

maximize observational capabilities and their cost-effectiveness;

(3) identify current and potential future data gaps in observing capabilities related to the requirements listed under paragraph (1); and

(4) determine a range of options to address gaps identified under paragraph (3).

(Pub. L. 115–25, title I, §106, Apr. 18, 2017, 131 Stat. 95.)

§ 8517. Observing System Simulation Experiments

(a) In general

In support of the requirements of section 8516 of this title, the Assistant Administrator for Oceanic and Atmospheric Research shall undertake Observing System Simulation Experiments, or such other quantitative assessments as the Assistant Administrator considers appropriate, to quantitatively assess the relative value and benefits of observing capabilities and systems. Technical and scientific Observing System Simulation Experiment evaluations—

(1) may include assessments of the impact of observing capabilities on—

(A) global weather prediction;

(B) hurricane track and intensity forecasting;

(C) tornado warning lead times and accuracy;

(D) prediction of mid-latitude severe local storm outbreaks; and

(E) prediction of storms that have the potential to cause extreme precipitation and flooding lasting from 6 hours to 1 week; and

(2) shall be conducted in cooperation with other appropriate entities within the National Oceanic and Atmospheric Administration, other Federal agencies, the United States weather industry, and academic partners to ensure the technical and scientific merit of results from Observing System Simulation Experiments or other appropriate quantitative assessment methodologies.

(b) Requirements

Observing System Simulation Experiments shall quantitatively—

(1) determine the potential impact of proposed space-based, suborbital, and in situ observing systems on analyses and forecasts, including potential impacts on extreme weather events across all parts of the Nation;

(2) evaluate and compare observing system design options; and

(3) assess the relative capabilities and costs of various observing systems and combinations of observing systems in providing data necessary to protect life and property.

(c) Implementation

Observing System Simulation Experiments—

(1) shall be conducted prior to the acquisition of major Government-owned or Government-leased operational observing systems, including polar-orbiting and geostationary satellite systems, with a lifecycle cost of more than \$500,000,000; and

(2) shall be conducted prior to the purchase of any major new commercially provided data with a lifecycle cost of more than \$500,000,000.

(d) Priority Observing System Simulation Experiments

(1) Global Navigation Satellite System Radio Occultation

Not later than 30 days after April 18, 2017, the Assistant Administrator for Oceanic and Atmospheric Research shall complete an Observing System Simulation Experiment to assess the value of data from Global Navigation Satellite System Radio Occultation.

(2) Geostationary hyperspectral sounder global constellation

Not later than 120 days after April 18, 2017, the Assistant Administrator for Oceanic and Atmospheric Research shall complete an Observing System Simulation Experiment to assess the value of data from a geostationary hyperspectral sounder global constellation.

(e) Results

Upon completion of all Observing System Simulation Experiments, the Assistant Administrator shall make available to the public the results an assessment¹ of related private and public sector weather data sourcing options, including their availability, affordability, and cost-effectiveness. Such assessments shall be developed in accordance with section 50503 of title 51.

(Pub. L. 115–25, title I, §107, Apr. 18, 2017, 131 Stat. 96.)

§ 8518. Annual report on computing resources prioritization

Not later than 1 year after April 18, 2017, and not less frequently than once each year thereafter, the Under Secretary, acting through the Chief Information Officer of the National Oceanic and Atmospheric Administration and in coordination with the Assistant Administrator for Oceanic and Atmospheric Research and the Director of the National Weather Service, shall produce and make publicly available a report that explains how the Under Secretary intends—

(1) to continually support upgrades to pursue the fastest, most powerful, and cost-effective high performance computing technologies in support of its weather prediction mission;

(2) to ensure a balance between the research to operations requirements to develop the next generation of regional and global models as well as highly reliable operational models;

(3) to take advantage of advanced development concepts to, as appropriate, make next generation weather prediction models available in beta-test mode to operational forecasters, the United States weather industry, and partners in academic and Government research; and

(4) to use existing computing resources to improve advanced research and operational weather prediction.

(Pub. L. 115–25, title I, §108, Apr. 18, 2017, 131 Stat. 97.)

¹ So in original.

§ 8519. Authorization of appropriations**(a) Fiscal years 2017 and 2018**

For each of fiscal years 2017 and 2018, there are authorized to be appropriated to Office of Oceanic and Atmospheric Research—

(1) \$111,516,000 to carry out this subchapter, of which—

(A) \$85,758,000 is authorized for weather laboratories and cooperative institutes; and

(B) \$25,758,000 is authorized for weather and air chemistry research programs; and

(2) an additional amount of \$20,000,000 for the joint technology transfer initiative described in section 8512(b)(4) of this title.

(b) Limitation

No additional funds are authorized to carry out this subchapter and the amendments made by this title.¹

(Pub. L. 115–25, title I, §110, Apr. 18, 2017, 131 Stat. 98.)

REFERENCES IN TEXT

This subchapter, referred to in subsecs. (a)(1) and (b), was in the original “this title”, meaning title I of Pub. L. 115–25, which enacted this subchapter and amended provisions formerly set out as a note under section 313 of this title, which is now classified to section 8520 of this title. For complete classification of title I to the Code, see Tables.

The amendments made by this title, referred to in subsec. (b), mean the amendments made by title I of Pub. L. 115–25, which amended provisions formerly set out as a note under section 313 of this title and which is now classified to section 8520 of this title.

§ 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; and

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

(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.

¹ See References in Text note below.