitoring for the likelihood of wildfire ignitions, for dry vegetation, and weather conditions that are conducive to rapid fire spread. These satellite systems also have the capability of detecting wildfire ignitions within minutes. By providing more targeted and rapid detection and monitoring of wildfires, the DOW/National Guard, and NOAA support federal, state, and local fire management agencies by improving situational awareness and response coordination.
- **Access to Space.** NOAA relies on commercial space launch operators, NASA, and DOW to get payloads into orbit. However, the commercial companies and interagency partners also rely on NOAA. NOAA Satellites provide the underlying information critical for ensuring safe space launch operations in the United States. The NOAA National Weather Service (NWS) has a specialized Spaceflight Meteorology Group based out of the NASA Johnson Space Center supporting manned spaceflight. The NWS Space Weather Prediction Center uses data from NOAA satellites to provide advance notice of geomagnetic storming and other space weather conditions that impact launch and orbital operations. NWS Weather Forecast Offices in Florida, California, and Virginia, as well as the Space Force's Space Launch Delta 45, provide tailored weather forecasts that support launches at Cape Canaveral, Vandenberg Space Force Base, and Wallops Flight Center.
- **Space-based Commercial Data Purchases (or Partnerships).** With Administration prioritization and continued Congressional support, NOAA is now routinely and consistently purchasing high-impact space-based data, such as radio occultation data, which is being ingested directly into numerical weather prediction models and space weather forecasting. Furthermore, NOAA is actively assessing other data streams for

sustained data purchases to support its critical operational weather and space weather missions. The national weather enterprise, which includes all DOW services, benefits from these weather forecasting improvements. NOAA works closely with interagency partners, including Air Force, Space Force, and NASA to align, prioritize, and support commercial partners to improve mission success.

### **Looking to the Future**

As we look to the future, there are emerging areas of further collaboration that NOAA and the national security sector are working on together, such as next generation Earth and Sun observing systems and instruments, uncrewed systems, quantum computing, the cloud, maximizing artificial intelligence, protecting our systems from cyber-attacks, and integrating the U.S. aerospace sector in our plans and strategies. This Committee and this hearing play an important role in emphasizing these urgent needs for adequate authorization and appropriations for NOAA and the national security sector.

### **Conclusion**

Thank you for this opportunity to testify. I would be happy to answer any questions you may have.