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105TH CONGRESS
1ST SESSION

H. R. 2249

To authorize appropriations for carrying out the Earthquake Hazards Reduction Act of 1977 for fiscal years 1998 and 1999, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

JULY 24, 1997

Mr. SENSENBRENNER (for himself and Mr. BROWN of California) introduced the following bill; which was referred to the Committee on Science, and in addition to the Committee on Resources, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

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A BILL

To authorize appropriations for carrying out the Earthquake Hazards Reduction Act of 1977 for fiscal years 1998 and 1999, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. AUTHORIZATION OF APPROPRIATIONS.

Section 12 of the Earthquake Hazards Reduction Act of 1977 (42 U.S.C. 7706) is amended—

(1) in subsection (a)(7)—

(A) by striking ''and'' after ''1995,''; and

(B) by inserting before the period at the end the following: ‘‘, $20,900,000 for the fiscal year ending September 30, 1998, and $21,500,000 for the fiscal year ending September 30, 1999’’;

(2) in subsection (b)—

(A) by striking ‘‘and’’ after ‘‘September 30, 1995;’’;

(B) by inserting before the period at the end the following: ‘‘; $52,565,660 for the fiscal year ending September 30, 1998, of which $3,800,000 shall be used for the Global Seismic Network operated by the Agency; and $54,052,630 for the fiscal year ending September 30, 1999, of which $3,800,000 shall be used for the Global Seismic Network operated by the Agency’’; and

(C) by adding at the end the following: ‘‘Of the amounts authorized to be appropriated under this subsection, at least—

‘‘(1) $8,000,000 of the amount authorized to be appropriated for the fiscal year ending September 30, 1998; and

‘‘(2) $8,250,000 of the amount authorized for the fiscal year ending September 30, 1999,

shall be used for carrying out a competitive, peer-reviewed program under which the Director, in close coordination with and as a complement to related activities of the United States Geological Survey, awards grants to, or enters into cooperative agreements with, State and local governments and persons or entities from the academic community and the private sector.'';

(3) in subsection (c)—

(A) by striking ''and'' after ''September 30, 1995;''; and

(B) by inserting before the period at the end the following: '', (3) $18,450,000 for engineering research and $11,920,000 for geosciences research for the fiscal year ending September 30, 1998, and (4) $19,000,000 for engineering research and $12,280,000 for geosciences research for the fiscal year ending September 30, 1999''; and

(4) in the last sentence of subsection (d)—

(A) by striking ''and'' after ''September 30, 1995,''; and

(B) by inserting before the period at the end the following: '', $2,000,000 for the fiscal year ending September 30, 1998, and

$2,060,000 for the fiscal year ending September 30, 1999''.

SEC. 2. AUTHORIZATION OF REAL-TIME SEISMIC HAZARD WARNING SYSTEM DEVELOPMENT, AND OTHER ACTIVITIES.

(a) AUTOMATIC SEISMIC WARNING SYSTEM DEVELOPMENT.—

(1) DEFINITIONS.—In this section:

(A) DIRECTOR.—The term ''Director'' means the Director of the United States Geological Survey.

(B) HIGH-RISK ACTIVITY.—The term ''high-risk activity'' means an activity that may be adversely affected by a moderate to severe seismic event (as determined by the Director). The term includes high-speed rail transportation.

(C) REAL-TIME SEISMIC WARNING SYSTEM.—The term ''real-time seismic warning system'' means a system that issues warnings in real-time from a network of seismic sensors to a set of analysis processors, directly to receivers related to high-risk activities.

(2) IN GENERAL.—The Director shall conduct a program to develop a prototype real-time seismic

warning system. The Director may enter into such agreements or contracts as may be necessary to carry out the program.

(3) UPGRADE OF SEISMIC SENSORS.—In carrying out a program under paragraph (2), in order to increase the accuracy and speed of seismic event analysis to provide for timely warning signals, the Director shall provide for the upgrading of the network of seismic sensors participating in the prototype to increase the capability of the sensors—

(A) to measure accurately large magnitude seismic events (as determined by the Director); and

(B) to acquire additional parametric data.

(4) DEVELOPMENT OF COMMUNICATIONS AND COMPUTATION INFRASTRUCTURE.—In carrying out a program under paragraph (2), the Director shall develop a communications and computation infrastructure that is necessary—

(A) to process the data obtained from the upgraded seismic sensor network referred to in paragraph (3); and

(B) to provide for, and carry out, such communications engineering and development as is necessary to facilitate—

(i) the timely flow of data within a real-time seismic hazard warning system; and

(ii) the issuance of warnings to receivers related to high-risk activities.

(5) PROCUREMENT OF COMPUTER HARDWARE AND COMPUTER SOFTWARE.—In carrying out a program under paragraph (2), the Director shall procure such computer hardware and computer software as may be necessary to carry out the program.

(6) REPORTS ON PROGRESS.—

(A) IN GENERAL.—Not later than 120 days after the date of enactment of this Act, the Director shall prepare and submit to Congress a report that contains a plan for implementing a real-time seismic hazard warning system.

(B) ADDITIONAL REPORTS.—Not later than 1 year after the date on which the Director submits the report under subparagraph (A), and annually thereafter, the Director shall prepare and submit to Congress a report that summarizes the progress of the Director in implementing the plan referred to in subparagraph (A).

(7) AUTHORIZATION OF APPROPRIATIONS.—In addition to the amounts made available to the Director under section 12(b) of the Earthquake Hazards Reduction Act of 1977 (42 U.S.C. 7706(b)), there are authorized to be appropriated to the Department of the Interior, to be used by the Director to carry out paragraph (2), $3,000,000 for each of fiscal years 1998 and 1999.

(b) SEISMIC MONITORING NETWORKS ASSESSMENT.—

(1) IN GENERAL.—The Director shall provide for an assessment of regional seismic monitoring networks in the United States. The assessment shall address—

(A) the need to update the infrastructure used for collecting seismological data for research and monitoring of seismic events in the United States;

(B) the need for expanding the capability to record strong ground motions, especially for urban area engineering purposes;

(C) the need to measure accurately large magnitude seismic events (as determined by the Director);

(D) the need to acquire additional parametric data; and

(E) projected costs for meeting the needs described in subparagraphs (A) through (D).

(2) RESULTS.—The Director shall transmit the results of the assessment conducted under this subsection to Congress not later than 1 year after the date of enactment of this Act.

(c) EARTH SCIENCE TEACHING MATERIALS.—

(1) DEFINITIONS.—In this subsection:

(A) LOCAL EDUCATIONAL AGENCY.—The term ''local educational agency'' has the meaning given that term in section 14101 of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 8801).

(B) SCHOOL.—The term ''school'' means a nonprofit institutional day or residential school that provides education for any of the grades kindergarten through grade 12.

(2) TEACHING MATERIALS.—In a manner consistent with the requirement under section 5(b)(4) of the Earthquake Hazards Reduction Act of 1977 (42 U.S.C. 7704(b)(4)) and subject to a merit based competitive process, the Director of the National Science Foundation may use funds made available to

him or her under section 12(c) of such Act (42 U.S.C. 7706(c)) to develop, and make available to schools and local educational agencies for use by schools, at a minimal cost, earth science teaching materials that are designed to meet the needs of elementary and secondary school teachers and students.

(d) IMPROVED SEISMIC HAZARD ASSESSMENT.—

(1) IN GENERAL.—As soon as practicable after the date of enactment of this Act, the Director shall conduct a project to improve the seismic hazard assessment of seismic zones.

(2) REPORTS.—

(A) IN GENERAL.—Not later than 1 year after the date of enactment of this Act, and annually during the period of the project, the Director shall prepare, and submit to Congress, a report on the findings of the project.

(B) FINAL REPORT.—Not later than 60 days after the date of termination of the project conducted under this subsection, the Director shall prepare and submit to Congress a report concerning the findings of the project.

(e) STUDY OF NATIONAL EARTHQUAKE EMERGENCY TRAINING CAPABILITIES.—

(1) IN GENERAL.—The Director of the Federal Emergency Management Agency shall conduct an assessment of the need for additional Federal disaster-response training capabilities that are applicable to earthquake response.

(2) CONTENTS OF ASSESSMENT.—The assessment conducted under this subsection shall include—

(A) a review of the disaster training programs offered by the Federal Emergency Management Agency at the time of the assessment;

(B) an estimate of the number and types of emergency response personnel that have, during the period beginning on January 1, 1990, and ending on July 1, 1997, sought the training referred to in subparagraph (A), but have been unable to receive that training as a result of the oversubscription of the training capabilities of the Federal Emergency Management Agency; and

(C) a recommendation on the need to provide additional Federal disaster-response training centers.

(3) REPORT.—Not later than February 15, 1998, the Director of the Federal Emergency Man-

agement Agency shall prepare and submit to Congress a report that addresses the results of the assessment conducted under this subsection.

SEC. 3. COMPREHENSIVE ENGINEERING RESEARCH PLAN.

(a) NATIONAL SCIENCE FOUNDATION.—Section 5(b)(4) of the Earthquake Hazards Reduction Act of 1977 (42 U.S.C. 7704(b)(4)) is amended—

(1) by striking ''and'' at the end of subparagraph (D);

(2) by striking the period at the end of subparagraph (E) and inserting ''; and''; and

(3) by adding at the end the following:

''(F) develop, in conjunction with the Federal Emergency Management Agency, the National Institute of Standards and Technology, and the United States Geological Survey, a comprehensive plan for earthquake engineering research to effectively use existing testing facilities and laboratories (in existence at the time of the development of the plan), upgrade facilities and equipment as needed, and integrate new, innovative testing approaches to the research infrastructure in a systematic manner.''.

(b) FEDERAL EMERGENCY MANAGEMENT AGENCY.—Section 5(b)(1) of the Earthquake Hazards Reduction Act of 1977 (42 U.S.C. 7704(b)(1)) is amended—

(1) by striking ''and'' at the end of subparagraph (D);

(2) by striking the period at the end of subparagraph (E) and inserting ''; and''; and

(3) by adding at the end the following:

''(F) work with the National Science Foundation, the National Institute of Standards and Technology, and the United States Geological Survey, to develop a comprehensive plan for earthquake engineering research to effectively use existing testing facilities and laboratories (existing at the time of the development of the plan), upgrade facilities and equipment as needed, and integrate new, innovative testing approaches to the research infrastructure in a systematic manner.''.

(c) UNITED STATES GEOLOGICAL SURVEY.—Section 5(b)(3) of the Earthquake Hazards Reduction Act of 1977 (42 U.S.C. 7704(b)(3)) is amended—

(1) by striking ''and'' at the end of subparagraph (E);

(2) by striking the period at the end of subparagraph (G) and inserting ''; and''; and

(3) by adding at the end the following:

''(H) work with the National Science Foundation, the Federal Emergency Management Agency, and the National Institute of Standards and Technology to develop a comprehensive plan for earthquake engineering research to effectively use existing testing facilities and laboratories (in existence at the time of the development of the plan), upgrade facilities and equipment as needed, and integrate new, innovative testing approaches to the research infrastructure in a systematic manner.''.

(d) NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY.—Section 5(b)(5) of the Earthquake Hazards Reduction Act of 1977 (42 U.S.C. 7704(b)(5)) is amended—

(1) by striking ''and'' at the end of subparagraph (B);

(2) by striking the period at the end of subparagraph (C) and inserting ''; and''; and

(3) by adding at the end the following:

''(D) work with the National Science Foundation, the Federal Emergency Manage-

ment Agency, and the United States Geological Survey to develop a comprehensive plan for earthquake engineering research to effectively use existing testing facilities and laboratories (in existence at the time of the development of the plan), upgrade facilities and equipment as needed, and integrate new, innovative testing approaches to the research infrastructure in a systematic manner.''.

SEC. 4. REPEALS.

Sections 6 and 7 of the Earthquake Hazards Reduction Act of 1977 (42 U.S.C. 7705 and 7705a) are repealed.

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