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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

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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.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the ''Fixing Gaps in Hurricane Preparedness Act''.

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

(a) IN GENERAL.—The Administrator of the National Oceanic and Atmospheric Administration (in this section referred to as the ''Administrator''), in consultation with the Director of the National Science Foundation, shall carry out research and development to improve the understanding of how the public receives, interprets, and responds to and values hurricane forecasts and warnings.

(b) RESEARCH AND DEVELOPMENT.—In conducting the research and development in accordance with subsection (a), the Administrator shall—

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

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

(B) how such hurricane forecasts and warnings generated by decision tools and products are used by emergency managers, governments, and other users to benefit the public and stakeholder groups;

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

(D) how the source of such hurricane forecasts and warnings affects interpretation;

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

(F) how understanding of and response to such hurricane forecasts and warnings vary across demographic groups, including the elderly, people with disabilities, and other vulnerable populations;

(G) language barriers; and

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

(2) identify data gaps based on the review conducted pursuant to paragraph (1);

(3) taking into the account the data gaps identified pursuant to paragraph (2), carry out social and behavioral research, including data collection, to improve the understanding of how the public, including vulnerable populations, receive, interpret, and respond to hurricane forecasts and warnings and to in-

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

(4) carry out research, including data collection, to evaluate and quantify the economic value of extending lead times of tropical cyclone warnings and watches, including to vulnerable populations;

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

(6) conduct retrospective assessments of previous hurricane forecasts and warnings and improvements to better understand the key components of the value of the forecasts and warnings provided;

(7) conduct ex ante assessments based on potential forecasts and warnings improvements and expected actions or behavior changes;

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

(9) conduct risk assessments for pre-, during, and post-storm periods in regions and communities with significant elderly populations, including retirement communities;

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

nerable populations, to high-impact tropical systems; and

(11) integrate and consider research and development described in this subsection in the development or enhancement of hurricane products, information, and services.

(c) PILOT STUDY.—

(1) IN GENERAL.—Not later than 180 days, the Administrator shall seek to enter into an agreement with an appropriate entity, as determined by the Administrator, to conduct a pilot study using a mixed methods approach, such as surveys, focus groups, and interviews, to gather information from hurricane prone population areas regarding their levels of preparedness for hurricanes. The surveys shall evaluate the following:

(A) Possession of disaster supplies.

(B) Evacuation decisions.

(C) Levels of trust of tropical cyclone information from various sources.

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

(E) Determination regarding a survey participant's reasoning that may hinder the ability

of such a participant to evacuate or willingness to evacuate.

(F) Any additional information the Administrator determines necessary.

(2) ADDITIONAL CRITERIA.—The pilot study described in paragraph (1) shall define its methodology and be made publicly available on a website of the National Oceanic and Atmospheric Administration.

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