AMENDMENT NO._______  Calendar No._____

Purpose: In the nature of a substitute.

IN THE SENATE OF THE UNITED STATES—114th Cong., 1st Sess.

H.R. 34

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

Referred to the Committee on __________________ and ordered to be printed

Ordered to lie on the table and to be printed

AMENDMENT intended to be proposed by Ms. CANTWELL
(for herself, Mr. SULLIVAN, and Mr. SCHATZ)

Viz:

1 Strike all after the enacting clause and insert the fol-

lowing:

3 SECTION 1. SHORT TITLE.

4 This Act may be cited as the “Tsunami Warning,

5 Education, and Research Act of 2015”.

6 SEC. 2. REFERENCES TO THE TSUNAMI WARNING AND EDU-

7 CATION ACT.

8 Except as otherwise expressly provided, whenever in

9 this Act an amendment or repeal is expressed in terms

10 of an amendment to, or repeal of, a section or other provi-

11 sion, the reference shall be considered to be made to a
section or other provision of the Tsunami Warning and Education Act (Public Law 109–424; 33 U.S.C. 3201 et seq.).

SEC. 3. EXPANSION OF PURPOSES OF TSUNAMI WARNING AND EDUCATION ACT.

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

(1) in paragraph (1), by inserting “research,”

after “warnings,”;

(2) by amending paragraph (2) to read as follows:

“(2) to enhance and modernize the existing United States Tsunami Warning System to increase the accuracy of forecasts and warnings, to ensure full coverage of tsunami threats to the United States with a network of detection assets, and to reduce false alarms;”;

(3) by amending paragraph (3) to read as follows:

“(3) to improve and develop standards and guidelines for mapping, modeling, and assessment efforts to improve tsunami detection, forecasting, warnings, notification, mitigation, resiliency, response, outreach, and recovery;”;

(4) by redesignating paragraphs (4), (5), and (6) as paragraphs (5), (6), and (8), respectively;
(5) by inserting after paragraph (3) the following:

“(4) to improve research efforts related to improving tsunami detection, forecasting, warnings, notification, mitigation, resiliency, response, outreach, and recovery;”;

(6) in paragraph (5), as so redesignated—

(A) by striking “and increase” and inserting “, increase, and develop uniform standards and guidelines for”; and

(B) by inserting “, including the warning signs of locally generated tsunami” after “approaching”;.

(7) in paragraph (6), as so redesignated, by striking “, including the Indian Ocean; and” and inserting a semicolon; and

(8) by inserting after paragraph (6), as so redesignated, the following:

“(7) to foster resilient communities in the face of tsunami and other similar coastal hazards; and”.

SEC. 4. MODIFICATION OF TSUNAMI FORECASTING AND WARNING PROGRAM.

(a) IN GENERAL.—Subsection (a) of section 4 (33 U.S.C. 3203) is amended by striking “Atlantic Ocean, Caribbean Sea, and Gulf of Mexico region” and inserting
1 "Atlantic Ocean region, including the Caribbean Sea and
2 the Gulf of Mexico”.
3 (b) COMPONENTS.—Subsection (b) of such section 4
4 is amended—
5 (1) in paragraph (1), by striking “established”
6 and inserting “supported or maintained”;
7 (2) by redesignating paragraphs (7) through
8 (9) as paragraphs (9) through (11), respectively;
9 (3) by redesignating paragraphs (2) through
10 (6) as paragraphs (3) through (7), respectively;
11 (4) by inserting after paragraph (1) the fol-
12 lowing:
13 “(2) to the degree practicable, maintain not less
14 than 80 percent of the Deep-ocean Assessment and
15 Reporting of Tsunamis buoy array at operational ca-
16 pacity to optimize data reliability;”.
17 (5) in paragraph (5), as redesignated by para-
18 graph (3), by inserting “and safeguarding port and
19 harbor operations” after “communities”;
20 (6) by inserting after paragraph (7), as redesig-
21 nated by paragraph (3), the following:
22 “(8) include a cooperative effort among the Ad-
23 ministration, the United States Geological Survey,
24 and the National Science Foundation under which
25 the Director of the United States Geological Survey
and the Director of the National Science Foundation
shall—

“(A) provide rapid and reliable seismic in-
formation to the Administrator from inter-
national and domestic seismic networks; and

“(B) support seismic stations installed be-
fore the date of the enactment of the Tsunami
Warning, Education, and Research Act of 2015
to supplement coverage in areas of sparse in-
strumentation;”.

(7) in paragraph (9), as redesignated by para-
graph (2)—

(A) by inserting “, including graphical
warning products,” after “warnings”;

(B) by inserting “, territories,” after
“States”; and

(C) by inserting “and Wireless Emergency
Alerts” after “Hazards Program”; and

(8) in paragraph (10), as redesignated by para-
graph (2)—

(A) by inserting “provide and” before
“allow”; and

(B) by inserting “and commercial and
Federal undersea communications cables” after
“observing technologies”.


(e) **TSUNAMI WARNING SYSTEM.**—Subsection (e) of such section 4 is amended to read as follows:

“(e) **TSUNAMI WARNING SYSTEM.**—The program under this section shall operate a tsunami warning system that—

“(1) is capable of forecasting tsunami, including forecasting tsunami arrival time and inundation estimates, anywhere in the Pacific and Arctic Ocean regions and providing adequate warnings;

“(2) is capable of forecasting and providing adequate warnings, including tsunami arrival time and inundation models where applicable, in areas of the Atlantic Ocean, including the Caribbean Sea and Gulf of Mexico, that are determined—

“(A) to be geologically active, or to have significant potential for geological activity; and

“(B) to pose significant risks of tsunami for States along the coastal areas of the Atlantic Ocean, Caribbean Sea, or Gulf of Mexico; and

“(3) supports other international tsunami forecasting and warning efforts.”.

(d) **TSUNAMI WARNING CENTERS.**—Subsection (d) of such section 4 is amended to read as follows:

“(d) **TSUNAMI WARNING CENTERS.**—
“(1) IN GENERAL.—The Administrator shall support or maintain centers to support the tsunami warning system required by subsection (c). The Centers shall include—

“(A) the National Tsunami Warning Center, located in Alaska, which is primarily responsible for Alaska and the continental United States;

“(B) the Pacific Tsunami Warning Center, located in Hawaii, which is primarily responsible for Hawaii, the Caribbean, and other areas of the Pacific not covered by the National Center; and

“(C) any additional forecast and warning centers determined by the National Weather Service to be necessary.

“(2) RESPONSIBILITIES.—The responsibilities of the centers supported or maintained pursuant to paragraph (1) shall include the following:

“(A) Continuously monitoring data from seismological, deep ocean, coastal sea level, and tidal monitoring stations and other data sources as may be developed and deployed.
“(B) Evaluating earthquakes, landslides, and volcanic eruptions that have the potential to generate tsunami.

“(C) Evaluating deep ocean buoy data and tidal monitoring stations for indications of tsunami resulting from earthquakes and other sources.

“(D) To the extent practicable, utilizing a range of models, including ensemble models, to predict tsunami, including arrival times, flooding estimates, coastal and harbor currents, and duration.

“(E) Using data from the Integrated Ocean Observing System of the Administration in coordination with regional associations to calculate new inundation estimates and periodically update existing inundation estimates.

“(F) Ensuring supercomputing resources of the National Centers for Environmental Prediction are available to run, as rapidly as possible, such computer models as are needed for purposes of the tsunami warning system operated pursuant to subsection (c).
“(G) Disseminating forecasts and tsunami warning bulletins to Federal, State, tribal, and local government officials and the public.

“(H) Coordinating with the tsunami hazard mitigation program conducted under section 5 to ensure ongoing sharing of information between forecasters and emergency management officials.

“(I) Evaluating and recommending procedures for ports and harbors at risk of tsunami inundation, including review of readiness, response, and communication strategies to ensure coordination and data sharing with the Coast Guard.

“(J) Making data gathered under this Act and post-warning analyses conducted by the National Weather Service or other relevant Administration offices available to the public.

“(K) Integrating and modernizing the program operated under this section with advances in tsunami science to improve performance without compromising service.

“(3) **FAIL-SAFE WARNING CAPABILITY.**—The tsunami warning centers supported or maintained pursuant to paragraph (1) shall maintain a fail-safe
warning capability and perform back-up duties for each other.

"(4) COORDINATION WITH NATIONAL WEATHER SERVICE.—The Administrator shall coordinate with the forecast offices of the National Weather Service, the centers supported or maintained pursuant to paragraph (1), and such program offices of the Administration as the Administrator or the coordinating committee consider appropriate to ensure that regional and local forecast offices—

"(A) have the technical knowledge and capability to disseminate tsunami warnings for the communities they serve;

"(B) leverage connections with local emergency management officials for optimally disseminating tsunami warnings and forecasts; and

"(C) implement mass communication tools in effect on the day before the date of the enactment of the Tsunami Warning, Education, and Research Act of 2015 used by the National Weather Service on such date and newer mass communication technologies as they are developed as a part of the Weather-Ready Nation program of the Administration, or otherwise,
for the purpose of timely and effective delivery
of tsunami warnings.

"(5) UNIFORM OPERATING PROCEDURES.—The
Administrator shall—

"(A) develop uniform operational proce-
dures for the centers supported or maintained
pursuant to paragraph (1), including the use of
software applications, checklists, decision sup-
port tools, and tsunami warning products that
have been standardized across the program sup-
ported under this section;

"(B) ensure that processes and products of
the warning system operated pursuant to sub-
section (c)—

"(i) reflect industry best practices
when practicable;

"(ii) conform to the maximum extent
practicable with internationally recognized
standards for information technology; and

"(iii) conform to the maximum extent
practicable with other warning products
and practices of the National Weather
Service;
"(C) ensure that future adjustments to
operational protocols, processes, and warning
products—

"(i) are made consistently across the
warning system operated pursuant to sub-
section (c); and

"(ii) are applied in a uniform manner
across such warning system;

"(D) establish a systematic method for in-
formation technology product development to
improve long-term technology planning efforts;
and

"(E) disseminate guidelines and metrics
for evaluating and improving tsunami forecast
models.

"(6) AVAILABLE RESOURCES.—The Adminis-
trator, through the National Weather Service, shall
ensure that resources are available to fulfill the obli-
gations of this Act. This includes ensuring super-
computing resources are available to run such com-
puter models as are needed for purposes of the tsu-
nami warning system operated pursuant to sub-
section (c)."
(c) Transfer of Technology; Maintenance and Upgrades.—Subsection (c) of such section 4 is amended to read as follows:

"(e) Transfer of Technology; Maintenance and Upgrades.—In carrying out this section, the Administrator shall—

"(1) develop requirements for the equipment used to forecast tsunami, including—

"(A) provisions for multipurpose detection platforms;

"(B) reliability and performance metrics;

and

"(C) to the maximum extent practicable, requirements for the integration of equipment with other United States and global ocean and coastal observation systems, the global Earth observing system of systems, the global seismic networks, and the Advanced National Seismic System;

"(2) develop and execute a plan for the transfer of technology from ongoing research conducted as part of the program supported or maintained under section 6 into the program under this section; and
“(3) ensure that the Administration’s operational tsunami detection equipment is properly maintained.”

(f) **FEDERAL COOPERATION.**—Subsection (f) of such section 4 is amended to read as follows:

“(f) **FEDERAL COOPERATION.**—When deploying and maintaining tsunami detection technologies under the program under this section, the Administrator shall—

“(1) identify which assets of other Federal agencies are necessary to support such program; and

“(2) work with each agency identified under paragraph (1)—

“(A) to acquire the agency’s assistance; and

“(B) to prioritize the necessary assets.”.

(g) **UNNECESSARY PROVISIONS.**—Such section 4 is further amended—

(1) by striking subsections (g) and (i) through (k); and

(2) by redesignating subsection (h) as subsection (g).

(h) **CONGRESSIONAL NOTIFICATIONS.**—Subsection (g) of such section, as redesignated by subsection (g)(2), is amended—
(1) by redesignating paragraphs (1) and (2) as subparagraphs (A) and (B), respectively, and moving such subparagraphs 2 ems to the right;

(2) in the matter before subparagraph (A), as redesignated by paragraph (1), by striking “The Administrator” and inserting the following:

“(1) IN GENERAL.—The Administrator”;

(3) in paragraph (1), as redesignated by paragraph (2)—

(A) in subparagraph (A), as redesignated by paragraph (1), by striking “and” at the end;

(B) in subparagraph (B), as redesignated by paragraph (1), by striking the period at the end and inserting “; and”;

(C) by adding at the end the following:

“(C) the occurrence of a significant tsunami warning.”; and

(4) by adding at the end the following:

“(2) CONTENTS.—In a case in which notice is submitted under paragraph (1) within 90 days of a significant tsunami warning described in subparagraph (C) of such paragraph, such notice shall include brief information and analysis of—

“(A) the accuracy of the tsunami model used;
“(B) the specific deep ocean or other monitoring equipment that detected the incident, as well as the deep ocean or other monitoring equipment that did not detect the incident due to malfunction or otherwise;

“(C) the effectiveness of the warning communication procedures including the integration of warnings with State, territory, local, and tribal partners in the affected area under the jurisdiction of the National Weather Service; and

“(D) such other findings as the Administrator considers appropriate.”.

SEC. 5. MODIFICATION OF NATIONAL TSUNAMI HAZARD MITIGATION PROGRAM.

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

“(a) PROGRAM REQUIRED.—The Administrator shall, in consultation with the Administrator of the Federal Emergency Management Agency and the heads of such other agencies as the Administrator considers relevant, conduct a community-based tsunami hazard mitigation program to improve tsunami preparedness and resil-
iency of at-risk areas in the United States and the terri-
tories of the United States.

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

"(1) Technical and financial assistance to
coastal States, territories, tribes, and local govern-
ments to develop and implement activities under this
section.

"(2) Integration of tsunami preparedness and
mitigation programs into ongoing State-based haz-
ard warning, resilience planning, and risk manage-
ment activities, including predisaster planning, emer-
gency response, evacuation planning, disaster recov-
ery, hazard mitigation, and community development
and redevelopment planning programs in affected
areas.

"(3) Activities to promote the adoption of tsu-
nami resilience, preparedness, warning, and mitiga-
tion measures by Federal, State, territorial, tribal,
and local governments and nongovernmental entities,
including educational and risk communication pro-
grams to discourage development in high-risk areas.
“(4) Activities to support the development of regional tsunami hazard and risk assessments. Such regional risk assessments may include the following:

“(A) The sources, sizes, and other relevant historical data of tsunami in the region.

“(B) Inundation models and maps of critical infrastructure and socioeconomic vulnerability in areas subject to tsunami inundation.

“(C) Maps of evacuation areas and evacuation routes, including, when appropriate, traffic studies that evaluate the viability of evacuation routes.

“(D) Evaluations of the size of populations that will require evacuation, including populations with special evacuation needs.

“(E) Evaluations and technical assistance for vertical evacuation structure planning for communities where models indicate limited or no ability for timely evacuation, especially in areas at risk of near shore generated tsunami.


“(5) Activities to promote preparedness in at-risk ports and harbors, including the following:
“(A) Evaluation and recommendation of procedures for ports and harbors in the event of a distant or near-field tsunami.

“(B) A review of readiness, response, and communication strategies to ensure coordination and data sharing with the Coast Guard.

“(6) Activities to support the development of community-based outreach and education programs to ensure community readiness and resilience, including the following:

“(A) The development, implementation, and assessment of technical training and public education programs, including education programs that address unique characteristics of distant and near-field tsunami.

“(B) The development of decision support tools.

“(C) The incorporation of social science research into community readiness and resilience efforts.

“(D) The development of evidence-based education guidelines.

“(7) Dissemination of guidelines and standards for community planning, education, and training products, programs, and tools, including—
“(A) standards for—

“(i) mapping products;
“(ii) inundation models; and
“(iii) effective emergency exercises;

and

“(B) recommended guidance for at-risk port and harbor tsunami warning, evacuation, and response procedures in coordination with the Coast Guard.

“(e) AUTHORIZED ACTIVITIES.—In addition to activities conducted under subsection (b), the program conducted pursuant to subsection (a) may include the following:

“(1) Multidisciplinary vulnerability assessment research, education, and training to help integrate risk management and resilience objectives with community development planning and policies.

“(2) Risk management training for local officials and community organizations to enhance understanding and preparedness.

“(3) Interagency, Federal, State, tribal, and territorial intergovernmental tsunami response exercise planning and implementation in high risk areas.

“(4) Development of practical applications for existing or emerging technologies, such as modeling,
remote sensing, geospatial technology, engineering, and observing systems.

"(5) Risk management, risk assessment, and resilience data and information services, including—

"(A) access to data and products derived from observing and detection systems; and

"(B) development and maintenance of new integrated data products to support risk management, risk assessment, and resilience programs.

"(6) Risk notification systems that coordinate with and build upon existing systems and actively engage decisionmakers, State, local, tribal, and territorial governments and agencies, business communities, nongovernmental organizations, and the media.

"(d) COORDINATING COMMITTEE.—

"(1) IN GENERAL.—The Administrator shall maintain a coordinating committee to assist the Administrator in the conduct of the program required by subsection (a).

"(2) COMPOSITION.—The coordinating committee shall be composed of members as follows:

"(A) Representatives of States and territories most at risk from tsunami, including
Alaska, Washington, Oregon, California, Hawaii, Puerto Rico, Guam and American Samoa.

"(B) Such other members as the Administrator considers appropriate to represent Federal, State, tribal, territorial, and local governments.

"(3) Subcommittees.—The Administrator may approve the formation of subcommittees to address specific program components or regional issues.

"(4) Responsibilities.—The coordinating committee shall—

"(A) provide feedback on how funds should be prioritized to carry out the program required by subsection (a);

"(B) ensure that areas described in section 4(e) in the United States and its territories have the opportunity to participate in the program;

"(C) provide recommendations to the Administrator on how to improve and continuously advance the TsunamiReady program of the National Weather Service, particularly on ways to make communities more tsunami resilient
through the use of inundation maps and models and other hazard mitigation practices;

"(D) ensure that all components of the program required by subsection (a) are integrated with ongoing State based hazard warning, risk management, and resilience activities, including—

"(i) integrating activities with emergency response plans, disaster recovery, hazard mitigation, and community development programs in affected areas; and

"(ii) integrating information to assist in tsunami evacuation route planning.

"(5) Exemption from FACA Termination Requirement.—Section 14 of the Federal Advisory Committee Act (5 U.S.C. App. 14) shall not apply to the committee established and maintained pursuant to paragraph (1).

"(e) No Preemption With Respect to 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 designating additional areas as being at risk based on knowledge of local conditions.
“(f) No New Regulatory Authority.—Nothing in this Act may be construed as establishing new regulatory authority for any Federal agency.”.

(b) Report on Accreditation of TsunamiReady Program.—Not later than 180 days after the date of enactment of this Act, the Administrator of the National Oceanic and Atmospheric Administration shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives a report on which authorities and activities would be needed to have the TsunamiReady program of the National Weather Service accredited by the Emergency Management Accreditation Program.

SEC. 6. MODIFICATION OF TSUNAMI RESEARCH PROGRAM.

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

(1) in the matter before paragraph (1), by striking “The Administrator shall” and all that follows through “establish or maintain” and inserting the following:

“(a) In General.—The Administrator shall, in consultation with such other Federal agencies, State, tribal, and territorial governments, and academic institutions as the Administrator considers appropriate, the coordinating
committee under section 5(d), and the panel under section 8(a), support or maintain’’;

(2) in subsection (a), as designated by paragraph (1), by striking ‘‘and assessment for tsunami tracking and numerical forecast modeling. Such research program shall—’’ and inserting the following: ‘‘assessment for tsunami tracking and numerical forecast modeling, and standards development.

(b) RESPONSIBILITIES.—The research program supported or maintained pursuant to subsection (a) shall—’’; and

(3) in subsection (b), as designated by paragraph (2)—

(A) by amending paragraph (1) to read as follows:

‘‘(1) consider other appropriate and cost effective research to mitigate the impact of tsunami, including the improvement of near-field and distant tsunami detection and forecasting capabilities, which may include use of a new generation of the Deep-ocean Assessment and Reporting of Tsunamis array and other real-time tsunami monitoring systems and supercomputer capacity of the Administration to develop a rapid tsunami forecast for all United States coastlines;’’;
(B) in paragraph (3)—

(i) by striking "include" and inserting "conduet"; and

(ii) by striking "and" at the end;

(C) by redesignating paragraph (4) as paragraph (5);

(D) by inserting after paragraph (3) the following:

"(4) develop the technical basis for validation of tsunami maps, numerical tsunami models, digital elevation models, and forecasts; and"

(E) in paragraph (5), as redesignated by subparagraph (C), by striking "to the scientific community" and inserting "to the public".

SEC. 7. GLOBAL TSUNAMI WARNING AND MITIGATION NETWORK.

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

(1) by amending subsection (a) to read as follows:

"(a) SUPPORT FOR DEVELOPMENT OF AN INTERNATIONAL TSUNAMI WARNING SYSTEM.—The Administrator shall, in coordination with the Secretary of State and in consultation with such other agencies as the Administrator considers relevant, provide technical assistance and training to the Intergovernmental Oceanographic
Commission of the United Nations Educational, Scientific, and Cultural Organization, the World Meteorological Organization of the United Nations, and such other international entities as the Administrator considers appropriate, as part of the international efforts to develop a fully functional global tsunami forecast and warning system comprised of regional tsunami warning networks.”;

(2) in subsection (b), by striking “shall” and inserting “may”; and

(3) in subsection (c)—

(A) in paragraph (1), by striking “establishing” and inserting “supporting”; and

(B) in paragraph (2)—

(i) by striking “establish” and inserting “support”; and

(ii) by striking “establishing” and inserting “supporting”.

SEC. 8. TSUNAMI SCIENCE AND TECHNOLOGY ADVISORY PANEL.

(a) IN GENERAL.—The Act is further amended—

(1) by redesignating section 8 (33 U.S.C. 3207) as section 9; and

(2) by inserting after section 7 (33 U.S.C. 3206) the following:
“SEC. 8. TSUNAMI SCIENCE AND TECHNOLOGY ADVISORY PANEL.

“(a) DESIGNATION.—The Administrator shall designate an existing working group within the Science Advisory Board of the Administration to serve as the Tsunami Science and Technology Advisory Panel to provide advice to the Administrator on matters regarding tsunami science, technology, and regional preparedness.

“(b) MEMBERSHIP.—

“(1) COMPOSITION.—The working group designated under subsection (a) shall be composed of no fewer than 7 members selected by the Administrator from among individuals from academia or State agencies who have academic or practical expertise in physical sciences, social sciences, information technology, coastal resilience, emergency management, or such other disciplines as the Administrator considers appropriate.

“(2) FEDERAL EMPLOYMENT.—No member of the working group designated pursuant to subsection (a) may be a Federal employee.

“(c) RESPONSIBILITIES.—Not less frequently than once every 4 years, the working group designated under subsection (a) shall—

“(1) review the activities of the Administration, and other Federal activities as appropriate, relating
to tsunami research, detection, forecasting, warning, mitigation, resiliency, and preparation; and

“(2) submit to the Administrator and such others as the Administrator considers appropriate—

“(A) the findings of the working group with respect to the most recent review conducted pursuant to paragraph (1); and

“(B) such recommendations for legislative or administrative action as the working group considers appropriate to improve Federal tsunami research, detection, forecasting, warning, mitigation, resiliency, and preparation.

“(d) REPORTS TO CONGRESS.—Not less frequently than once every 4 years, the Administrator shall submit to the Committee on Commerce, Science, and Transportation 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 (e)(2).”

SEC. 9. REPORTS.

(a) REPORT ON IMPLEMENTATION OF TSUNAMI WARNING AND EDUCATION ACT.—

(1) IN GENERAL.—Not later than 1 year after the date of the enactment of this Act, the Administrator of the National Oceanic and Atmospheric Ad-
ministration shall submit to Congress a report on
the implementation of the Tsunami Warning and
Education Act (33 U.S.C. 3201 et seq.).

(2) **ELEMENTS.**—The report required by para-
graph (1) shall include the following:

(A) A detailed description of the progress
made in implementing sections 4(d)(6), 5(b)(6),
and 6(b)(4) of the Tsunami Warning and Edu-
cation Act.

(B) A description of the ways that tsunami
warnings and warning products issued by the
Tsunami Forecasting and Warning Program es-
established under section 4 of the Tsunami Warn-
ing and Education Act (33 U.S.C. 3203) can be
standardized and streamlined with warnings
and warning products for hurricanes, coastal
storms, and other coastal flooding events.

(b) **REPORT ON NATIONAL EFFORTS THAT SUPPORT
RAPID RESPONSE FOLLOWING NEAR-SHORE TSUNAMI
EVENTS.**—

(1) **IN GENERAL.**—Not later than 1 year after
the date of the enactment of this Act, the Adminis-
trator and the Secretary of Homeland Security shall
jointly, in coordination with the Director of the
United States Geological Survey, Administrator of
the Federal Emergency Management Agency, the
Chief of the National Guard Bureau, and the heads
of such other Federal agencies as the Administrator
considers appropriate, submit to the appropriate
committees of Congress a report on the national ef-
forts in effect on the day before the date of the en-
actment of this Act that support and facilitate rapid
emergency response following a domestic near-shore
tsunami event to better understand domestic effects
of earthquake derived tsunami on people, infrastruc-
ture, and communities in the United States.

(2) ELEMENTS.—The report required by para-
graph (1) shall include the following:

(A) A description of scientific or other
measurements collected on the day before the
date of the enactment of this Act to quickly
identify and quantify lost or degraded infra-
structure or terrestrial formations.

(B) A description of scientific or other
measurements that would be necessary to col-
lect to quickly identify and quantify lost or de-
graded infrastructure or terrestrial formations.

(C) Identification and evaluation of Fed-
eral, State, local, tribal, territorial, and military
first responder and search and rescue operation
centers, bases, and other facilities as well as
other critical response assets and infrastruc-
ture, including search and rescue aircraft, lo-
cated within near-shore and distant tsunami in-
undation areas on the day before the date of
the enactment of this Act.

(D) An evaluation of near-shore tsunami
response plans in areas described in subpara-
graph (C) in effect on the day before the date
of the enactment of this Act, and how those re-
sponse plans would be affected by the loss of
search and rescue and first responder infra-
structure described in such subparagraph.

(E) A description of redevelopment plans
and reports in effect on the day before the date
of the enactment of this Act for communities in
areas that are at high-risk for near-shore tsu-
nami, as well identification of States or commu-
nities that do not have redevelopment plans.

(F) Recommendations to enhance near-
shore tsunami preparedness and response plans,
including recommended responder exercises,
predisaster planning, and mitigation needs.
(G) Such other data and analysis information as the Administrator and the Secretary of Homeland Security consider appropriate.

(3) APPROPRIATE COMMITTEES OF CONGRESS.—In this subsection, the term “appropriate committees of Congress” means—

(A) the Committee on Commerce, Science, and Transportation and the Committee on Homeland Security and Governmental Affairs of the Senate; and

(B) the Committee on Science, Space, and Technology and the Committee on Homeland Security of the House of Representatives.

SEC. 10. AUTHORIZATION OF APPROPRIATIONS.

Section 9 of the Act, as redesignated by section 8(a)(1) of this Act, is amended—

(1) in paragraph (4)(B), by striking “and” at the end;

(2) in paragraph (5)(B), by striking the period at the end and inserting “; and”; and

(3) by adding at the end the following:

“(6) $27,000,000 for each of fiscal years 2016 through 2021, of which—

“(A) not less than 27 percent of the amount appropriated for each fiscal year shall
be for activities conducted at the State level
under the tsunami hazard mitigation program
under section 5; and
“(B) not less than 8 percent of the amount
appropriated shall be for the tsunami research
program under section 6.”.

SEC. 11. OUTREACH RESPONSIBILITIES.

The Administrator of the National Oceanic and At-
mospheric Administration, in coordination with State and
local emergency managers, shall develop and carry out for-
mal outreach activities to improve tsunami education and
awareness and foster the development of resilient commu-
nities. 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
U.S.C. 3203(d)) with local Weather Forecast Offices
of the National Weather Service and emergency
managers;

(2) working with appropriate local Weather
Forecast Offices to ensure they have the technical
knowledge and capability to disseminate tsunami
warnings to the communities they serve; and
(3) evaluating the effectiveness of warnings and
of coordination with local Weather Forecast Offices
after significant tsunami events.

SEC. 12. REPEAL OF DUPLICATE PROVISIONS OF LAW.
(a) REPEAL.—The Magnuson-Stevens Fishery Con-
servation and Management Reauthorization Act of 2006
(Public Law 109–479) is amended by striking title VIII
(relating to tsunami warning and education).
(b) CONSTRUCTION.—Nothing in this section shall be
construed to repeal, or affect in any way, Public Law 109–
424.