

117TH CONGRESS
2D SESSION

H. R. 1437

IN THE SENATE OF THE UNITED STATES

MAY 12, 2022

Received

AN ACT

To amend the Weather Research and Forecasting Innovation Act of 2017 to direct the National Oceanic and Atmospheric Administration to provide comprehensive and regularly updated Federal precipitation information, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

1 **SECTION 1. SHORT TITLE.**

2 This Act may be cited as the “Providing Research
3 and Estimates of Changes In Precipitation Act” or the
4 “PRECIP Act”.

5 **SEC. 2. AMENDMENT TO THE WEATHER RESEARCH AND**
6 **FORECASTING INNOVATION ACT OF 2017 RE-**
7 **LATING TO IMPROVING FEDERAL PRECIPITA-**
8 **TION INFORMATION.**

9 (a) IN GENERAL.—The Weather Research and Fore-
10 casting Innovation Act of 2017 (15 U.S.C. 8501 et seq.)
11 is amended by adding at the end the following:

12 **“TITLE VI—IMPROVING FED-**
13 **ERAL PRECIPITATION INFOR-**
14 **MATION**

15 **“SEC. 601. STUDY ON PRECIPITATION ESTIMATION.**

16 “(a) IN GENERAL.—Not later than 90 days after the
17 date of enactment of the PRECIP Act, the Administrator,
18 in consultation with other Federal agencies as appropriate,
19 shall seek to enter an agreement with the National Acad-
20 emies—

21 “(1) to conduct a study on the state of practice
22 and research needs for precipitation estimation, in-
23 cluding probable maximum precipitation estimation;
24 and

25 “(2) to submit, not later than 24 months after
26 the date on which such agreement is finalized, to the

1 Committee on Science, Space, and Technology of the
2 House of Representatives and the Committee on
3 Commerce, Science, and Transportation of the Sen-
4 ate, and make publicly available on a website, a re-
5 port on the results of the study under paragraph
6 (1).

7 “(b) STUDY.—The report under subsection (a) shall
8 include the following:

9 “(1) An examination of the current state of
10 practice for precipitation estimation at scales appro-
11 priate for decisionmaker needs, and rationale for
12 further evolution of this field.

13 “(2) An evaluation of best practices for precipi-
14 tation estimation that are based on the best-avail-
15 able science, include assumptions of non-stationarity,
16 and can be utilized by the user community.

17 “(3) A framework for—

18 “(A) the development of a National Guid-
19 ance Document for estimating extreme precipi-
20 tation in future conditions; and

21 “(B) evaluation of the strengths and chal-
22 lenges of the full spectrum of approaches, in-
23 cluding for probable maximum precipitation
24 studies.

1 “(4) A description of existing research needs in
2 the field of precipitation estimation in order to mod-
3 ernize current methodologies and incorporate as-
4 sumptions of non-stationarity.

5 “(5) A description of in-situ, airborne, and
6 space-based observation requirements, that could en-
7 hance precipitation estimation and development of
8 models, including an examination of the use of geo-
9 graphic information systems and geospatial tech-
10 nology for integration, analysis, and visualization of
11 precipitation data.

12 “(6) A recommended plan for a Federal re-
13 search and development program, including speci-
14 fications for costs, timeframes, and responsible agen-
15 cies for addressing identified research needs.

16 “(7) An analysis of the respective roles in pre-
17 cipitation estimation of various Federal agencies,
18 academia, State, tribal, territorial, and local govern-
19 ments, and other public and private stakeholders.

20 “(8) Recommendations for data management to
21 promote long-term needs such as enabling retrospec-
22 tive analyses and data discoverability, interoper-
23 ability, and reuse.

8 “(11) Such other topics as the Administrator or
9 National Academies consider appropriate.

13 "SEC. 602. IMPROVING PROBABLE MAXIMUM PRECIPITA-
14 TION ESTIMATES.

“ (1) not later than 6 years after the completion
of such report and not less than every 10 years
thereafter, update probable maximum precipitation
estimates for the United States, such that each up-

1 date includes estimates that incorporate assumptions
2 of non-stationarity;

3 “(2) coordinate with partners to conduct re-
4 search in the field of extreme precipitation esti-
5 mation, in accordance with the research needs iden-
6 tified in such report;

7 “(3) make publicly available, in a searchable,
8 interoperable format, all probable maximum precipi-
9 tation studies developed by the National Oceanic and
10 Atmospheric Administration that the Administrator
11 has the legal right to redistribute and deemed to be
12 at an appropriate state of development on an inter-
13 net website of the National Oceanic and Atmos-
14 pheric Administration; and

15 “(4) ensure all probable maximum precipitation
16 estimate data, products, and supporting documenta-
17 tion and metadata developed by the National Oce-
18 anic and Atmospheric Administration are preserved,
19 curated, and served by the National Oceanic and At-
20 mospheric Administration, as appropriate.

21 “(b) NATIONAL GUIDANCE DOCUMENT FOR THE DE-
22 VELOPMENT OF PROBABLE MAXIMUM PRECIPITATION
23 ESTIMATES.—The Administrator, in collaboration with
24 Federal agencies, State, territorial, Tribal and local gov-
25 ernments, academia, and other partners the Administrator

1 deems appropriate, shall develop a National Guidance
2 Document that—

3 “(1) provides best practices that can be fol-
4 lowed by Federal and State regulatory agencies, pri-
5 vate meteorological consultants, and other users that
6 perform probable maximum precipitation studies;

7 “(2) considers the recommendations provided in
8 the National Academies study under section 601;

9 “(3) facilitates review of probable maximum
10 precipitation studies by regulatory agencies;

11 “(4) provides confidence in regional and site-
12 specific probable maximum precipitation estimates;
13 and

14 “(5) includes such other topics as the Adminis-
15 trator deems appropriate.

16 “(c) PUBLICATION.—Not later than 2 years after the
17 date on which the National Academies makes public the
18 report under section 601, the Administrator shall make
19 publicly available the National Guidance Document under
20 subsection (b) on an internet website of the National Oce-
21 anic and Atmospheric Administration.

22 “(d) UPDATES.—The Administrator shall update the
23 National Guidance Document not less than once every 10
24 years after the publication of the National Guidance Docu-

1 ment under subsection (c) and publish such updates in
2 accordance with such subsection.

3 “(e) AUTHORIZATION OF APPROPRIATIONS.—There
4 are authorized to be appropriated to the National Oceanic
5 and Atmospheric Administration to carry out this section:

6 “(1) \$13,000,000 for fiscal year 2022.

7 “(2) \$14,000,000 for fiscal year 2023.

8 “(3) \$14,000,000 for fiscal year 2024.

9 “(4) \$2,000,000 for fiscal year 2025.

10 “(5) \$2,000,000 for fiscal year 2026.

11 “(6) \$2,000,000 for fiscal year 2027.

12 **“SEC. 603. DEFINITIONS.**

13 “ In this title:

14 “(1) ADMINISTRATOR.—The term ‘Adminis-
15 trator’ means the Under Secretary of Commerce for
16 Oceans and Atmosphere and Administrator of the
17 National Oceanic and Atmospheric Administration.

18 “(2) NATIONAL ACADEMIES.—The term ‘Na-
19 tional Academies’ means the National Academies of
20 Sciences, Engineering, and Medicine.

21 “(3) UNITED STATES.—The term ‘United
22 States’ means, collectively, each State of the United
23 States, the District of Columbia, the Commonwealth
24 of Puerto Rico, American Samoa, Guam, the Com-
25 monwealth of the Northern Mariana Islands, the

1 Virgin Islands of the United States, and any other
2 territory or possession of the United States.”.

3 (b) CONFORMING AMENDMENT.—Section 1(b) of the
4 Weather Research and Forecasting Innovation Act of
5 2017 (15 U.S.C. 8501 note) is amended in the table of
6 contents by adding at the end the following:

“TITLE VI—IMPROVING FEDERAL PRECIPITATION INFORMATION

“Sec. 601. Study on precipitation estimation.

“Sec. 602. Improving probable maximum precipitation estimates.

“Sec. 603. Definitions.”.

Passed the House of Representatives May 11, 2022.

Attest: CHERYL L. JOHNSON,
Clerk.