

ficers and employees of Federal agencies may collaborate with, and participate in, such research and projects to the extent requested by the grant recipient. The Secretary shall consult with the oceans and human health advisory panel established under subsection (b) and may work cooperatively with other agencies participating in the interagency program to establish joint criteria for such research and projects.

(2) Grants under this subsection shall be awarded through a competitive peer-reviewed, merit-based process that may be conducted jointly with other agencies participating in the interagency program.

(e) Traineeships

The Secretary of Commerce is authorized to establish a program to provide traineeships, training, and experience to pre-doctoral and post-doctoral students and to scientists at the beginning of their careers who are interested in the oceans in human health research conducted under the NOAA initiative.

(Pub. L. 108-447, div. B, title IX, §903, Dec. 8, 2004, 118 Stat. 2933.)

REFERENCES IN TEXT

The Federal Advisory Committee Act, referred to in subsec. (b), is Pub. L. 92-463, Oct. 6, 1972, 86 Stat. 770, as amended, which is set out in the Appendix to Title 5, Government Organization and Employees.

§ 3103. Public information and outreach

The Secretary of Commerce, in consultation with other Federal agencies, and in cooperation with the National Sea Grant program, shall design and implement a program to disseminate information developed under the NOAA Oceans and Human Health Initiative, including research, assessments, and findings regarding the relationship between oceans and human health, on both a regional and national scale. The information, particularly with respect to potential health risks, shall be made available in a timely manner to appropriate Federal or State agencies, involved industries, and other interested persons through a variety of means, including through the Internet.

(Pub. L. 108-447, div. B, title IX, §904, Dec. 8, 2004, 118 Stat. 2934; Pub. L. 114-327, title VI, §601, Dec. 16, 2016, 130 Stat. 1998.)

AMENDMENTS

2016—Pub. L. 114-327 struck out subsec. (a) designation and heading, realigned margins, and struck out subsec. (b) which related to NOAA Oceans and Human Health Initiative annual report.

§ 3104. Authorization of appropriations

There are authorized to be appropriated to the Secretary of Commerce to carry out the National Oceanic and Atmospheric Administration Oceans and Human Health Initiative, \$60,000,000 for fiscal years 2005 through 2008. Not less than 50 percent of the amounts appropriated to carry out the initiative shall be utilized in each fiscal year to support the extramural grant and traineeship programs of the Initiative.

(Pub. L. 108-447, div. B, title IX, §905, Dec. 8, 2004, 118 Stat. 2934.)

CHAPTER 45—TSUNAMI WARNING AND EDUCATION

Sec. 3201.	Definitions.
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§ 3201. Definitions

In this chapter:

(1) The term “Administration” means the National Oceanic and Atmospheric Administration.

(2) The term “Administrator” means the Administrator of the National Oceanic and Atmospheric Administration.

(Pub. L. 109-424, §2, Dec. 20, 2006, 120 Stat. 2902; Pub. L. 109-479, title VIII, §802, Jan. 12, 2007, 120 Stat. 3653.)

CODIFICATION

Pub. L. 109-424 and title VIII of Pub. L. 109-479 enacted substantially identical sections. This section is based on the text of section 802 of Pub. L. 109-479.

SHORT TITLE

Pub. L. 109-479, title VIII, §801, Jan. 12, 2007, 120 Stat. 3653, provided that: “This title [enacting this chapter] may be cited as the ‘Tsunami Warning and Education Act.’”

Pub. L. 109-424, §1, Dec. 20, 2006, 120 Stat. 2902, provided that: “This Act [enacting this chapter] may be cited as the ‘Tsunami Warning and Education Act.’”

§ 3202. Purposes

The purposes of this chapter are—

(1) to improve tsunami detection, forecasting, warnings, notification, outreach, and mitigation to protect life and property in the United States;

(2) to enhance and modernize the existing Pacific Tsunami Warning System to increase coverage, reduce false alarms, and increase the accuracy of forecasts and warnings, and to expand detection and warning systems to include other vulnerable States and United States territories, including the Atlantic Ocean, Caribbean Sea, and Gulf of Mexico areas;

(3) to improve mapping, modeling, research, and assessment efforts to improve tsunami detection, forecasting, warnings, notification, outreach, mitigation, response, and recovery;

(4) to improve and increase education and outreach activities and ensure that those receiving tsunami warnings and the at-risk public know what to do when a tsunami is approaching;

(5) to provide technical and other assistance to speed international efforts to establish regional tsunami warning systems in vulnerable areas worldwide, including the Indian Ocean; and

(6) to improve Federal, State, and international coordination for detection, warnings, and outreach for tsunami and other coastal impacts.

(Pub. L. 109-424, §3, Dec. 20, 2006, 120 Stat. 2902; Pub. L. 109-479, title VIII, §803, Jan. 12, 2007, 120 Stat. 3653.)

CODIFICATION

Pub. L. 109-424 and title VIII of Pub. L. 109-479 enacted substantially identical sections. This section is based on the text of section 803 of Pub. L. 109-479.

§ 3203. Tsunami forecasting and warning program

(a) In general

The Administrator, through the National Weather Service and in consultation with other relevant Administration offices, shall operate a program to provide tsunami detection, forecasting, and warnings for the Pacific and Arctic Ocean regions and for the Atlantic Ocean, Caribbean Sea, and Gulf of Mexico region.

(b) Components

The program under this section shall—

- (1) include the tsunami warning centers established under subsection (d);
- (2) utilize and maintain an array of robust tsunami detection technologies;
- (3) maintain detection equipment in operational condition to fulfill the detection, forecasting, and warning requirements of this chapter;
- (4) provide tsunami forecasting capability based on models and measurements, including tsunami inundation models and maps for use in increasing the preparedness of communities, including through the TsunamiReady program;
- (5) maintain data quality and management systems to support the requirements of the program;
- (6) include a cooperative effort among the Administration, the United States Geological Survey, and the National Science Foundation under which the Geological Survey and the National Science Foundation shall provide rapid and reliable seismic information to the Administration from international and domestic seismic networks;
- (7) provide a capability for the dissemination of warnings to at-risk States and tsunami communities through rapid and reliable notification to government officials and the public, including utilization of and coordination with existing Federal warning systems, including the National Oceanic and Atmospheric Administration Weather Radio All Hazards Program;
- (8) allow, as practicable, for integration of tsunami detection technologies with other environmental observing technologies; and
- (9) include any technology the Administrator considers appropriate to fulfill the objectives of the program under this section.

(c) System areas

The program under this section shall operate—

- (1) a Pacific tsunami warning system capable of forecasting tsunami anywhere in the Pacific and Arctic Ocean regions and providing adequate warnings; and
- (2) an Atlantic Ocean, Caribbean Sea, and Gulf of Mexico tsunami warning system capa-

ble of forecasting tsunami and providing adequate warnings in areas of the Atlantic Ocean, 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.

(d) Tsunami warning centers

(1) In general

The Administrator, through the National Weather Service, shall maintain or establish—

(A) a Pacific Tsunami Warning Center in Hawaii;

(B) a West Coast and Alaska Tsunami Warning Center in Alaska; and

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

(2) Responsibilities

The responsibilities of each tsunami warning center shall include—

(A) continuously monitoring data from seismological, deep ocean, and tidal monitoring stations;

(B) evaluating earthquakes 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) disseminating forecasts and tsunami warning bulletins to Federal, State, and local government officials and the public;

(E) coordinating with the tsunami hazard mitigation program described in section 3204 of this title to ensure ongoing sharing of information between forecasters and emergency management officials; and

(F) making data gathered under this chapter and post-warning analyses conducted by the National Weather Service or other relevant Administration offices available to researchers.

(e) Transfer of technology; maintenance and upgrades

(1) In general

In carrying out this section, the National Weather Service, in consultation with other relevant Administration offices, shall—

(A) develop requirements for the equipment used to forecast tsunami, which shall include provisions for multipurpose detection platforms, reliability and performance metrics, and to the maximum extent practicable how the equipment will be integrated with other United States and global ocean and coastal observation systems, the global earth observing system of systems, global seismic networks, and the Advanced National Seismic System;

(B) develop and execute a plan for the transfer of technology from ongoing research described in section 3205 of this title into the program under this section; and

(C) ensure that maintaining operational tsunami detection equipment is the highest