

119TH CONGRESS
1ST SESSION

H. R. 4563

To require the National Oceanic and Atmospheric Administration to carry out research and development to improve the understanding of how the public receives, interprets, and responds to and values hurricane forecasts and warnings, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

JULY 21, 2025

Mr. FROST (for himself and Mr. WEBSTER of Florida) introduced the following bill; which was referred to the Committee on Science, Space, and Technology

A BILL

To require the National Oceanic and Atmospheric Administration to carry out research and development to improve the understanding of how the public receives, interprets, and responds to and values hurricane forecasts and warnings, 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. SHORT TITLE.**

4 This Act may be cited as the “Fixing Gaps in Hurri-
5 cane Preparedness Act”.

1 **SEC. 2. HURRICANE SOCIAL, BEHAVIORAL, AND ECONOMIC**
2 **SCIENCES.**

3 (a) IN GENERAL.—The Administrator of the Na-
4 tional Oceanic and Atmospheric Administration (in this
5 section referred to as the “Administrator”), in consulta-
6 tion with the Director of the National Science Foundation,
7 shall carry out research and development to improve the
8 understanding of how the public receives, interprets, and
9 responds to and values hurricane forecasts and warnings.

10 (b) RESEARCH AND DEVELOPMENT.—In conducting
11 the research and development in accordance with sub-
12 section (a), the Administrator shall—

13 (1) conduct a comprehensive review of what is
14 known about how the public receives, interprets, and
15 responds to and makes decisions regarding hurricane
16 forecasts and warnings, including—

17 (A) how the connections between weather
18 observations, downstream models, and processes
19 affect the decision tools or products derived
20 from such hurricane forecasts and warnings;

21 (B) how such hurricane forecasts and
22 warnings generated by decision tools and prod-
23 ucts are used by emergency managers, govern-
24 ments, and other users to benefit the public and
25 stakeholder groups;

1 (C) how past experiences with hurricanes
2 impacts decision making;

3 (D) how the source of such hurricane fore-
4 casts and warnings affects interpretation;

5 (E) how tropical cyclone warnings and
6 watches are received and interpreted;

7 (F) how understanding of and response to
8 such hurricane forecasts and warnings vary
9 across demographic groups, including the elder-
10 ly, people with disabilities, and other vulnerable
11 populations;

12 (G) language barriers; and

13 (H) how understanding and response to
14 such hurricane forecasts and warnings varies
15 across geographic areas, including rural, urban,
16 and suburban;

17 (2) identify data gaps based on the review con-
18 ducted pursuant to paragraph (1);

19 (3) taking into the account the data gaps iden-
20 tified pursuant to paragraph (2), carry out social
21 and behavioral research, including data collection, to
22 improve the understanding of how the public, includ-
23 ing vulnerable populations, receive, interpret, and re-
24 spond to hurricane forecasts and warnings and to in-

1 form evidence-based updates to existing hurricane
2 forecasts and warnings;

3 (4) carry out research, including data collection,
4 to evaluate and quantify the economic value of ex-
5 tending lead times of tropical cyclone warnings and
6 watches, including to vulnerable populations;

7 (5) identify affected populations and gather
8 data to conduct baseline assessments;

9 (6) conduct retrospective assessments of pre-
10 vious hurricane forecasts and warnings and improve-
11 ments to better understand the key components of
12 the value of the forecasts and warnings provided;

13 (7) conduct ex ante assessments based on po-
14 tential forecasts and warnings improvements and ex-
15 pected actions or behavior changes;

16 (8) conduct cost benefit analysis of forecasts
17 and warnings improvement alternatives;

18 (9) conduct risk assessments for pre-, during,
19 and post-storm periods in regions and communities
20 with significant elderly populations, including retire-
21 ment communities;

22 (10) establish policies and procedures for the
23 collection, archiving, and stewardship of data on
24 community response, including the response of vul-

1 nerable populations, to high-impact tropical systems;
2 and

3 (11) integrate and consider research and devel-
4 opment described in this subsection in the develop-
5 ment or enhancement of hurricane products, infor-
6 mation, and services.

7 (c) PILOT STUDY.—

8 (1) IN GENERAL.—Not later than 180 days, the
9 Administrator shall seek to enter into an agreement
10 with an appropriate entity, as determined by the Ad-
11 ministrator, to conduct a pilot study using a mixed
12 methods approach, such as surveys, focus groups,
13 and interviews, to gather information from hurricane
14 prone population areas regarding their levels of pre-
15 paredness for hurricanes. The surveys shall evaluate
16 the following:

17 (A) Possession of disaster supplies.

18 (B) Evacuation decisions.

19 (C) Levels of trust of tropical cyclone in-
20 formation from various sources.

21 (D) Access to tropical cyclone warnings in
22 a survey participant's first language.

23 (E) Determination regarding a survey par-
24 ticipant's reasoning that may hinder the ability

1 of such a participant to evacuate or willingness
2 to evacuate.

3 (F) Any additional information the Admin-
4 istrator determines necessary.

5 (2) ADDITIONAL CRITERIA.—The pilot study
6 described in paragraph (1) shall define its method-
7 ology and be made publicly available on a website of
8 the National Oceanic and Atmospheric Administra-
9 tion.

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