

Weather Research and Forecasting Innovation Reauthorization Act of 2026

Sens. Ted Cruz (R-Texas), Maria Cantwell (D-Wash), Dan Sullivan (R-Alaska),
Lisa Blunt Rochester (D-Del.), Jerry Moran (R-Kan.), Brian Schatz (D-Hawaii),
Tim Sheehy (R-Mo.), Jacky Rosen (D-Nev.), Ted Budd (R-NC), and Amy Klobuchar (D-Minn.)

Background

The Weather Research and Forecasting Innovation Act of 2017 established the National Oceanic and Atmospheric Administration's (NOAA) core weather research and forecasting framework, aligning the National Weather Service, the Office of Oceanic and Atmospheric Research, and the National Environmental Satellite, Data, and Information Service around a unified mission to improve forecasts, accelerate research-to-operations, and strengthen public safety. The 2017 law formalized coordination across the broader weather enterprise—including partnerships with NASA, NSF, DOE, academia, states, and the private sector—and established the statutory foundation for advancing numerical weather prediction, satellite observations, radar modernization, and hazard communication.

The Weather Act would reauthorize these programs and build on this framework to keep NOAA focused on its core public-safety mission, further enhancing forecasting, warning, and hazard communication capabilities. The Act includes a package of more than 17 bipartisan bills that have either been referred to or reported out of Committee. It addresses hurricane and tornado forecasting, wildfire and landslide preparedness, atmospheric river prediction, drought monitoring, radar and satellite modernization, artificial integration, commercial data partnerships, and NOAA Weather Radio modernization.

Included Committee Bills

Passed the Senate

- S. 93, Harmful Algal Bloom and Hypoxia Research and Control Amendments Act of 2025 (Sullivan, Baldwin, Collins, Cornyn, Merkley, Peters, Whitehouse, Murkowski, Coons, Padilla, Cassidy, Wicker, Moreno, Schiff, King, Kennedy)
- S. 283, Illegal Red Snapper and Tuna Enforcement Act (Cruz, Schatz, Britt, Tuberville, Wicker)
- S. 306, Fire Ready Nation Act of 2025 (Cantwell, Sheehy, Cruz, Lujan, Sullivan, Rosen, Murkowski, Padilla, Schatz)
- S. 318, ANCHOR Act (Padilla, Sullivan)
- S. 1626, National Landslide Preparedness Act Reauthorization Act of 2025 (Murkowski, Cantwell)

Reported Out of Committee

- S. 258, TORNADO Act (Wicker, Hyde-Smith, Grassley, Moran, Sheehy, Young, Cruz, Peters, Warnock, Blackburn)
- S. 613, Improving Flood and Agricultural Forecasts Act of 2025 (Schatz, Marshall)
- S. 1278, Fog Observations and Geographic Forecasting Act (Cruz, Padilla)
- S. 1378, TAME Extreme Weather and Wildfires Act (Schatz, Sheehy, Lujan, Welch)
- S. 1523, Water Research Optimization Act of 2025 (Britt, Welch)
- S. 2126, Integrated Ocean Observation System Reauthorization Act of 2025 (Wicker, Cantwell, Hyde-Smith, Murkowski, Sullivan, Blunt Rochester, Baldwin, and Markey).

Awaiting Action

- S. 322, Improving Atmospheric River Forecasts Act (Padilla, Murkowski)
- S. 2583, NOAA Weather Radio Modernization Act (Cruz, Cantwell, Sullivan, Schatz, Moran, Peters)
- S. 3795, Radar Next Program Act of 2026 (Cantwell, Budd)

- S. 3854, Advanced Weather Model Computing Development Act (Lujan, Blackburn)
- S. 3881, Tsunami Warning and Education Reauthorization Act (Cantwell, Murkowski, Sullivan)
- S. 3912, National Integrated Drought Information System (Sheehy)
- S. 3919, Hurricane Field Improvement Program (Budd)

Summary of Major Provisions

Reauthorizes Proven Forecasting Programs

Reauthorizes programs established under the Weather Research and Forecasting Innovation Act of 2017 to ensure continued progress in weather science, operational forecasting, and public safety services.

Improves Forecast Accuracy

Delivers more precise forecasts and earlier warnings by accelerating the development of and operational transition to next-generation technologies like artificial intelligence.

Modernizes Radar and Satellite Infrastructure

Strengthens the resilience of national weather satellite systems to prevent operational gaps. Supports next-generation radar for reliable nationwide weather detection and warning capabilities.

Leverages Commercial Innovation

Codifies and expands NOAA's Commercial Data Program to integrate private-sector weather and environmental observations. Requires cost comparisons between Federal and commercial options.

Improves Warning Dissemination and Public Communication

Modernizes and expands NOAA Weather Radio and national warning dissemination systems to improve reliability, redundancy, and geographic specificity. Draws on behavioral science to improve the clarity and actionability of public communications during severe weather events.

Improves High-Impact Hazard Forecasting

Enhances forecasting for hurricanes, tornadoes, atmospheric rivers, extreme precipitation, flooding, coastal hazards, heat, wildfire, and landslides. Improves hydrologic modeling, storm-surge prediction, and decision-support tools to reduce disaster costs and enhance community preparedness.

Supports Agriculture, Water, and Aviation

Expands subseasonal to seasonal forecasting and data services to keep agriculture, fisheries, water management, and food supply chains productive and economically stable. Improves aviation weather services and better integrates data systems to ensure safe and efficient operation of the national airspace.

Strengthens Resilience and Cybersecurity

Protects national weather and environmental information systems against cyber threats, space weather events, and infrastructure disruptions. Enhances cybersecurity and telecommunications capabilities for the U.S. academic research fleet.

Enhances Interagency Coordination

Facilitates coordination across Federal agencies to ensure weather information supports emergency management, infrastructure protection, and national security missions.

Addresses Emerging and Cross-Cutting Risks

Codifies Fire Ready Nation to improve wildfire preparedness and risk reduction capabilities. Reauthorizes and expands the National Landslide Preparedness Act to improve precipitation estimates and landslide risk reduction. Updates harmful algal bloom and hypoxia research authorities. Authorizes the development of a chemical analysis tool to determine the country of origin for red snapper and tuna to support enforcement.