114TH CONGRESS 1ST SESSION H.R.34

# **AN ACT**

- To authorize and strengthen the tsunami detection, forecast, warning, research, and mitigation program of the National Oceanic and Atmospheric Administration, 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 "Tsunami Warning,3 Education, and Research Act of 2015".

# 4 SEC. 2. REFERENCES TO THE TSUNAMI WARNING AND EDU-

# 5 CATION ACT.

6 Except as otherwise expressly provided, whenever in 7 this Act an amendment or repeal is expressed in terms 8 of an amendment to, or repeal of, a section or other provi-9 sion, the reference shall be considered to be made to a 10 section or other provision of the Tsunami Warning and 11 Education Act (33 U.S.C. 3201 et seq.).

# 12 SEC. 3. EXPANSION OF PURPOSES OF TSUNAMI WARNING 13 AND EDUCATION ACT.

14 Section 3 (33 U.S.C. 3202) is amended—

15 (1) in paragraph (1), by inserting "research,"
16 after "warnings,";

17 (2) by amending paragraph (2) to read as fol-18 lows:

"(2) to enhance and modernize the existing
United States Tsunami Warning System to increase
the accuracy of forecasts and warnings, to maintain
full coverage of tsunami detection assets, and to reduce false alarms;";

24 (3) by amending paragraph (3) to read as fol-25 lows:

| 1  | "(3) to improve and develop standards and                   |
|----|---|
| 2  | guidelines for mapping, modeling, and assessment            |
| 3  | efforts to improve tsunami detection, forecasting,          |
| 4  | warnings, notification, mitigation, resiliency, re-         |
| 5  | sponse, outreach, and recovery;";                           |
| 6  | (4) by redesignating paragraphs $(4)$ , $(5)$ , and         |
| 7  | (6) as paragraphs $(5)$ , $(6)$ , and $(8)$ , respectively; |
| 8  | (5) by inserting after paragraph $(3)$ the fol-             |
| 9  | lowing:   |
| 10 | "(4) to improve research efforts related to im-             |
| 11 | proving tsunami detection, forecasting, warnings, no-       |
| 12 | tification, mitigation, resiliency, response, outreach,     |
| 13 | and recovery;";   |
| 14 | (6) in paragraph $(5)$ , as so redesignated—                |
| 15 | (A) by striking "and increase" and insert-                  |
| 16 | ing ", increase, and develop uniform standards              |
| 17 | and guidelines for"; and                                    |
| 18 | (B) by inserting ", including the warning                   |
| 19 | signs of locally generated tsunami" after "ap-              |
| 20 | proaching";   |
| 21 | (7) in paragraph $(6)$ , as so redesignated, by             |
| 22 | striking ", including the Indian Ocean; and" and in-        |
| 23 | serting a semicolon; and                                    |
| 24 | (8) by inserting after paragraph (6), as so re-             |
| 25 | designated, the following:                                  |

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| 1  | ((7) to foster resilient communities in the face        |
| 2  | of tsunami and other coastal hazards; and".             |
| 3  | SEC. 4. MODIFICATION OF TSUNAMI FORECASTING AND         |
| 4  | WARNING PROGRAM.  |
| 5  | (a) IN GENERAL.—Subsection (a) of section 4 (33         |
| 6  | U.S.C. 3203) is amended by striking "Atlantic Ocean,    |
| 7  | Caribbean Sea, and Gulf of Mexico region" and inserting |
| 8  | "Atlantic Ocean region, including the Caribbean Sea and |
| 9  | the Gulf of Mexico".                                    |
| 10 | (b) Components.—Subsection (b) of such section 4        |
| 11 | is amended—   |
| 12 | (1) in paragraph (1), by striking "established"         |
| 13 | and inserting "supported or maintained";                |
| 14 | (2) in paragraph $(4)$ , by inserting "and safe-        |
| 15 | guarding port and harbor operations" after "com-        |
| 16 | munities";  |
| 17 | (3) in paragraph $(7)$ —                                |
| 18 | (A) by inserting ", including graphical                 |
| 19 | warning products," after "warnings";                    |
| 20 | (B) by inserting ", territories," after                 |
| 21 | "States"; and   |
| 22 | (C) by inserting "and Wireless Emergency                |
| 23 | Alerts" after "Hazards Program"; and                    |
|    |   |

1 (4) in paragraph (8), by inserting "and com-2 mercial and Federal undersea communications ca-3 bles" after "observing technologies". 4 (c) TSUNAMI WARNING SYSTEM.—Subsection (c) of 5 such section 4 is amended to read as follows: "(c) TSUNAMI WARNING SYSTEM.—The program 6 7 under this section shall operate a tsunami warning system that-8 9 "(1) is capable of forecasting tsunami, includ-10 ing forecasting tsunami arrival time and inundation 11 estimates, anywhere in the Pacific and Arctic Ocean 12 regions and providing adequate warnings; 13 "(2) is capable of forecasting and providing 14 adequate warnings in areas of the Atlantic Ocean, 15 including the Caribbean Sea and Gulf of Mexico, that are determined— 16 17 "(A) to be geologically active, or to have 18 significant potential for geological activity; and "(B) to pose significant risks of tsunami 19 20 for States along the coastal areas of the Atlan-21 tic Ocean, Caribbean Sea, or Gulf of Mexico; 22 and "(3) supports other international tsunami fore-23 casting and warning efforts.". 24

| 1  | (d) TSUNAMI WARNING CENTERS.—Subsection (d)         |
|----|---|
| 2  | of such section 4 is amended to read as follows:    |
| 3  | "(d) TSUNAMI WARNING CENTERS.—                      |
| 4  | "(1) IN GENERAL.—The Administrator shall            |
| 5  | support or maintain centers to support the tsunami  |
| 6  | warning system required by subsection (c). The Cen- |
| 7  | ters shall include—                                 |
| 8  | "(A) the National Tsunami Warning Cen-              |
| 9  | ter, located in Alaska, which is primarily re-      |
| 10 | sponsible for Alaska and the continental United     |
| 11 | States;   |
| 12 | "(B) the Pacific Tsunami Warning Center,            |
| 13 | located in Hawaii, which is primarily respon-       |
| 14 | sible for Hawaii, the Caribbean, and other          |
| 15 | areas of the Pacific not covered by the National    |
| 16 | Center; and   |
| 17 | "(C) any additional forecast and warning            |
| 18 | centers determined by the National Weather          |
| 19 | Service to be necessary.                            |
| 20 | "(2) RESPONSIBILITIES.—The responsibilities         |
| 21 | of the centers supported or maintained pursuant to  |
| 22 | paragraph (1) shall include the following:          |
| 23 | "(A) Continuously monitoring data from              |
| 24 | seismological, deep ocean, coastal sea level, and   |

| 1  | tidal monitoring stations and other data sources  |
|----|---|
| 2  | as may be developed and deployed.                 |
| 3  | "(B) Evaluating earthquakes, landslides,          |
| 4  | and volcanic eruptions that have the potential    |
| 5  | to generate tsunami.                              |
| 6  | "(C) Evaluating deep ocean buoy data and          |
| 7  | tidal monitoring stations for indications of tsu- |
| 8  | nami resulting from earthquakes and other         |
| 9  | sources.  |
| 10 | "(D) To the extent practicable, utilizing a       |
| 11 | range of models to predict tsunami arrival        |
| 12 | times and flooding estimates.                     |
| 13 | "(E) Disseminating forecasts and tsunami          |
| 14 | warning bulletins to Federal, State, and local    |
| 15 | government officials and the public.              |
| 16 | "(F) Coordinating with the tsunami haz-           |
| 17 | ard mitigation program conducted under section    |
| 18 | 5 to ensure ongoing sharing of information be-    |
| 19 | tween forecasters and emergency management        |
| 20 | officials.  |
| 21 | "(G) Making data gathered under this Act          |
| 22 | and post-warning analyses conducted by the        |
| 23 | National Weather Service or other relevant Ad-    |
| 24 | ministration offices available to researchers.    |

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| 1  | "(3) FAIL-SAFE WARNING CAPABILITY.—The               |
|----|--|
| 2  | tsunami warning centers supported or maintained      |
| 3  | pursuant to paragraph (1) shall maintain a fail-safe |
| 4  | warning capability and ability to perform back-up    |
| 5  | duties for each other.                               |
| 6  | "(4) Coordination with National Weather              |
| 7  | SERVICE.—The National Weather Service shall co-      |
| 8  | ordinate with the centers supported or maintained    |
| 9  | pursuant to paragraph $(1)$ to ensure that regional  |
| 10 | and local forecast offices—                          |
| 11 | "(A) have the technical knowledge and ca-            |
| 12 | pability to disseminate tsunami warnings for         |
| 13 | the communities they serve; and                      |
| 14 | "(B) leverage connections with local emer-           |
| 15 | gency management officials for optimally dis-        |
| 16 | seminating tsunami warnings and forecasts.           |
| 17 | "(5) UNIFORM OPERATING PROCEDURES.—The               |
| 18 | Administrator shall—                                 |
| 19 | "(A) develop uniform operational proce-              |
| 20 | dures for the centers supported or maintained        |
| 21 | pursuant to paragraph (1), including the use of      |
| 22 | software applications, checklists, decision sup-     |
| 23 | port tools, and tsunami warning products that        |
| 24 | have been standardized across the program sup-       |
| 25 | ported under this section;                           |

| 1  | "(B) ensure that processes and products of               |
|----|--|
| 2  | the warning system operated pursuant to sub-             |
| 3  | section (c)—   |
| 4  | "(i) reflect industry best practices;                    |
| 5  | "(ii) conform to the maximum extent                      |
| 6  | practicable with internationally recognized              |
| 7  | standards for information technology; and                |
| 8  | "(iii) conform to the maximum extent                     |
| 9  | practicable with other warning products                  |
| 10 | and practices of the National Weather                    |
| 11 | Service;   |
| 12 | "(C) ensure that future adjustments to                   |
| 13 | operational protocols, processes, and warning            |
| 14 | products—  |
| 15 | "(i) are made consistently across the                    |
| 16 | warning system operated pursuant to sub-                 |
| 17 | section (c); and   |
| 18 | "(ii) are applied in a uniform manner                    |
| 19 | across such warning system; and                          |
| 20 | "(D) disseminate guidelines and metrics                  |
| 21 | for evaluating and improving tsunami forecast            |
| 22 | models.  |
| 23 | "(6) AVAILABLE RESOURCES.—The Adminis-                   |
| 24 | trator, through the National Weather Service, shall      |
| 25 | ensure that resources are available to fulfill the obli- |

gations of this Act. This includes ensuring super-1 2 computing resources are available to run such com-3 puter models as are needed for purposes of the tsu-4 nami warning system operated pursuant to sub-5 section (c).". 6 (e) TRANSFER OF TECHNOLOGY; MAINTENANCE AND 7 UPGRADES.—Subsection (e) of such section 4 is amended 8 to read as follows: "(e) Transfer of Technology; Maintenance 9 AND UPGRADES.—In carrying out this section, the Admin-10 11 istrator shall— 12 "(1) develop requirements for the equipment 13 used to forecast tsunami, including-14 "(A) provisions for multipurpose detection 15 platforms; "(B) reliability and performance metrics; 16 17 and 18 "(C) to the maximum extent practicable, 19 requirements for the integration of equipment 20 with other United States and global ocean and coastal observation systems, the global Earth 21 22 observing system of systems, the global seismic 23 networks, and the Advanced National Seismic

24 System;

| 1  | ((2) develop and execute a plan for the transfer          |
|----|---|
| 2  | of technology from ongoing research conducted as          |
| 3  | part of the program supported or maintained under         |
| 4  | section 6 into the program under this section; and        |
| 5  | "(3) ensure that the Administration's oper-               |
| 6  | ational tsunami detection equipment is properly           |
| 7  | maintained.".   |
| 8  | (f) FEDERAL COOPERATION.—Subsection (f) of such           |
| 9  | section 4 is amended to read as follows:                  |
| 10 | "(f) FEDERAL COOPERATION.—When deploying and              |
| 11 | maintaining tsunami detection technologies under the pro- |
| 12 | gram under this section, the Administrator shall—         |
| 13 | "(1) identify which assets of other Federal               |
| 14 | agencies are necessary to support such program; and       |
| 15 | "(2) work with each agency identified under               |
| 16 | paragraph (1)—  |
| 17 | "(A) to acquire the agency's assistance;                  |
| 18 | and   |
| 19 | "(B) to prioritize the necessary assets.".                |
| 20 | (g) UNNECESSARY PROVISIONS.—Such section 4 is             |
| 21 | further amended by striking subsections (g) through (k).  |

# 1SEC. 5. MODIFICATION OF NATIONAL TSUNAMI HAZARD2MITIGATION PROGRAM.

3 (a) IN GENERAL.—Section 5 (33 U.S.C. 3204) is
4 amended by striking subsections (a) through (d) and in5 serting the following:

6 "(a) PROGRAM REQUIRED.—The Administrator, in 7 consultation with the Administrator of the Federal Emer-8 gency Management Agency and the heads of such other 9 agencies as the Administrator considers relevant, shall 10 conduct a community-based tsunami hazard mitigation program to improve tsunami preparedness and resiliency 11 of at-risk areas in the United States and the territories 12 of the United States. 13

14 "(b) PROGRAM COMPONENTS.—The Program con-15 ducted pursuant to subsection (a) shall include the fol-16 lowing:

17 "(1) Technical and financial assistance to
18 coastal States, territories, tribes, and local govern19 ments to develop and implement activities under this
20 section.

21 "(2) Integration of tsunami preparedness and 22 mitigation programs into ongoing State-based haz-23 ard warning, resilience planning, and risk manage-24 ment activities, including predisaster planning, emer-25 gency response, evacuation planning, disaster recov-

|    | 10  |
|----|---|
| 1  | ery, hazard mitigation, and community development     |
| 2  | and redevelopment programs in affected areas.         |
| 3  | "(3) Activities to promote the adoption of tsu-       |
| 4  | nami resilience, preparedness, warning, and mitiga-   |
| 5  | tion measures by Federal, State, territorial, tribal, |
| 6  | and local governments and nongovernmental entities,   |
| 7  | including educational and risk communication pro-     |
| 8  | grams to discourage development in high-risk areas.   |
| 9  | "(4) Activities to support the development of         |
| 10 | regional tsunami hazard and risk assessments, using   |
| 11 | inundation models that meet programmatic stand-       |
| 12 | ards for accuracy. Such regional risk assessments     |
| 13 | may include the following:                            |
| 14 | "(A) The sources, sizes, and histories of             |
| 15 | tsunami in that region.                               |
| 16 | "(B) Inundation models and maps of crit-              |
| 17 | ical infrastructure and socioeconomic vulner-         |
| 18 | ability in areas subject to tsunami inundation.       |
| 19 | "(C) Maps of evacuation areas and evacu-              |
| 20 | ation routes.   |
| 21 | "(D) Evaluations of the size of populations           |
| 22 | that will require evacuation, including popu-         |
| 23 | lations with special evacuation needs.                |
| 24 | "(5) Activities to support the development of         |
| 25 | community-based outreach and education programs       |
|    |   |

| 1  | to ensure community readiness and resilience, in-      |
|----|--|
| 2  | cluding the following:                                 |
| 3  | "(A) The development, implementation,                  |
| 4  | and assessment of technical training and public        |
| 5  | education programs, including education pro-           |
| 6  | grams that address unique characteristics of           |
| 7  | distant and near-field tsunami.                        |
| 8  | "(B) The development of decision support               |
| 9  | tools.   |
| 10 | "(C) The incorporation of social science re-           |
| 11 | search into community readiness and resilience         |
| 12 | efforts.   |
| 13 | "(D) The development of evidence-based                 |
| 14 | education guidelines.                                  |
| 15 | "(6) Dissemination of guidelines and standards         |
| 16 | for community planning, education, and training        |
| 17 | products, programs, and tools, including standards     |
| 18 | for—   |
| 19 | "(A) mapping products;                                 |
| 20 | "(B) inundation models; and                            |
| 21 | "(C) effective emergency exercises.                    |
| 22 | "(c) AUTHORIZED ACTIVITIES.—In addition to activi-     |
| 23 | ties conducted under subsection (b), the program con-  |
| 24 | ducted pursuant to subsection (a) may include the fol- |
| 25 | lowing:  |

| 1  | "(1) Multidisciplinary vulnerability assessment      |
|----|--|
| 2  | research, education, and training to help integrate  |
| 3  | risk management and resilience objectives with com-  |
| 4  | munity development planning and policies.            |
| 5  | "(2) Risk management training for local offi-        |
| 6  | cials and community organizations to enhance un-     |
| 7  | derstanding and preparedness.                        |
| 8  | "(3) Development of practical applications for       |
| 9  | existing or emerging technologies, such as modeling, |
| 10 | remote sensing, geospatial technology, engineering,  |
| 11 | and observing systems.                               |
| 12 | "(4) Risk management, risk assessment, and           |
| 13 | resilience data and information services, including— |
| 14 | "(A) access to data and products derived             |
| 15 | from observing and detection systems; and            |
| 16 | "(B) development and maintenance of new              |
| 17 | integrated data products to support risk man-        |
| 18 | agement, risk assessment, and resilience pro-        |
| 19 | grams.   |
| 20 | "(5) Risk notification systems that coordinate       |
| 21 | with and build upon existing systems and actively    |
| 22 | engage decisionmakers, local and State government    |
| 23 | agencies, business communities, nongovernmental or-  |
| 24 | ganizations, and the media.                          |
| 25 | "(d) No Preemption.—                                 |

"(1) DESIGNATION OF AT-RISK AREAS.—The
 establishment of national standards for inundation
 models under this section shall not prevent States,
 territories, tribes, and local governments from desig nating additional areas as being at risk based on
 knowledge of local conditions.

7 "(2) NO NEW REGULATORY AUTHORITY.—
8 Nothing in this Act may be construed as estab9 lishing new regulatory authority for any Federal
10 agency.".

11 (b) REPORT ON ACCREDITATION OF TSUNAMIREADY 12 PROGRAM.—Not later than 180 days after the date of enactment of this Act, the Administrator of the National 13 14 Oceanic and Atmospheric Administration shall submit to 15 the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and 16 17 Technology of the House of Representatives a report on 18 which authorities and activities would be needed to have 19 the TsunamiReady program of the National Weather 20 Service accredited by the Emergency Management Accred-21 itation Program.

## 22 SEC. 6. MODIFICATION OF TSUNAMI RESEARCH PROGRAM.

23 Section 6 (33 U.S.C. 3205) is amended—

(1) in the matter before paragraph (1), bystriking "The Administrator shall" and all that fol-

lows through "establish or maintain" and inserting
 the following:

3 "(a) IN GENERAL.—The Administrator shall, in con-4 sultation with such other Federal agencies, State and ter-5 ritorial governments, and academic institutions as the Ad-6 ministrator considers appropriate, the coordinating com-7 mittee under section 11(b), and the panel under section 8 8(a), support or maintain";

9 (2) by striking "and assessment for tsunami 10 tracking and numerical forecast modeling. Such re-11 search program shall—" and inserting the following: 12 "assessment for tsunami tracking and numerical 13 forecast modeling, and standards development.

14 "(b) RESPONSIBILITIES.—The research program
15 supported or maintained pursuant to subsection (a)
16 shall—";

17 (3) in subsection (b), as designated by para-18 graph (2)—

19 (A) by amending paragraph (1) to read as20 follows:

21 "(1) consider other appropriate research to 22 mitigate the impact of tsunami, including the im-23 provement of near-field tsunami detection and fore-24 casting capabilities, which may include use of new 25 generation Deep-ocean Assessment and Reporting of

| 1  | Tsunamis and National Oceanic and Atmospheric              |
|----|--|
| 2  | Administration supercomputer capacity to develop a         |
| 3  | rapid tsunami forecast for all United States coast-        |
| 4  | lines;";   |
| 5  | (B) in paragraph (3)—                                      |
| 6  | (i) by striking "include" and inserting                    |
| 7  | "conduct"; and   |
| 8  | (ii) by striking "and" at the end;                         |
| 9  | (C) by redesignating paragraph $(4)$ as                    |
| 10 | paragraph (5); and   |
| 11 | (D) by inserting after paragraph $(3)$ the                 |
| 12 | following:   |
| 13 | "(4) develop the technical basis for validation of         |
| 14 | tsunami maps, numerical tsunami models, digital            |
| 15 | elevation models, and forecasts; and"; and                 |
| 16 | (4) by adding at the end the following:                    |
| 17 | "(c) PILOT PROJECT.—The Administrator may, pur-            |
| 18 | suant to subsection (b), develop a pilot project for near- |
| 19 | field tsunami forecast development for the Cascadia region |
| 20 | along the west coast of the United States using new gen-   |
| 21 | eration Deep-ocean Assessment and Reporting of             |
| 22 | Tsunamis, upcoming and existing cable networks, and new    |
| 23 | National Centers for Environmental Protection modeling     |
| 24 | capability.".  |

19

3 Section 7 (33 U.S.C. 3206) is amended—

4 (1) by amending subsection (a) to read as fol-5 lows:

"(a) 6 SUPPORT FOR DEVELOPMENT OF INTER-7 NATIONAL TSUNAMI WARNING SYSTEM.—The Adminis-8 trator shall, in coordination with the Secretary of State 9 and in consultation with such other agencies as the Administrator considers relevant, provide technical assistance 10 11 and training to the Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific, 12 13 and Cultural Organization, the World Meteorological Or-14 ganization of the United Nations, and such other international entities as the Administrator considers appro-15 16 priate, as part of the international efforts to develop a 17 fully functional global tsunami forecast and warning system comprised of regional tsunami warning networks."; 18 19 (2) in subsection (b), by striking "shall" and inserting "may"; and 20 21 (3) in subsection (c)— (A) in paragraph (1), by striking "estab-22 lishing" and inserting "supporting"; and 23 24 (B) in paragraph (2)— (i) by striking "establish" and insert-25 ing "support"; and 26

| 1  | (ii) by striking "establishing" and in-                   |
|----|---|
| 2  | serting "supporting".                                     |
| 3  | SEC. 8. TSUNAMI SCIENCE AND TECHNOLOGY ADVISORY           |
| 4  | PANEL.  |
| 5  | (a) IN GENERAL.—The Act is further amended—               |
| 6  | (1) by redesignating section 8 (33 U.S.C. 3207)           |
| 7  | as section 9; and   |
| 8  | (2) by inserting after section 7 (33 U.S.C.               |
| 9  | 3206) the following:                                      |
| 10 | "SEC. 8. TSUNAMI SCIENCE AND TECHNOLOGY ADVISORY          |
| 11 | PANEL.  |
| 12 | "(a) DESIGNATION.—The Administrator shall des-            |
| 13 | ignate an existing working group within the Science Advi- |
| 14 | sory Board of the Administration to serve as the Tsunami  |
| 15 | Science and Technology Advisory Panel to provide advice   |
| 16 | to the Administrator on matters regarding tsunami         |
| 17 | science, technology, and regional preparedness.           |
| 18 | "(b) Membership.—   |
| 19 | "(1) Composition.—The working group des-                  |
| 20 | ignated under subsection (a) shall be composed of no      |
| 21 | fewer than 7 members selected by the Administrator        |
| 22 | from among individuals from academia or State             |
| 23 | agencies who have academic or practical expertise in      |
| 24 | physical sciences, social sciences, information tech-     |
| 25 | nology, coastal resilience, emergency management,         |
|    |   |

| or such other disciplines as the Administrator con-<br>siders appropriate.<br>"(2) FEDERAL EMPLOYMENT.—No member of<br>the working group designated pursuant to subsection<br>(a) may be a Federal employee.<br>"(c) RESPONSIBILITIES.—Not less frequently than<br>once every 4 years, the working group designated under<br>subsection (a) shall—<br>"(1) review the activities of the Administration,<br>and other Federal activities as appropriate, relating<br>to tsunami research, detection, forecasting, warning,<br>mitigation, resiliency, and preparation; and |
|---|
| <ul> <li>"(2) FEDERAL EMPLOYMENT.—No member of the working group designated pursuant to subsection (a) may be a Federal employee.</li> <li>"(c) RESPONSIBILITIES.—Not less frequently than once every 4 years, the working group designated under subsection (a) shall— <ul> <li>"(1) review the activities of the Administration, and other Federal activities as appropriate, relating to tsunami research, detection, forecasting, warning,</li> </ul> </li> </ul>   |
| the working group designated pursuant to subsection<br>(a) may be a Federal employee.<br>"(c) RESPONSIBILITIES.—Not less frequently than<br>once every 4 years, the working group designated under<br>subsection (a) shall—<br>"(1) review the activities of the Administration,<br>and other Federal activities as appropriate, relating<br>to tsunami research, detection, forecasting, warning,  |
| <ul> <li>(a) may be a Federal employee.</li> <li>"(c) RESPONSIBILITIES.—Not less frequently than once every 4 years, the working group designated under subsection (a) shall—</li> <li>"(1) review the activities of the Administration, and other Federal activities as appropriate, relating to tsunami research, detection, forecasting, warning,</li> </ul>   |
| <ul> <li>"(c) RESPONSIBILITIES.—Not less frequently than once every 4 years, the working group designated under subsection (a) shall—</li> <li>"(1) review the activities of the Administration, and other Federal activities as appropriate, relating to tsunami research, detection, forecasting, warning,</li> </ul>   |
| once every 4 years, the working group designated under<br>subsection (a) shall—<br>"(1) review the activities of the Administration,<br>and other Federal activities as appropriate, relating<br>to tsunami research, detection, forecasting, warning,  |
| subsection (a) shall—<br>"(1) review the activities of the Administration,<br>and other Federal activities as appropriate, relating<br>to tsunami research, detection, forecasting, warning,  |
| "(1) review the activities of the Administration,<br>and other Federal activities as appropriate, relating<br>to tsunami research, detection, forecasting, warning,   |
| and other Federal activities as appropriate, relating<br>to tsunami research, detection, forecasting, warning,  |
| to tsunami research, detection, forecasting, warning,   |
|   |
| mitigation, resiliency, and preparation; and  |
|   |
| "(2) submit to the Administrator and such oth-  |
| ers as the Administrator considers appropriate—   |
| "(A) the findings of the working group  |
| with respect to the most recent review con-   |
| ducted pursuant to paragraph (1); and   |
| "(B) such recommendations for legislative   |
| or administrative action as the working group   |
| considers appropriate to improve Federal tsu-   |
| nami research, detection, forecasting, warning,   |
|   |
| mitigation, resiliency, and preparation.  |
| mitigation, resiliency, and preparation.<br>"(d) REPORTS TO CONGRESS.—Not less frequently   |
|   |
|   |

tation of the Senate, and the Committee on Science,
 Space, and Technology of the House of Representatives
 a report on the findings and recommendations received by
 the Administrator under subsection (c)(2).".

# 5 SEC. 9. REPORT ON IMPLEMENTATION OF TSUNAMI WARN6 ING AND EDUCATION ACT.

7 (a) IN GENERAL.—Not later than 1 year after the
8 date of the enactment of this Act, the Administrator shall
9 submit to Congress a report on the implementation of the
10 Tsunami Warning and Education Act (33 U.S.C. 3201 et
11 seq.).

12 (b) ELEMENTS.—The report required by subsection13 (a) shall include the following:

14 (1) A detailed description of the progress made 15 implementing sections 4(d)(6), 5(b)(6), in and 16 6(b)(4) of the Tsunami Warning and Education Act. 17 (2) A description of the ways that tsunami 18 warnings and warning products issued by the Tsu-19 nami Forecasting and Warning Program established 20 under section 4 of the Tsunami Warning and Edu-21 cation Act (33 U.S.C. 3203) can be standardized 22 and streamlined with warnings and warning prod-23 ucts for hurricanes, coastal storms, and other coast-24 al flooding events.

### 1 SEC. 10. AUTHORIZATION OF APPROPRIATIONS.

2 Section 9 of the Act, as redesignated by section
3 8(a)(1) of this Act, is amended to read as follows:

### 4 "SEC. 9. AUTHORIZATION OF APPROPRIATIONS.

5 "There are authorized to be appropriated to the Ad6 ministrator to carry out this Act \$27,000,000 for each of
7 fiscal years 2015 through 2017, of which—

8 "(1) not less than 27 percent of the amount ap-9 propriated for each fiscal year shall be for activities 10 under the National Tsunami Hazard Mitigation Pro-11 gram under section 5; and

"(2) not less than 8 percent of the amount appropriated for each fiscal year shall be for the Tsunami Research Program under section 6.".

### 15 SEC. 11. OUTREACH RESPONSIBILITIES.

(a) IN GENERAL.—The Administrator of the National Oceanic and Atmospheric Administration, in coordination with State and local emergency managers, shall develop and carry out formal outreach activities to improve
tsunami education and awareness and foster the development of resilient communities. Outreach activities may include—

(1) the development of outreach plans to ensure
the close integration of tsunami warning centers
supported or maintained pursuant to section 4(d) of
the Tsunami Warning and Education Act (33
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U.S.C. 3203(d)) with local Weather Forecast Offices
 of the National Weather Service and emergency
 managers;

4 (2) working with appropriate local Weather
5 Forecast Offices to ensure they have the technical
6 knowledge and capability to disseminate tsunami
7 warnings to the communities they serve; and

8 (3) evaluating the effectiveness of warnings and
9 of coordination with local Weather Forecast Offices
10 after significant tsunami events.

11 (b) COORDINATING COMMITTEE OF THE NATIONAL12 TSUNAMI HAZARD MITIGATION PROGRAM.—

(1) IN GENERAL.—The Administrator shall convene a coordinating committee to assist the Administrator in the conduct of the program required by
section 5(a) of the Tsunami Warning and Education
Act (33 U.S.C. 3204(a)).

(2) COMPOSITION.—The coordinating committee shall be composed of members from each of
the States at risk from tsunami, and any other such
representatives as the Administrator considers appropriate to represent Federal, State, tribal, territorial, and local governments.

| 1  | (3) SUBCOMMITTEES.—The Administrator may          |
|----|---|
| 2  | approve the formation of subcommittees to address |
| 3  | specific program components or regional issues.   |
| 4  | (4) RESPONSIBILITIES.—The coordinating com-       |
| 5  | mittee shall—                                     |
| 6  | (A) provide feedback on how funds should          |
| 7  | be prioritized to carry out the program required  |
| 8  | by section 5(a) of the Tsunami Warning and        |
| 9  | Education Act (33 U.S.C. 3204(a));                |
| 10 | (B) ensure that areas described in section        |
| 11 | 4(c) of the Tsunami Warning and Education         |
| 12 | Act (33 U.S.C. 3203(c)) in the United States      |
| 13 | and its territories have the opportunity to par-  |
| 14 | ticipate in the program;                          |
| 15 | (C) provide recommendations to the Ad-            |
| 16 | ministrator on how to improve and continuously    |
| 17 | advance the TsunamiReady program, particu-        |
| 18 | larly on ways to make communities more tsu-       |
| 19 | nami resilient through the use of inundation      |
| 20 | maps and models and other hazard mitigation       |
| 21 | practices; and                                    |
| 22 | (D) ensure that all components of the pro-        |
| 23 | gram required by section 5(a) of the Tsunami      |
| 24 | Warning and Education Act (33 U.S.C.              |
| 25 | 3204(a)) are integrated with ongoing State-       |

| 1 | based hazard warning, risk management, and |
|---|--|
| 2 | resilience activities, including—          |
| 3 | (i) integrating activities with emer-      |
| 4 | gency response plans, disaster recovery,   |
| 5 | hazard mitigation, and community develop-  |
| 6 | ment programs in affected areas; and       |
| 7 | (ii) integrating information to assist     |
| 8 | in tsunami evacuation route planning.      |
|   |  |

Passed the House of Representatives January 7, 2015.

Attest:

Clerk.

# 114TH CONGRESS H. R. 34

# AN ACT

To authorize and strengthen the tsunami detection, forecast, warning, research, and mitigation program of the National Oceanic and Atmospheric Administration, and for other purposes.