[~113H5309IH]

(Original Signature of Member)
114TH CONGRESS 1ST SESSION H. R.
To authorize and strengthen the tsunami detection, forecast, warning, re search, and mitigation program of the National Oceanic and Atmospheric Administration, and for other purposes.
IN THE HOUSE OF REPRESENTATIVES
Ms. Bonamici (for herself, Mr. Rohrabacher, and [see attached list o cosponsors]) introduced the following bill; which was referred to the Committee on
A BILL
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
3 SECTION 1. SHORT TITLE.

This Act may be cited as the "Tsunami Warning,

4

5 Education, and Research Act of 2015".

1	SEC. 2. REFERENCES TO THE TSUNAMI WARNING AND EDU-
2	CATION ACT.
3	Except as otherwise expressly provided, whenever in
4	this Act an amendment or repeal is expressed in terms
5	of an amendment to, or repeal of, a section or other provi-
6	sion, the reference shall be considered to be made to a
7	section or other provision of the Tsunami Warning and
8	Education Act (33 U.S.C. 3201 et seq.).
9	SEC. 3. EXPANSION OF PURPOSES OF TSUNAMI WARNING
10	AND EDUCATION ACT.
11	Section 3 (33 U.S.C. 3202) is amended—
12	(1) in paragraph (1), by inserting "research,"
13	after "warnings,";
14	(2) by amending paragraph (2) to read as fol-
15	lows:
16	"(2) to enhance and modernize the existing
17	United States Tsunami Warning System to increase
18	the accuracy of forecasts and warnings, to maintain
19	full coverage of tsunami detection assets, and to re-
20	duce false alarms;";
21	(3) by amending paragraph (3) to read as fol-
22	lows:
23	"(3) to improve and develop standards and
24	guidelines for mapping, modeling, and assessment
25	efforts to improve tsunami detection, forecasting,

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

1	SEC. 4. MODIFICATION OF TSUNAMI FORECASTING AND
2	WARNING PROGRAM.
3	(a) In General.—Subsection (a) of section 4 (33
4	U.S.C. 3203) is amended by striking "Atlantic Ocean,
5	Caribbean Sea, and Gulf of Mexico region" and inserting
6	"Atlantic Ocean region, including the Caribbean Sea and
7	the Gulf of Mexico".
8	(b) Components.—Subsection (b) of such section 4
9	is amended—
10	(1) in paragraph (1), by striking "established"
11	and inserting "supported or maintained";
12	(2) in paragraph (4), by inserting "and safe-
13	guarding port and harbor operations" after "com-
14	munities";
15	(3) in paragraph (7)—
16	(A) by inserting ", including graphical
17	warning products," after "warnings";
18	(B) by inserting ", territories," after
19	"States"; and
20	(C) by inserting "and Wireless Emergency
21	Alerts" after "Hazards Program"; and
22	(4) in paragraph (8), by inserting "and com-
23	mercial and Federal undersea communications ca-
24	bles" after "observing technologies".
25	(c) TSUNAMI WARNING SYSTEM.—Subsection (c) of
26	such section 4 is amended to read as follows:

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

1	warning system required by subsection (c). The Cen-
2	ters shall include—
3	"(A) the National Tsunami Warning Cen-
4	ter, located in Alaska, which is primarily re-
5	sponsible for Alaska and the continental United
6	States;
7	"(B) the Pacific Tsunami Warning Center,
8	located in Hawaii, which is primarily respon-
9	sible for Hawaii, the Caribbean, and other
10	areas of the Pacific not covered by the National
11	Center; and
12	"(C) any additional forecast and warning
13	centers determined by the National Weather
14	Service to be necessary.
15	"(2) Responsibilities.—The responsibilities
16	of the centers supported or maintained pursuant to
17	paragraph (1) shall include the following:
18	"(A) Continuously monitoring data from
19	seismological, deep ocean, coastal sea level, and
20	tidal monitoring stations and other data sources
21	as may be developed and deployed.
22	"(B) Evaluating earthquakes, landslides,
23	and volcanic eruptions that have the potential
24	to generate tsunami.

1	"(C) Evaluating deep ocean buoy data and
2	tidal monitoring stations for indications of tsu-
3	nami resulting from earthquakes and other
4	sources.
5	"(D) To the extent practicable, utilizing a
6	range of models to predict tsunami arrival
7	times and flooding estimates.
8	"(E) Disseminating forecasts and tsunami
9	warning bulletins to Federal, State, and local
10	government officials and the public.
11	"(F) Coordinating with the tsunami haz-
12	ard mitigation program conducted under section
13	5 to ensure ongoing sharing of information be-
14	tween forecasters and emergency management
15	officials.
16	"(G) Making data gathered under this Act
17	and post-warning analyses conducted by the
18	National Weather Service or other relevant Ad-
19	ministration offices available to researchers.
20	"(3) Fail-safe warning capability.—The
21	tsunami warning centers supported or maintained
22	pursuant to paragraph (1) shall maintain a fail-safe
23	warning capability and ability to perform back-up
24	duties for each other.

1	"(4) Coordination with national weather
2	SERVICE.—The National Weather Service shall co-
3	ordinate with the centers supported or maintained
4	pursuant to paragraph (1) to ensure that regional
5	and local forecast offices—
6	"(A) have the technical knowledge and ca-
7	pability to disseminate tsunami warnings for
8	the communities they serve; and
9	"(B) leverage connections with local emer-
10	gency management officials for optimally dis-
11	seminating tsunami warnings and forecasts.
12	"(5) Uniform operating procedures.—The
13	Administrator shall—
14	"(A) develop uniform operational proce-
15	dures for the centers supported or maintained
16	pursuant to paragraph (1), including the use of
17	software applications, checklists, decision sup-
18	port tools, and tsunami warning products that
19	have been standardized across the program sup-
20	ported under this section;
21	"(B) ensure that processes and products of
22	the warning system operated pursuant to sub-
23	section (c)—
24	"(i) reflect industry best practices;

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

1	nami warning system operated pursuant to sub-
2	section (c).".
3	(e) Transfer of Technology; Maintenance and
4	UPGRADES.—Subsection (e) of such section 4 is amended
5	to read as follows:
6	"(e) Transfer of Technology; Maintenance
7	AND UPGRADES.—In carrying out this section, the Admin-
8	istrator shall—
9	"(1) develop requirements for the equipment
10	used to forecast tsunami, including—
11	"(A) provisions for multipurpose detection
12	platforms;
13	"(B) reliability and performance metrics;
14	and
15	"(C) to the maximum extent practicable,
16	requirements for the integration of equipment
17	with other United States and global ocean and
18	coastal observation systems, the global Earth
19	observing system of systems, the global seismic
20	networks, and the Advanced National Seismic
21	System;
22	"(2) develop and execute a plan for the transfer
23	of technology from ongoing research conducted as
24	part of the program supported or maintained under
25	section 6 into the program under this section; and

1	"(3) ensure that the Administration's oper-
2	ational tsunami detection equipment is properly
3	maintained.".
4	(f) Federal Cooperation.—Subsection (f) of such
5	section 4 is amended to read as follows:
6	"(f) Federal Cooperation.—When deploying and
7	maintaining tsunami detection technologies under the pro-
8	gram under this section, the Administrator shall—
9	"(1) identify which assets of other Federal
10	agencies are necessary to support such program; and
11	"(2) work with each agency identified under
12	paragraph (1)—
13	"(A) to acquire the agency's assistance;
14	and
15	"(B) to prioritize the necessary assets.".
16	(g) Unnecessary Provisions.—Such section 4 is
17	further amended by striking subsections (g) through (k).
18	SEC. 5. MODIFICATION OF NATIONAL TSUNAMI HAZARD
19	MITIGATION PROGRAM.
20	(a) In General.—Section 5 (33 U.S.C. 3204) is
21	amended by striking subsections (a) through (d) and in-
22	serting the following:
23	"(a) Program Required.—The Administrator, in
24	consultation with the Administrator of the Federal Emer-
25	gency Management Agency and the heads of such other

agencies as the Administrator considers relevant, shall conduct a community-based tsunami hazard mitigation program to improve tsunami preparedness and resiliency 3 4 of at-risk areas in the United States and the territories 5 of the United States. 6 "(b) Program Components.—The Program conducted pursuant to subsection (a) shall include the fol-8 lowing: 9 "(1) Technical and financial assistance to 10 coastal States, territories, tribes, and local govern-11 ments to develop and implement activities under this 12 section. 13 "(2) Integration of tsunami preparedness and 14 mitigation programs into ongoing State-based haz-15 ard warning, resilience planning, and risk manage-16 ment activities, including predisaster planning, emer-17 gency response, evacuation planning, disaster recov-18 ery, hazard mitigation, and community development 19 and redevelopment programs in affected areas. 20 "(3) Activities to promote the adoption of tsu-21 nami resilience, preparedness, warning, and mitiga-22 tion measures by Federal, State, territorial, tribal, 23 and local governments and nongovernmental entities, 24 including educational and risk communication pro-25 grams to discourage development in high-risk areas.

1	"(4) Activities to support the development of
2	regional tsunami hazard and risk assessments, using
3	inundation models that meet programmatic stand-
4	ards for accuracy. Such regional risk assessments
5	may include the following:
6	"(A) The sources, sizes, and histories of
7	tsunami in that region.
8	"(B) Inundation models and maps of crit-
9	ical infrastructure and socioeconomic vulner-
10	ability in areas subject to tsunami inundation.
11	"(C) Maps of evacuation areas and evacu-
12	ation routes.
13	"(D) Evaluations of the size of populations
14	that will require evacuation, including popu-
15	lations with special evacuation needs.
16	"(5) Activities to support the development of
17	community-based outreach and education programs
18	to ensure community readiness and resilience, in-
19	cluding the following:
20	"(A) The development, implementation,
21	and assessment of technical training and public
22	education programs, including education pro-
23	grams that address unique characteristics of
24	distant and near-field tsunami.

1	"(B) The development of decision support
2	tools.
3	"(C) The incorporation of social science re-
4	search into community readiness and resilience
5	efforts.
6	"(D) The development of evidence-based
7	education guidelines.
8	"(6) Dissemination of guidelines and standards
9	for community planning, education, and training
10	products, programs, and tools, including standards
11	for—
12	"(A) mapping products;
13	"(B) inundation models; and
14	"(C) effective emergency exercises.
15	"(c) Authorized Activities.—In addition to activi-
16	ties conducted under subsection (b), the program con-
17	ducted pursuant to subsection (a) may include the fol-
18	lowing:
19	"(1) Multidisciplinary vulnerability assessment
20	research, education, and training to help integrate
21	risk management and resilience objectives with com-
22	munity development planning and policies.
23	"(2) Risk management training for local offi-
24	cials and community organizations to enhance un-
25	derstanding and preparedness.

1	"(3) Development of practical applications for
2	existing or emerging technologies, such as modeling,
3	remote sensing, geospatial technology, engineering,
4	and observing systems.
5	"(4) Risk management, risk assessment, and
6	resilience data and information services, including—
7	"(A) access to data and products derived
8	from observing and detection systems; and
9	"(B) development and maintenance of new
10	integrated data products to support risk man-
11	agement, risk assessment, and resilience pro-
12	grams.
13	"(5) Risk notification systems that coordinate
14	with and build upon existing systems and actively
15	engage decisionmakers, local and State government
16	agencies, business communities, nongovernmental or-
17	ganizations, and the media.
18	"(d) No Preemption.—
19	"(1) Designation of at-risk areas.—The
20	establishment of national standards for inundation
21	models under this section shall not prevent States,
22	territories, tribes, and local governments from desig-
23	nating additional areas as being at risk based on
24	knowledge of local conditions.

1	"(2) No New Regulatory Authority.—
2	Nothing in this Act may be construed as estab-
3	lishing new regulatory authority for any Federal
4	agency.".
5	(b) REPORT ON ACCREDITATION OF TSUNAMIREADY
6	Program.—Not later than 180 days after the date of en-
7	actment of this Act, the Administrator of the National
8	Oceanic and Atmospheric Administration shall submit to
9	the Committee on Commerce, Science, and Transportation
10	of the Senate and the Committee on Science, Space, and
11	Technology of the House of Representatives a report on
12	which authorities and activities would be needed to have
13	the TsunamiReady program of the National Weather
14	Service accredited by the Emergency Management Accred-
15	itation Program.
16	SEC. 6. MODIFICATION OF TSUNAMI RESEARCH PROGRAM.
17	Section 6 (33 U.S.C. 3205) is amended—
18	(1) in the matter before paragraph (1), by
19	striking "The Administrator shall" and all that fol-
20	lows through "establish or maintain" and inserting
21	the following:
22	"(a) In General.—The Administrator shall, in con-
23	sultation with such other Federal agencies, State and ter-
24	ritorial governments, and academic institutions as the Ad-
25	ministrator considers appropriate, the coordinating com-

1	mittee under section 11(b), and the panel under section
2	8(a), support or maintain";
3	(2) by striking "and assessment for tsunami
4	tracking and numerical forecast modeling. Such re-
5	search program shall—" and inserting the following:
6	"assessment for tsunami tracking and numerical
7	forecast modeling, and standards development.
8	"(b) Responsibilities.—The research program
9	supported or maintained pursuant to subsection (a)
10	shall—";
11	(3) in subsection (b), as designated by para-
12	graph (2)—
13	(A) by amending paragraph (1) to read as
14	follows:
15	"(1) consider other appropriate research to
16	mitigate the impact of tsunami, including the im-
17	provement of near-field tsunami detection and fore-
18	casting capabilities, which may include use of new
19	generation Deep-ocean Assessment and Reporting of
20	Tsunamis and National Oceanic and Atmospheric
21	Administration supercomputer capacity to develop a
22	rapid tsunami forecast for all United States coast-
23	lines;";
24	(B) in paragraph (3)—

1	(i) by striking "include" and inserting
2	"conduct"; and
3	(ii) by striking "and" at the end;
4	(C) by redesignating paragraph (4) as
5	paragraph (5); and
6	(D) by inserting after paragraph (3) the
7	following:
8	"(4) develop the technical basis for validation of
9	tsunami maps, numerical tsunami models, digital
10	elevation models, and forecasts; and"; and
11	(4) by adding at the end the following:
12	"(c) Pilot Project.—The Administrator may, pur-
13	suant to subsection (b), develop a pilot project for near-
14	field tsunami forecast development for the Cascadia region
15	along the west coast of the United States using new gen-
16	eration Deep-ocean Assessment and Reporting of
17	Tsunamis, upcoming and existing cable networks, and new
18	National Centers for Environmental Protection modeling
19	capability.".
20	SEC. 7. GLOBAL TSUNAMI WARNING AND MITIGATION NET-
21	WORK.
22	Section 7 (33 U.S.C. 3206) is amended—
23	(1) by amending subsection (a) to read as fol-
24	lows:

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

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

1	"(2) Federal employment.—No member of
2	the working group designated pursuant to subsection
3	(a) may be a Federal employee.
4	"(c) Responsibilities.—Not less frequently than
5	once every 4 years, the working group designated under
6	subsection (a) shall—
7	"(1) review the activities of the Administration,
8	and other Federal activities as appropriate, relating
9	to tsunami research, detection, forecasting, warning,
10	mitigation, resiliency, and preparation; and
11	"(2) submit to the Administrator and such oth-
12	ers as the Administrator considers appropriate—
13	"(A) the findings of the working group
14	with respect to the most recent review con-
15	ducted pursuant to paragraph (1); and
16	"(B) such recommendations for legislative
17	or administrative action as the working group
18	considers appropriate to improve Federal tsu-
19	nami research, detection, forecasting, warning,
20	mitigation, resiliency, and preparation.
21	"(d) Reports to Congress.—Not less frequently
22	than once every 4 years, the Administrator shall submit
23	to the Committee on Commerce, Science, and Transpor-
24	tation of the Senate, and the Committee on Science,
25	Space, and Technology of the House of Representatives

1	a report on the findings and recommendations received by
2	the Administrator under subsection (c)(2).".
3	SEC. 9. REPORT ON IMPLEMENTATION OF TSUNAMI WARN-
4	ING AND EDUCATION ACT.
5	(a) In General.—Not later than 1 year after the
6	date of the enactment of this Act, the Administrator shall
7	submit to Congress a report on the implementation of the
8	Tsunami Warning and Education Act (33 U.S.C. 3201 et
9	seq.).
10	(b) Elements.—The report required by subsection
11	(a) shall include the following:
12	(1) A detailed description of the progress made
13	in implementing sections $4(d)(6)$, $5(b)(6)$, and
14	6(b)(4) of the Tsunami Warning and Education Act.
15	(2) A description of the ways that tsunami
16	warnings and warning products issued by the Tsu-
17	nami Forecasting and Warning Program established
18	under section 4 of the Tsunami Warning and Edu-
19	cation Act (33 U.S.C. 3203) can be standardized
20	and streamlined with warnings and warning prod-
21	ucts for hurricanes, coastal storms, and other coast-
22	al flooding events.
23	SEC. 10. AUTHORIZATION OF APPROPRIATIONS.
24	Section 9 of the Act, as redesignated by section
25	8(a)(1) of this Act, is amended to read as follows:

1 "SEC. 9. AUTHORIZATION OF APPROPRIATIONS.

- 2 "There are authorized to be appropriated to the Ad-
- 3 ministrator to carry out this Act \$27,000,000 for each of
- 4 fiscal years 2015 through 2017, of which—
- 5 "(1) not less than 27 percent of the amount ap-
- 6 propriated for each fiscal year shall be for activities
- 7 under the National Tsunami Hazard Mitigation Pro-
- 8 gram under section 5; and
- 9 "(2) not less than 8 percent of the amount ap-
- propriated for each fiscal year shall be for the Tsu-
- 11 nami Research Program under section 6.".

12 SEC. 11. OUTREACH RESPONSIBILITIES.

- 13 (a) IN GENERAL.—The Administrator of the Na-
- 14 tional Oceanic and Atmospheric Administration, in coordi-
- 15 nation with State and local emergency managers, shall de-
- 16 velop and carry out formal outreach activities to improve
- 17 tsunami education and awareness and foster the develop-
- 18 ment of resilient communities. Outreach activities may in-
- 19 clude—
- 20 (1) the development of outreach plans to ensure
- 21 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
- 26 managers;

1	(2) working with appropriate local Weather
2	Forecast Offices to ensure they have the technical
3	knowledge and capability to disseminate tsunami
4	warnings to the communities they serve; and
5	(3) evaluating the effectiveness of warnings and
6	of coordination with local Weather Forecast Offices
7	after significant tsunami events.
8	(b) Coordinating Committee of the National
9	TSUNAMI HAZARD MITIGATION PROGRAM.—
10	(1) In General.—The Administrator shall con-
11	vene a coordinating committee to assist the Adminis-
12	trator in the conduct of the program required by
13	section 5(a) of the Tsunami Warning and Education
14	Act (33 U.S.C. 3204(a)).
15	(2) Composition.—The coordinating com-
16	mittee shall be composed of members from each of
17	the States at risk from tsunami, and any other such
18	representatives as the Administrator considers ap-
19	propriate to represent Federal, State, tribal, terri-
20	torial, and local governments.
21	(3) Subcommittees.—The Administrator may
22	approve the formation of subcommittees to address
23	specific program components or regional issues.
24	(4) Responsibilities.—The coordinating com-
25	mittee shall—

1	(A) provide feedback on how funds should
2	be prioritized to carry out the program required
3	by section 5(a) of the Tsunami Warning and
4	Education Act (33 U.S.C. 3204(a));
5	(B) ensure that areas described in section
6	4(c) of the Tsunami Warning and Education
7	Act (33 U.S.C. 3203(c)) in the United States
8	and its territories have the opportunity to par-
9	ticipate in the program;
10	(C) provide recommendations to the Ad-
11	ministrator on how to improve and continuously
12	advance the TsunamiReady program, particu-
13	larly on ways to make communities more tsu-
14	nami resilient through the use of inundation
15	maps and models and other hazard mitigation
16	practices; and
17	(D) ensure that all components of the pro-
18	gram required by section 5(a) of the Tsunami
19	Warning and Education Act (33 U.S.C.
20	3204(a)) are integrated with ongoing State-
21	based hazard warning, risk management, and
22	resilience activities, including—
23	(i) integrating activities with emer-
24	gency response plans, disaster recovery.

1	hazard mitigation, and community develop-
2	ment programs in affected areas; and
3	(ii) integrating information to assist
4	in tsunami evacuation route planning.