

119TH CONGRESS
1ST SESSION

H. R. 4073

To reauthorize the Tsunami Warning and Education Act, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

JUNE 23, 2025

Ms. BONAMICI (for herself and Mr. ISSA) introduced the following bill; which was referred to the Committee on Science, Space, and Technology, and in addition to the Committee on Transportation and Infrastructure, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

A BILL

To reauthorize the Tsunami Warning and Education Act,
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 “Tsunami Warning, Re-
5 search, and Education Act of 2025”.

1 **SEC. 2. TSUNAMI WARNING AND EDUCATION ACT REAU-**
2 **THORIZATION.**

3 (a) **TITLE HEADING.**—The Tsunami Warning and
4 Education Act (enacted as title VIII of the Magnuson-Ste-
5 vens Fishery Conservation and Management Reauthoriza-
6 tion Act of 2006 (Public Law 109–479)) is amended, in
7 the title heading, by inserting “**RESEARCH,**” after
8 “**WARNING,**”;

9 (b) **PURPOSES.**—Section 803 of the Tsunami Warn-
10 ing and Education Act (33 U.S.C. 3202) is amended—

11 (1) in paragraph (2), by inserting “timeliness
12 and” before “accuracy”;

13 (2) in paragraph (7), by striking “and” after
14 the semicolon;

15 (3) in paragraph (8), by striking the period and
16 inserting “; and”; and

17 (4) by adding at the end the following new
18 paragraph:

19 “(9) to ensure data and metadata are managed,
20 archived, and made fully available for operations, re-
21 search, education, and mitigation activities.”.

22 (c) **TSUNAMI FORECASTING AND WARNING PRO-**
23 **GRAM.**—Section 804 of the Tsunami Warning and Edu-
24 cation Act (33 U.S.C. 3203) is amended—

25 (1) in subsection (b)—

(A) in paragraph (4), by inserting “, using industry and scientific best practices,” after “operational condition”;

(B) in paragraph (5)—

(i) in subparagraph (C), by striking “global seismic network” and inserting “Global Seismic Network”;

(ii) by redesignating subparagraphs (D), (E), (F), and (G), as subparagraphs (E), (F), (G), and (H), respectively; and

(iii) by inserting after subparagraph (C) the following new subparagraph:

“(D) the global navigation satellite system (GNSS) network;”;

(C) by amending paragraph (6) to read as follows:

“(6) ensure data quality and management systems, support data and metadata access and archiving, and support the requirements of the program pursuant to the Foundations for Evidence-Based Policymaking Act of 2018 (Public Law 115–435) and chapter 31 of title 44, United States Code;”;

(D) in paragraph (7)—

1 (i) by amending the matter preceding
2 subparagraph (A) to read as follows: “in-
3 clude a cooperative effort among the Ad-
4 ministration, the United States Geological
5 Survey (USGS), the National Aeronautics
6 and Space Administration (NASA), and
7 the National Science Foundation (NSF)
8 under which the Director of USGS, the Di-
9 rector of the NSF, and the Administrator
10 of NASA shall—”;

11 (ii) in subparagraph (A), by striking
12 “and” at the end; and

13 (iii) by adding at the end the fol-
14 lowing new subparagraphs:

15 “(C) provide reliable and real-time support
16 for the GNSS network data streams from NSF,
17 NASA, and USGS maintained networks, and
18 supplement instrumentation coverage for rapid
19 earthquake assessment;

20 “(D) assess the data and information re-
21 lating to warning systems of collaborating agen-
22 cies for potential utilization in NOAA’s warning
23 system, taking into consideration advancements
24 in research and technology; and

1 “(E) incorporate, as practicable, tsunami
2 notifications and warnings in the USGS Earth-
3 quake Early Warning System;”;

4 (E) in paragraph (8)—

5 (i) by inserting “ and decision support
6 aides” after “graphical warning prod-
7 ucts,”; and

8 (ii) by inserting “-prone” after “tsu-
9 nami”;

10 (F) in paragraph (9), by striking “and”
11 after the semicolon;

12 (G) in paragraph (10), by striking the pe-
13 riod and inserting “; and”; and

14 (H) by adding at the end the following new
15 paragraph:

16 “(11) update tsunami inundation maps, models,
17 or other geographic products, in order to best sup-
18 port, as appropriate, relevant agencies with tsunami
19 mitigation and recovery activities.”;

20 (2) in subsection (c)—

21 (A) by striking paragraph (1) and redesign-
22 ating paragraphs (2) and (3) as paragraphs
23 (1) and (2), respectively; and

24 (B) in paragraph (1), as so redesignated—

1 (i) by striking “the Atlantic Ocean,
2 including the Caribbean Sea and Gulf of
3 Mexico, that are determined—” and insert-
4 ing “the Pacific, Arctic, and Atlantic
5 Oceans, including the Caribbean Sea and
6 Gulf of Mexico, that are determined to
7 pose significant risks of tsunami for States
8 and United States territories along the
9 coastal areas of such regions; and”;

10 (ii) by striking subparagraphs (A) and
11 (B);

12 (3) by redesignating subsections (d), (e), (f),
13 and (g) as subsections (f), (g), (h), and (i), respec-
14 tively;

15 (4) by inserting after subsection (c) the fol-
16 lowing new subsections:

17 “(d) TSUNAMI WARNING ALERT LEVEL EVALUA-
18 TION.—The Administrator, in collaboration with social sci-
19 entists, emergency personnel, and high-risk communities,
20 shall—

21 “(1) evaluate tsunami alert levels terminology,
22 timing, and effectiveness;

23 “(2) determine if such alerts produce the de-
24 sired response and understanding from possible tsu-
25 nami-prone communities; and

1 “(3) if necessary, update the alert level system
2 for increased effectiveness.

3 “(e) REVIEW OF NOAA WEATHER RADIO COV-
4 ERAGE.—The Administrator shall—

5 “(1) conduct a review of the extent to which
6 NOAA Weather Radio coverage extends to populated
7 areas at risk of tsunami; and

8 “(2) make the results of such review available
9 to the public.”;

10 (5) in subsection (f), as so redesignated—

11 (A) in paragraph (1)—

12 (i) in the matter preceding subpara-
13 graph (A), by inserting “responsible for
14 Alaska, the continental United States, Ha-
15 waii, United States territories, and inter-
16 national entities the Administrator deter-
17 mines appropriate” before the period;

18 (ii) in subparagraph (A), by striking
19 “which is primarily responsible for Alaska
20 and the continental United States”; and

21 (iii) in subparagraph (B), by striking
22 “which is primarily responsible for Hawaii,
23 the Caribbean, and other areas of the Pa-
24 cific not covered by the National Center”;

25 (B) in paragraph (2)—

1 (i) in subparagraph (A), by inserting
2 “current,” after “sea level,”;

3 (ii) in subparagraph (B), by striking
4 “and volcanic eruptions” and inserting
5 “volcanic eruptions, or other sources”;

6 (iii) in subparagraph (C), by striking
7 “buoy data and tidal” and inserting “and
8 coastal”;

9 (iv) in subparagraph (E), by striking
10 “Integrated Ocean Observing System of
11 the Administration” and inserting “United
12 States and global ocean and coastal observ-
13 ing system”;

14 (v) in subparagraph (H), by inserting
15 “monitoring needs,” after “response,”; and

16 (vi) by amending subparagraph (I) to
17 read as follows:

18 “(I) Providing a Tsunami Warning Coordi-
19 nator to coordinate with partners and stake-
20 holders products and services of the centers
21 supported or maintained under paragraph (1).”;

22 (C) by amending paragraph (3) to read as
23 follows:

24 “(3) FAIL-SAFE WARNING CAPABILITY.—The
25 Administrator shall support and maintain fail-safe

1 warning capability for the tsunami warning centers
2 supported or maintained under paragraph (1), and
3 such centers shall conduct at least one service back
4 up drill biannually.”;

5 (D) in paragraph (4)—

6 (i) by amending the matter preceding
7 subparagraph (A) to read as follows: “The
8 Administrator shall coordinate with the
9 weather forecast offices of the National
10 Weather Service, the centers supported or
11 maintained under paragraph (1), and such
12 national and regional program offices of
13 the Administration as the Administrator or
14 the coordinating committee, as established
15 in section 805(b), consider appropriate to
16 ensure that regional and local weather
17 forecast offices—”;

18 (ii) in subparagraph (B), by striking
19 “and” after the semicolon;

20 (iii) in subparagraph (C), by striking
21 the period and inserting “; and”; and

22 (iv) by adding at the end the following
23 new subparagraph:

1 “(D) conduct education and outreach ef-
2 forts to help prepare coastal communities for
3 tsunami hazards.”; and

4 (E) in paragraph (5)—

5 (i) in the section heading, by striking
6 “UNIFORM” and inserting “STANDARD-
7 IZED”;

8 (ii) in subparagraph (A), by striking
9 “uniform” and inserting “standardized”;

10 and

11 (iii) in subparagraph (C)(ii), by strik-
12 ing “uniform” and inserting “standard-
13 ized”; and

14 (F) by adding at the end the following new
15 paragraph:

16 “(7) REPORTING.—Not later than 180 days
17 after the date of the enactment of this paragraph
18 and annually thereafter until such time as all rel-
19 evant requirements have been satisfied, the Adminis-
20 trator shall provide to the Committee on Science,
21 Space, and Technology of the House of Representa-
22 tives and the Committee on Commerce, Science, and
23 Transportation of the Senate an update briefing on
24 the progress of the following:

1 “(A) Standardizing products and proce-
2 dures under paragraph (5), including tsunami
3 assessments, forecast guidance, and related
4 products.

5 “(B) Migrating the message generation
6 systems of the centers supported or maintained
7 under paragraph (1) to the Advanced Weather
8 Information Processing Systems, or successor
9 systems.

10 “(C) The structural reorganization effort,
11 if necessary, to align such centers’ organiza-
12 tional charts.

13 “(D) The expected timeline for the full
14 completion of standardizing such centers’ prod-
15 ucts and procedures.”;

16 (6) in subsection (g), as so redesignated—

17 (A) in paragraph (1)—

18 (i) in the matter preceding subpara-
19 graph (A), by inserting “detect, measure,
20 and” after “used to”;

21 (ii) in subparagraph (B), by striking
22 “and” after the semicolon;

23 (iii) in subparagraph (C), by striking
24 “and the Advanced National Seismic Sys-
25 tem” and inserting “the Advanced Na-

1 tional Seismic System, and the global navi-
2 gation satellite system (GNSS); and”; and

3 (iv) by adding at the end the following
4 new subparagraph:

5 “(D) ensure research is coordinated with
6 tsunami warning operations;”; and

7 (B) in paragraph (3), by inserting “in ac-
8 cordance with industry best practices” before
9 the period;

10 (7) in subsection (i)(2)(A), as so redesignated,
11 by striking “accuracy of the tsunami model used”
12 and inserting “timeliness and accuracy of the fore-
13 cast used to issue the warning”; and

14 (8) by adding at the end the following new sub-
15 section:

16 “(j) USE OF IPAWS TO DELIVER TSUNAMI
17 ALERTS.—The Administrator, in consultation with the
18 Administrator of the Federal Emergency Management
19 Agency and the Federal Communications Commission,
20 shall clarify and document the responsibilities and deci-
21 sion-making process of the National Oceanic and Atmos-
22 pheric Administration, Federal Emergency Management
23 Agency, and the Federal Communications Commission
24 with respect to the use of the Integrated Public Alert and

1 Warning System to deliver tsunami alerts to the Emer-
2 gency Alert System.”.

3 (d) NATIONAL TSUNAMI HAZARD MITIGATION PRO-
4 GRAM.—Section 805(c) of the Tsunami Warning and Edu-
5 cation Act (33 U.S.C. 3204(c)) is amended—

6 (1) in paragraph (5)—

7 (A) by redesignating subparagraphs (B),
8 (C), (D), (E), (F), and (G) as subparagraphs
9 (C), (D), (E), (F), (G), and (H), respectively;

10 (B) by inserting after subparagraph (A)
11 the following new subparagraph:

12 “(B) Coastal digital elevation models
13 (DEMs) to support the development of inunda-
14 tion maps.”; and

15 (C) by adding at the end the following new
16 subparagraphs:

17 “(I) Evaluation of the variation of inunda-
18 tion impact resulting from tsunami-driven sedi-
19 ment transport.

20 “(J) Evaluation of tsunami debris impact
21 on critical infrastructure (as such term is de-
22 fined in section 1016(e) of Public Law 107–56
23 (42 U.S.C. 5195c(e))) and lifelines.

24 “(K) High-resolution and high-quality dig-
25 ital elevation models needed for at-risk coast-

1 lines, ports, and harbors, particularly for re-
2 gions not covered by existing inundation
3 maps.”; and

4 (2) in paragraph (7)(C), by inserting “and be-
5 havioral” after “social”;

6 (e) TSUNAMI RESEARCH PROGRAM.—Section 806 of
7 the Tsunami Warning and Education Act (33 U.S.C.
8 3205) is amended—

9 (1) in subsection (a)—

10 (A) by striking “section 805(d)” and in-
11 serting “section 805(b)”;

12 (B) by inserting “and management” after
13 “data collection”;

14 (2) in subsection (b)—

15 (A) in paragraph (1), by inserting “deploy-
16 ment and” after “may include”;

17 (B) in paragraph (3), by striking “social
18 science research” and inserting “social and be-
19 havioral science research, including data collec-
20 tion,”;

21 (C) in paragraph (4), by striking “and”
22 after the semicolon;

23 (D) by redesignating paragraph (5) as
24 paragraph (8); and

1 (E) by inserting after paragraph (4) the
2 following new paragraphs:

3 “(5) develop and maintain a data portal for ad-
4 vancing research and model development;

5 “(6) develop decision support tools;

6 “(7) leverage and prioritize research opportuni-
7 ties; and”; and

8 (3) by adding at the end the following new sub-
9 section:

10 “(c) RESEARCH AND DEVELOPMENT PLAN.—Not
11 later than 12 months after the date of the enactment of
12 this subsection and not less frequently than every 36
13 months thereafter, the Administrator, in consultation with
14 the Interagency Council for Advancing Meteorological
15 Services, shall develop a research and development, and
16 research to operations, plan to improve tsunami detection
17 and forecasting capabilities that—

18 “(1) identifies and prioritizes research and de-
19 velopment priorities to satisfy section 804;

20 “(2) identifies key research needs for better de-
21 tecting tsunamis that may occur in open ocean and
22 along the coastlines of the United States and its ter-
23 ritories, improve forecasting of tsunamis that are
24 not seismically driven, and other opportunities deter-
25 mined appropriate;

1 “(3) develops plans for transitioning research to
2 operations; and

3 “(4) identifies collaboration opportunities that
4 may further and align tsunami research, develop-
5 ment, warnings, and operations between the centers
6 supported or maintained under section 804, the Na-
7 tional Tsunami Hazard Mitigation Program, the Na-
8 tional Oceanic and Atmospheric Administration Cen-
9 ter for Tsunami Research, the National Science
10 Foundation, the United States Geological Survey,
11 the Federal Emergency Management Agency, insti-
12 tutions of higher education, private entities, stake-
13 holders, and others determined appropriate.”;

14 (f) GLOBAL TSUNAMI WARNING AND MITIGATION
15 NETWORK.—Section 807(d) of the Tsunami Warning and
16 Education Act (33 U.S.C. 3206(d)) is amended by insert-
17 ing “and management” after “data sharing”;

18 (g) TSUNAMI SCIENCE AND TECHNOLOGY ADVISORY
19 PANEL.—Section 808(b)(1) of the Tsunami Warning and
20 Education Act (33 U.S.C. 3206a(b)(1)) is amended by in-
21 serting “and behavioral” after “social”;

22 (h) AUTHORIZATION OF APPROPRIATIONS.—Section
23 809 of the Tsunami Warning and Education Act (33
24 U.S.C. 3207) is amended to read as follows:

1 **“SEC. 808. AUTHORIZATION OF APPROPRIATIONS.**

2 “There are authorized to be appropriated to the Ad-
3 ministrator to carry out this title \$32,000,000 for each
4 of fiscal years 2026 through 2030, of which—

5 “(1) not less than 27 percent of the amount ap-
6 propriated for each fiscal year shall be for activities
7 conducted at the State level under the national tsu-
8 nami hazard mitigation program under section 805;
9 and

10 “(2) not less than eight percent of the amount
11 appropriated shall be for the tsunami research pro-
12 gram under section 806.”.

○