

§ 8520. United States Weather Research Program**(a) Establishment**

The Secretary of Commerce, in cooperation with the Federal Coordinating Council for Science, Engineering, and Technology through the Committee on Earth and Environmental Sciences, shall establish a United States Weather Research Program to—

(1) increase benefits to the Nation from the substantial investment in modernizing the public weather warning and forecast system in the United States;

(2) improve local and regional weather forecasts and warnings;

(3) address critical weather-related scientific issues;

(4) coordinate governmental, university, and private-sector efforts;

(5) submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives, not less frequently than once each year, a report, including—

(A) a list of ongoing research projects;

(B) project goals and a point of contact for each project;

(C) the five projects related to weather observations, short-term weather, or subseasonal forecasts within Office of Oceanic and Atmospheric Research that are closest to operationalization;

(D) for each project referred to in subparagraph (C)—

(i) the potential benefit;

(ii) any barrier to operationalization; and

(iii) the plan for operationalization, including which line office will financially support the project and how much the line office intends to spend;

(6) establish teams with staff from the Office of Oceanic and Atmospheric Research and the National Weather Service to oversee the operationalization of research products developed by the Office of Oceanic and Atmospheric Research;

(7) develop mechanisms for research priorities of the Office of Oceanic and Atmospheric Research to be informed by the relevant line offices within the National Oceanic and Atmospheric Administration, the relevant user community, and the weather enterprise;

(8) develop an internal mechanism to track the progress of each research project within the Office of Oceanic and Atmospheric Research and mechanisms to terminate a project that is not adequately progressing;

(9) develop and implement a system to track whether extramural research grant goals were accomplished;

(10) provide facilities for products developed by the Office of Oceanic and Atmospheric Research to be tested in operational simulations, such as test beds;

(11) encourage academic collaboration with the Office of Oceanic and Atmospheric Research and the National Weather Service by facilitating visiting scholars; and

(12) carry out the activities of the Earth Prediction Innovation Center as described in section 8512(b)(2) of this title.

(b) Implementation plan

The Secretary of Commerce, in cooperation with the Committee on Earth and Environmental Sciences, shall prepare and submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives a plan for implementation of the United States Weather Research Program which shall—

(1) establish, for the 10-year period beginning in the year the plan is submitted, the goals and priorities for Federal weather research which most effectively advance the scientific understanding of weather processes and provide information to improve weather warning and forecast systems in the United States;

(2) describe specific activities, including research activities, data collection and data analysis requirements, predictive modeling, participation in international research efforts, demonstration of potential operational forecast applications, and education and training required to achieve such goals and priorities; and

(3) set forth the role of each Federal agency and department to be involved in the United States Weather Research Program, identifying and addressing, as appropriate, relevant programs and activities of the Federal agencies and departments that would contribute to such Program.

(c) Subseasonal defined

In this section, the term “subseasonal” means the time range between 2 weeks and 3 months.

(Pub. L. 102-567, title I, §108, Oct. 29, 1992, 106 Stat. 4276; Pub. L. 115-25, title I, §109, Apr. 18, 2017, 131 Stat. 97; Pub. L. 115-423, §4(b), Jan. 7, 2019, 132 Stat. 5457.)

Editorial Notes**CODIFICATION**

Pub. L. 115-25, which directed amendment of section 108 of the “Oceanic and Atmospheric Administration Authorization Act of 1992”, was executed to this section, which is section 108 of the National Oceanic and Atmospheric Administration Authorization Act of 1992, to reflect the probable intent of Congress.

Section was formerly set out as a note under section 313 of this title.

Section was enacted as part of the National Oceanic and Atmospheric Administration Authorization Act of 1992, and not as part of the Weather Research and Forecasting Innovation Act of 2017 which comprises this chapter.

AMENDMENTS

2019—Subsec. (a)(12). Pub. L. 115-423 added par. (12).

2017—Subsec. (a)(5) to (11). Pub. L. 115-25, §109(1), added pars. (5) to (11). See Codification note above.

Subsec. (b). Pub. L. 115-25, §109(2), substituted “The” for “Not later than 90 days after October 29, 1992, the” in introductory provisions. See Codification note above.

Subsec. (c). Pub. L. 115-25, §109(3), added subsec. (c). See Codification note above.

§ 8521. Weather and climate information in agriculture**(a) Findings**

Congress finds that—

(1) agricultural and silvicultural operations are vulnerable to damage from atmospheric conditions that accurate and timely reporting of weather information can help prevent;

(2) the maintenance of current weather and climate analysis and information dissemination systems, and Federal, State, and private efforts to improve these systems, is essential if agriculture and silviculture are to mitigate damage from atmospheric conditions;

(3) agricultural and silvicultural weather services at the Federal level should be maintained with joint planning between the National Oceanic and Atmospheric Administration and the Department of Agriculture; and

(4) efforts should be made, involving user groups, weather and climate information providers, and Federal and State governments, to expand the use of weather and climate information in agriculture and silviculture.

(b) Policy

It, therefore, is declared to be the policy of Congress that it is in the public interest to maintain an active Federal involvement in providing agricultural and silvicultural weather and climate information and that efforts should be made, among users of this information and among private providers of this information, to improve use of this information.

(c) Functions

The Under Secretary, acting through the Director of the National Weather Service and the heads of such other programs of the National Oceanic and Atmospheric Administration as the Under Secretary considers appropriate, shall—

(1) collect and utilize information in order to make usable, reliable, and timely foundational forecasts of subseasonal and seasonal temperature and precipitation;

(2) leverage existing research and models from the weather enterprise to improve the forecasts under paragraph (1);

(3) determine and provide information on how the forecasted conditions under paragraph (1) may impact—

(A) the number and severity of droughts, fires, tornadoes, hurricanes, floods, heat waves, coastal inundation, winter storms, high impact weather, or other relevant natural disasters;

(B) snowpack; and

(C) sea ice conditions; and

(4) develop an Internet clearinghouse to provide the forecasts under paragraph (1) and the information under paragraphs (1) and (3) on both national and regional levels.

(d) Communication

The Director of the National Weather Service shall provide the forecasts under paragraph (1) of subsection (c) and the information on their impacts under paragraph (3) of such subsection to the public, including public and private entities engaged in planning and preparedness, such as National Weather Service Core partners at the Federal, regional, State, tribal, and local levels of government.

(e) Cooperation

The Under Secretary shall build upon existing forecasting and assessment programs and partnerships, including—

(1) by designating research and monitoring activities related to subseasonal and seasonal forecasts as a priority in one or more solicitations of the Cooperative Institutes of the Office of Oceanic and Atmospheric Research;

(2) by contributing to the interagency Earth System Prediction Capability; and

(3) by consulting with the Secretary of Defense and the Secretary of Homeland Security to determine the highest priority subseasonal and seasonal forecast needs to enhance national security.

(f) Forecast communication coordinators

(1) In general

The Under Secretary shall foster effective communication, understanding, and use of the forecasts by the intended users of the information described in subsection (d). This shall include assistance to States for forecast communication coordinators to enable local interpretation and planning based on the information.

(2) Requirements

For each State that requests assistance under this subsection, the Under Secretary may—

(A) provide funds to support an individual in that State—

(i) to serve as a liaison among the National Oceanic and Atmospheric Administration, other Federal departments and agencies, the weather enterprise, the State, and relevant interests within that State; and

(ii) to receive the forecasts and information under subsection (c) and disseminate the forecasts and information throughout the State, including to county and tribal governments; and

(B) require matching funds of at least 50 percent, from the State, a university, a non-governmental organization, a trade association, or the private sector.

(3) Limitation

Assistance to an individual State under this subsection shall not exceed \$100,000 in a fiscal year.

(g) Cooperation from other Federal agencies

Each Federal department and agency shall cooperate as appropriate with the Under Secretary in carrying out this section.

(h) Reports

(1) In general

Not later than 18 months after April 18, 2017, the Under Secretary shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives a report, including—

(A) an analysis of the¹ how information from the National Oceanic and Atmospheric Administration on subseasonal and seasonal forecasts, as provided under subsection (c), is utilized in public planning and preparedness;

(B) specific plans and goals for the continued development of the subseasonal and sea-

¹ So in original. The word “the” probably should not appear.

sonal forecasts and related products described in subsection (c); and

(C) an identification of research, monitoring, observing, and forecasting requirements to meet the goals described in subparagraph (B).

(2) Consultation

In developing the report under paragraph (1), the Under Secretary shall consult with relevant Federal, regional, State, tribal, and local government agencies, research institutions, and the private sector.

(i) Definitions

In this section:

(1) Foundational forecast

The term “foundational forecast” means basic weather observation and forecast data, largely in raw form, before further processing is applied.

(2) National Weather Service core partners

The term “National Weather Service core partners” means government and nongovernment entities which are directly involved in the preparation or dissemination of, or discussions involving, hazardous weather or other emergency information put out by the National Weather Service.

(3) Seasonal

The term “seasonal” means the time range between 3 months and 2 years.

(4) State

The term “State” means a State, a territory, or possession of the United States, including a Commonwealth, or the District of Columbia.

(5) Subseasonal

The term “subseasonal” means the time range between 2 weeks and 3 months.

(6) Under Secretary

The term “Under Secretary” means the Under Secretary of Commerce for Oceans and Atmosphere.

(7) Weather industry and weather enterprise

The terms “weather industry” and “weather enterprise” are interchangeable in this section and include individuals and organizations from public, private, and academic sectors that contribute to the research, development, and production of weather forecast products, and primary consumers of these weather forecast products.

(j) Authorization of appropriations

There are authorized to be appropriated to carry out the activities under this section—

- (1) \$26,500,000 for fiscal year 2019;
- (2) \$27,000,000 for fiscal year 2020;
- (3) \$27,500,000 for fiscal year 2021;
- (4) \$28,000,000 for fiscal year 2022; and
- (5) \$28,500,000 for fiscal year 2023.

(k) Derivation of funds

Amounts made available to carry out this section shall be derived from amounts appropriated or otherwise made available to the National Weather Service.

(Pub. L. 99–198, title XVII, §1762, Dec. 23, 1985, 99 Stat. 1651; Pub. L. 115–25, title II, §201, Apr. 18, 2017, 131 Stat. 98; Pub. L. 115–423, §3(a), Jan. 7, 2019, 132 Stat. 5455; Pub. L. 117–316, §11, Dec. 27, 2022, 136 Stat. 4413.)

Editorial Notes

CODIFICATION

Section was formerly set out as a note under section 313 of this title.

Section was enacted as part of the Food Security Act of 1985, and not as part of the Weather Research and Forecasting Innovation Act of 2017 which comprises this chapter.

AMENDMENTS

2022—Subsec. (f)(1). Pub. L. 117–316 substituted “shall include” for “may include”.

2019—Subsec. (j). Pub. L. 115–423, §3(a)(1), amended subsec. (j) generally. Prior to amendment, text read as follows: “For each of fiscal years 2017 and 2018, there are authorized out of funds appropriated to the National Weather Service, \$26,500,000 to carry out the activities of this section.”

Subsec. (k). Pub. L. 115–423, §3(a)(2), added subsec. (k). 2017—Subsecs. (a), (b). Pub. L. 115–25, §201(1), (2), inserted headings.

Subsecs. (c) to (j). Pub. L. 115–25, §201(3), added subsecs. (c) to (j).

SUBCHAPTER II—WEATHER SATELLITE AND DATA INNOVATION

§ 8531. National Oceanic and Atmospheric Administration satellite and data management

(a) Short-term management of environmental observations

(1) Microsatellite constellations

(A) In general

The Under Secretary shall complete and operationalize the Constellation Observing System for Meteorology, Ionosphere, and Climate–1 and Climate–2 (COSMIC) in effect on the day before April 18, 2017—

- (i) by deploying constellations of microsatellites in both the equatorial and polar orbits;
- (ii) by integrating the resulting data and research into all national operational and research weather forecast models; and
- (iii) by ensuring that the resulting data of National Oceanic and Atmospheric Administration’s COSMIC–1 and COSMIC–2 programs are free and open to all communities.

(B) Annual reports

Not less frequently than once each year until the Under Secretary has completed and operationalized the program described in subparagraph (A) pursuant to such subparagraph, the Under Secretary shall submit to Congress a report on the status of the efforts of the Under Secretary to carry out such subparagraph.

(2) Integration of ocean and coastal data from the Integrated Ocean Observing System

In National Weather Service Regions where the Director of the National Weather Service determines that ocean and coastal data would improve forecasts, the Director, in consulta-