

119TH CONGRESS  
1ST SESSION

# H. R. 4416

To establish in the National Oceanic and Atmospheric Administration a program to improve precipitation forecasts, and for other purposes.

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## IN THE HOUSE OF REPRESENTATIVES

JULY 15, 2025

Ms. ROSS (for herself and Mr. WEBER of Texas) introduced the following bill;  
which was referred to the Committee on Science, Space, and Technology

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## A BILL

To establish in the National Oceanic and Atmospheric Administration a program to improve precipitation forecasts, 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,*

3 **SECTION 1. ESTABLISHMENT OF NOAA PRECIPITATION**  
4 **FORECASTS PROGRAM.**

5 (a) ESTABLISHMENT.—There is established in the  
6 National Oceanic and Atmospheric Administration  
7 (NOAA) a program to improve precipitation forecasts (in  
8 this section referred to as the “program”).

9 (b) GOAL.—The goal of the program shall be to im-  
10 prove precipitation forecasts across all timescales through

1 the research, development, and operational implementa-  
2 tion of fully coupled Earth System Models. The program  
3 shall carry out the following:

4           (1) Improve the understanding and prediction  
5 of precipitation extremes from a wide variety of  
6 weather systems and climate patterns.

7           (2) Improve the development, production, man-  
8 agement, assimilation, integration, availability, and  
9 curation of datasets for precipitation prediction.

10           (3) Identify and improve observations and anal-  
11 yses necessary for precipitation prediction, including  
12 relating to water vapor, oceans, and boundary lay-  
13 ers.

14           (4) Utilize high performance computing and  
15 other technologies, as appropriate, to advance Earth  
16 System Models predictions skill of precipitation ex-  
17 treme phenomena, including atmospheric rivers,  
18 tropical cyclones, and winter storms across weather,  
19 subseasonal, and decadal timescales.

20           (5) Advance understanding and modeling of  
21 precipitation processes key to improving models and  
22 precipitation forecasts from weather to subseasonal-  
23 to-seasonal (S2S) to seasonal-to-decadal (S2D)  
24 timescales.

1           (6) Support research and development to im-  
2           prove the accuracy, reliability, and timeliness of pre-  
3           cipitation prediction, in collaboration with academic  
4           and private sector partners to test and evaluate  
5           emerging technologies, including the use of machine  
6           learning and artificial intelligence.

7           (7) Improve weather, subseasonal, seasonal, and  
8           decadal skill for precipitation forecasts through the  
9           use of emerging techniques and technologies.

10          (8) Support research in social and behavioral  
11          sciences to improve precipitation forecast products  
12          and communication, in collaboration with the Direc-  
13          tor of the National Weather Service.

14          (9) Lead the ongoing advancement of current  
15          and next-generation precipitation forecasting models.

16          (10) Identify observational gaps, systematic er-  
17          rors, and model limitations in precipitation pre-  
18          diction systems.

19          (11) Improve, expand, and sustain operational  
20          precipitation products and applications for decision  
21          support.

22          (12) Coordinate across NOAA line offices to ad-  
23          dress priorities of the program.

24          (13) Direct efforts to engage with Federal,  
25          State, local, Tribal, and academic entities and stake-

1 holders, as appropriate, when conducting program  
2 activities.

3 (14) Ensure adequate data management, ac-  
4 cess, and archive processes are in place to ensure  
5 data and metadata are findable, accessible, inter-  
6 operable, and usable by the science community and  
7 public.

8 (c) UPDATES.—The Administrator of NOAA shall re-  
9 vise and update, as necessary, the goals of the program  
10 at least once every two years. Such revisions and updates  
11 shall be incorporated into relevant NOAA strategic imple-  
12 mentation plans as determined appropriate by the Admin-  
13 istrator.

14 (d) AUTHORIZATION OF APPROPRIATIONS.—There is  
15 authorized to be appropriated to the National Oceanic and  
16 Atmospheric Administration to carry out this section the  
17 following:

18 (1) \$15,000,000 for fiscal year 2026.

19 (2) \$15,040,000 for fiscal year 2027.

20 (3) \$15,080,800 for fiscal year 2028.

21 (4) \$15,122,416 for fiscal year 2029.

22 (5) \$15,200,000 for fiscal year 2030.

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