

115TH CONGRESS
1ST SESSION

S. 1768

To reauthorize and amend the National Earthquake Hazards Reduction Program, and for other purposes.

IN THE SENATE OF THE UNITED STATES

SEPTEMBER 6, 2017

Mrs. FEINSTEIN (for herself, Ms. MURKOWSKI, Mr. GARDNER, Mrs. MURRAY, Mr. WYDEN, Ms. HARRIS, Mr. MERKLEY, and Ms. CANTWELL) introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

A BILL

To reauthorize and amend the National Earthquake Hazards Reduction Program, 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.**

4 This Act may be cited as the “National Earthquake
5 Hazards Reduction Program Reauthorization Act of
6 2017”.

1 **SEC. 2. MODIFICATION OF FINDINGS AND PURPOSE.**

2 (a) FINDINGS.—Section 2 of the Earthquake Haz-
3 ards Reduction Act of 1977 (42 U.S.C. 7701) is amend-
4 ed—

5 (1) in paragraph (1)—

6 (A) by inserting “Oregon,” after “New
7 York,”; and

8 (B) by inserting “Tennessee,” after
9 “South Carolina”;

10 (2) in paragraph (2), by striking “prediction
11 techniques and”;

12 (3) by striking paragraph (4) and inserting the
13 following:

14 “(4) A well-funded seismological research pro-
15 gram could provide the scientific understanding
16 needed to fully implement an effective earthquake
17 early warning system.”;

18 (4) in paragraphs (6) and (7), by striking “life-
19 lines” each place it appears and inserting “lifeline
20 infrastructure”; and

21 (5) by adding at the end the following:

22 “(12) The built environment has generally been
23 constructed and maintained to meet the needs of the
24 users under normal conditions. When earthquakes
25 occur, the built environment is generally designed to
26 prevent severe injuries or loss of human life and is

1 not expected to remain operational or able to recover
2 under any specified schedule.

3 “(13) The National Research Council published
4 a study on reducing hazards and risks associated
5 with earthquakes based on the goals and objectives
6 for achieving national earthquake resilience de-
7 scribed in the strategic plan entitled ‘Strategic Plan
8 for the National Earthquake Hazards Reduction
9 Program’. The study and an accompanying report
10 called for work in 18 tasks focused on research, pre-
11 paredness, and mitigation and annual funding of ap-
12 proximately \$300,000,000 per year for 20 years.”.

13 (b) PURPOSE.—Section 3 of such Act (42 U.S.C.
14 7702) is amended—

15 (1) in the matter preceding paragraph (1), in
16 the first sentence, by inserting “and increase the re-
17 silience of communities” after “future earthquakes”;

18 (2) in paragraph (1), by inserting “to individ-
19 uals and the communities” after “an earthquake”;

20 (3) in paragraph (2), by striking “in time of
21 disaster” and inserting “to facilitate community-
22 wide post-earthquake recovery and in times of dis-
23 aster”;

24 (4) in paragraph (3), by striking “for predicting
25 damaging earthquakes and”;

1 (5) in paragraph (4), by inserting “and plan-
2 ning” after “model building”; and

3 (6) in paragraph (5), by striking “reconstruc-
4 tion” and inserting “re-occupancy, recovery, recon-
5 struction,”.

6 (c) DEFINITIONS.—

7 (1) LIFELINE INFRASTRUCTURE.—

8 (A) IN GENERAL.—Section 4(6) of such
9 Act (42 U.S.C. 7703(6)) is amended by striking
10 “lifelines” and inserting “lifeline infrastruc-
11 ture”.

12 (B) CONFORMING AMENDMENT.—Such Act
13 (42 U.S.C. 7701 et seq.) is amended by striking
14 “lifelines” each place it appears and inserting
15 “lifeline infrastructure”.

16 (2) COMMUNITY RESILIENCE.—Section 4 of
17 such Act (42 U.S.C. 7703) is amended by adding at
18 the end the following:

19 “(3) The term ‘community resilience’ means the
20 ability of a community to prepare and plan for, ab-
21 sorb, recover from, and more successfully adapt to
22 adverse seismic events.”.

1 **SEC. 3. MODIFICATION OF NATIONAL EARTHQUAKE HAZ-**
 2 **ARDS REDUCTION PROGRAM.**

3 (a) MODIFICATION OF PROGRAM ACTIVITIES.—Sub-
 4 section (a)(2) of section 5 of the Earthquake Hazards Re-
 5 duction Act of 1977 (42 U.S.C. 7704) is amended—

6 (1) in subparagraph (B)—

7 (A) in clause (iii), by inserting “, commu-
 8 nity resilience,” after “seismic risk”; and

9 (B) by adding at the end the following:

10 “(iv) publishing a systematic set of
 11 maps of active faults and folds, lique-
 12 faction susceptibility, susceptibility for
 13 earthquake induced landslides, and other
 14 seismically induced hazards; and”;

15 (2) in subparagraph (D), by striking “develop,
 16 operate” and all that follows through “7708),” and
 17 inserting “continue the development of the Advanced
 18 National Seismic System, including earthquake early
 19 warning capabilities”.

20 (b) AMENDMENTS RELATING TO INTERAGENCY CO-
 21 ORDINATING COMMITTEE ON EARTHQUAKE HAZARDS RE-
 22 Duction.—

23 (1) CLARIFICATION REGARDING MEMBER-
 24 SHIP.—Subparagraph (B) of subsection (a)(3) of
 25 such section is amended, in the matter preceding

1 clause (i), by striking “The committee” and insert-
 2 ing “In addition to the Director, the committee”.

3 (2) REDUCTION IN MINIMUM FREQUENCY OF
 4 MEETINGS OF INTERAGENCY COORDINATING COM-
 5 MITTEE ON EARTHQUAKE HAZARDS REDUCTION.—

6 Subparagraph (C) of such subsection is amended by
 7 striking “not less than 3 times a year” and inserting
 8 “not less frequently than once each year”.

9 (3) EXPANSION OF DUTIES.—Subparagraph
 10 (D) of such subsection is amended to read as fol-
 11 lows:

12 “(D) DUTIES.—

13 “(i) GENERAL DUTY.—The Inter-
 14 agency Coordinating Committee shall over-
 15 see the planning, management, and coordi-
 16 nation of the Program.

17 “(ii) SPECIFIC DUTIES.—The duties
 18 of the Interagency Coordinating Committee
 19 include the following:

20 “(I) Developing, not later than 6
 21 months after the date of the enact-
 22 ment of the National Earthquake
 23 Hazards Reduction Program Reau-
 24 thorization Act of 2004 and updating
 25 periodically—

1 “(aa) a strategic plan that
2 establishes goals and priorities
3 for the Program activities de-
4 scribed under subsection (a)(2);
5 and

6 “(bb) a detailed manage-
7 ment plan to implement such
8 strategic plan.

9 “(II) Developing a coordinated
10 interagency budget for the Program
11 that will ensure appropriate balance
12 among the Program activities de-
13 scribed under subsection (a)(2), and,
14 in accordance with the plans devel-
15 oped under subclause (I), submitting
16 such budget to the Director of the Of-
17 fice of Management and Budget at
18 the time designated by the Director
19 for agencies to submit biennial budg-
20 ets.

21 “(III) Developing interagency
22 memorandums of understanding with
23 any relevant Federal agencies on data
24 sharing and resource commitment in
25 the event of an earthquake disaster.

1 “(IV) Coordinating with the Ad-
 2 ministrators of the National Aero-
 3 nautics and Space Administration and
 4 the Administrator of the National
 5 Oceanic and Atmospheric Administra-
 6 tion on data sharing and resource al-
 7 location to ensure judicious use of
 8 Government resources and the free-
 9 flowing exchange of information re-
 10 lated to earthquakes.

11 “(V) Coordinating with the Sec-
 12 retary of Agriculture and the Sec-
 13 retary of the Interior on the use of
 14 public lands for earthquake moni-
 15 toring and research stations, and re-
 16 lated data collection.

17 “(VI) Coordinating with the Sec-
 18 retary of Transportation and the Sec-
 19 retary of Housing and Urban Devel-
 20 opment on the effects of earthquakes
 21 on transportation and housing stocks.

22 “(iii) ASSISTANCE FROM SECRETARY
 23 OF AGRICULTURE AND SECRETARY OF THE
 24 INTERIOR.—To the extent practicable, the
 25 Secretary of Agriculture and the Secretary

1 of the Interior shall expedite any request
 2 for a permit to use public land under
 3 clause (ii)(V).”.

4 (4) REDUCTION IN FREQUENCY OF REPORTING
 5 BY INTERAGENCY COORDINATING COMMITTEE ON
 6 EARTHQUAKE HAZARDS REDUCTION.—

7 (A) IN GENERAL.—Subsection (a)(4) of
 8 such section is amended—

9 (i) in the paragraph heading, by strik-
 10 ing “ANNUAL” and inserting “BIENNIAL”;

11 (ii) by redesignating subparagraphs
 12 (A) through (F) as clauses (i) through (vi),
 13 respectively, and adjusting the indentation
 14 of the margin of such clauses, as so redes-
 15 ignated, two ems to the right;

16 (iii) in the matter preceding clause (i),
 17 as redesignated by clause (ii), by striking
 18 “The Interagency” and all that follows
 19 through “Senate” and inserting the fol-
 20 lowing:

21 “(A) IN GENERAL.—Not less frequently
 22 than once every two years, the Interagency Co-
 23 ordinating Committee shall submit to the Com-
 24 mittee on Commerce, Science, and Transpor-
 25 tation, the Committee on Energy and Natural

Resources, and the Committee on Homeland Security and Governmental Affairs of the Senate and the Committee on Energy and Commerce, the Committee on Natural Resources, and the Committee on Homeland Security of the House of Representatives a report on the Program”; and

(iv) by adding at the end the following:

“(B) SUPPORT FOR PREPARATION OF REPORT.—Each head of a Program agency shall submit to the Director of the National Institute of Standards and Technology such information as the Director may request for the preparation of a report under subparagraph (A) not later than 90 days after the date on which the Director requests such information.”.

(B) EFFECTIVE DATE.—The amendments made by subparagraph (A) shall take effect on the first day of the first fiscal year beginning after the date of the enactment of this Act.

(c) MODIFICATION OF RESPONSIBILITIES OF NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY.—Subsection (b) of such section is amended—

(1) in paragraph (1)—

1 (A) in subparagraph (A), by striking “and
 2 constructing,” and inserting “constructing,
 3 evaluating, and retrofitting”; and

4 (B) in subparagraph (D), by inserting
 5 “provide new and” after “research to”; and

6 (2) in paragraph (5), in the matter preceding
 7 subparagraph (A), in the first sentence, by inserting
 8 “community resilience through” after “improve”.

9 (d) MODIFICATION OF RESPONSIBILITIES OF FED-
 10 ERAL EMERGENCY MANAGEMENT AGENCY.—Paragraph
 11 (2) of subsection (b) of such section is amended to read
 12 as follows:

13 “(2) DEPARTMENT OF HOMELAND SECURITY;
 14 FEDERAL EMERGENCY MANAGEMENT AGENCY.—

15 “(A) PROGRAM RESPONSIBILITIES.—The
 16 Administrator of the Federal Emergency Man-
 17 agement Agency—

18 “(i) shall operate a program of grants
 19 and assistance to enable States to develop
 20 mitigation, preparedness, and response
 21 plans, purchase necessary instrumentation,
 22 prepare inventories and conduct seismic
 23 safety inspections of critical structures and
 24 lifelines, update building, land use plan-
 25 ning, and zoning codes and ordinances to

1 enhance seismic safety, increase earth-
2 quake awareness and education, and pro-
3 vide assistance to multi-State groups for
4 such purposes;

5 “(ii) shall support the implementation
6 of a comprehensive earthquake education,
7 outreach, and public awareness program,
8 including development of materials and
9 their wide dissemination to all appropriate
10 audiences and support public access to lo-
11 cality-specific information that may assist
12 the public in preparing for, mitigating
13 against, responding to and recovering from
14 earthquakes and related disasters;

15 “(iii) shall, in conjunction with the
16 Director of the National Institute of
17 Standards and Technology, other Federal
18 agencies, and private sector groups, use re-
19 search results to support the preparation,
20 maintenance, and wide dissemination of
21 seismic resistant design guidance and re-
22 lated information on building codes, stand-
23 ards, and practices for new and existing
24 buildings, structures, and lifelines, aid in
25 the development of performance-based de-

1 sign guidelines and methodologies, and
2 support model codes that are cost effective
3 and affordable in order to promote better
4 practices within the design and construc-
5 tion industry and reduce losses from earth-
6 quakes;

7 “(iv) shall enter into cooperative
8 agreements or contracts with States and
9 local jurisdictions and other Federal agen-
10 cies to establish demonstration projects on
11 earthquake hazard mitigation, to link
12 earthquake research and mitigation efforts
13 with emergency management programs, or
14 to prepare educational materials for na-
15 tional distribution; and

16 “(v) shall support the Director of the
17 National Institute of Standards and Tech-
18 nology in the completion of programmatic
19 goals.

20 “(B) STATE ASSISTANCE PROGRAM CRI-
21 TERIA.—In order to qualify for assistance
22 under subparagraph (A)(i), a State must—

23 “(i) demonstrate that the assistance
24 will result in enhanced seismic safety in
25 the State;

1 “(ii) provide 25 percent of the costs of
 2 the activities for which assistance is being
 3 given, except that the Administrator may
 4 lower or waive the cost-share requirement
 5 for these activities in exceptional cases of
 6 economic hardship; and

7 “(iii) meet such other requirements as
 8 the Administrator shall prescribe.”.

9 (e) MODIFICATION OF RESPONSIBILITIES OF UNITED
 10 STATES GEOLOGICAL SURVEY.—Subsection (b)(3) of such
 11 section is amended—

12 (1) in the matter preceding subparagraph (A),
 13 in the first sentence—

14 (A) by inserting “report on significant do-
 15 mestic and international earthquakes and” after
 16 “Survey shall”; and

17 (B) by striking “predictions.” and insert-
 18 ing “forecasts.”;

19 (2) in subparagraph (C), by striking “pre-
 20 dictions, including aftershock advisories” and insert-
 21 ing “alerts and early warnings”;

22 (3) by striking subparagraph (D) and inserting
 23 the following:

24 “(D) issue when necessary and feasible,
 25 and notify the Administrator of the Federal

1 Emergency Management Agency, the Director
 2 of the National Institute of Standards and
 3 Technology, and State and local officials, an
 4 alert and an earthquake warning;”;

5 (4) in subparagraph (E), in the matter pre-
 6 ceding clause (i), by striking “using” and inserting
 7 “including”;

8 (5) in subparagraph (I), by striking “; and”
 9 and inserting a semicolon;

10 (6) in subparagraph (J)—

11 (A) by inserting “and data” after “hazard
 12 maps”; and

13 (B) by striking the period at the end and
 14 inserting “; and”; and

15 (7) by adding at the end the following:

16 “(K) support the Director of the National
 17 Institute of Standards and Technology in the
 18 completion of programmatic goals.”.

19 (f) MODIFICATION OF RESPONSIBILITIES OF NA-
 20 TIONAL SCIENCE FOUNDATION.—Subsection (b)(4) of
 21 such section is amended—

22 (1) in subparagraph (B), by inserting “, State
 23 agencies, State geological surveys,”;

24 (2) in subparagraph (C), by inserting “to sup-
 25 port applied science in the production of a system-

1 atic series of earthquake-related geologic hazard
2 maps, and” after “Survey”;

3 (3) in subparagraph (D), by striking “George
4 E. Brown Jr. Network for Earthquake Engineering
5 and Simulation” and inserting “Natural Hazards
6 Engineering Research Infrastructure”;

7 (4) in subparagraph (G), by striking “; and”
8 and inserting a semicolon;

9 (5) in subparagraph (H), by striking the period
10 at the end and inserting “; and”;

11 (6) by adding at the end the following:

12 “(I) support the Director of the National
13 Institute of Standards and Technology in the
14 completion of programmatic goals.”;

15 (7) by redesignating subparagraphs (A) through
16 (I) as clauses (i) through (ix), respectively, and in-
17 denting such clauses accordingly;

18 (8) in the matter before clause (i), as redesign-
19 ated by paragraph (7), in the first sentence, by
20 striking “The National Science Foundation” and in-
21 serting the following:

22 “(A) IN GENERAL.—The National Science
23 Foundation”; and

24 (9) by adding at the end the following:

1 “(B) IDENTIFICATION OF FUNDING.—The
2 National Science Foundation shall—

3 “(i) note in any notice of Program
4 funding or other funding possibilities
5 under the Program that the funds are part
6 of the Program;

7 “(ii) track the awarding of Federal
8 funds through the Program; and

9 “(iii) not less frequently than once
10 every 2 years, submit to the director of the
11 Program a report specifying the amount of
12 Federal funds awarded to conduct research
13 that enhances the understanding of earth-
14 quake science.”.

15 **SEC. 4. REVIEW OF RISKS POSED BY EARTHQUAKES TO**
16 **THE UNITED STATES.**

17 (a) IN GENERAL.—As soon as practicable, but not
18 later than such date as is necessary for the Comptroller
19 General of the United States to submit the report required
20 by subsection (c) in accordance with such subsection, the
21 Comptroller General shall complete a review of risks posed
22 by earthquakes to the United States.

23 (b) ELEMENTS.—The review conducted under sub-
24 section (a) shall include the following:

25 (1) A comprehensive assessment of—

1 (A) the risks and hazards to the United
2 States posed by earthquakes, including risks
3 and hazards resulting from tsunamis and land-
4 slides that are generated by earthquakes;

5 (B) the efforts of the Federal Emergency
6 Management Agency and the National Institute
7 of Standards and Technology to improve the re-
8 siliency of the United States to earthquakes and
9 to identify important gaps in the resilience of
10 the United States to earthquakes;

11 (C) the progress made by the National In-
12 stitute of Standards and Technology and the
13 Interagency Coordinating Committee to coordi-
14 nate effectively the budget and activities of the
15 Program agencies (as defined in section 4 of
16 the Earthquake Hazards Reduction Act of 1977
17 (42 U.S.C. 7703)) in advancing the plans and
18 goals of the National Earthquake Hazards Re-
19 duction Program and how coordination among
20 the Program agencies can be improved;

21 (D) the extent to which the Federal Gov-
22 ernment, States, local, and tribal governments,
23 and the private sector are already implementing
24 strategies to improve resilience of the United
25 States to earthquakes; and

1 (E) the extent to which the research done
2 during the 40 years of the Program has been
3 applied to both public and private earthquake
4 risk and hazards reduction.

5 (2) Identification of such legislative or adminis-
6 trative action as may be appropriate to improve the
7 Program and the resilience of the United States to
8 earthquakes.

9 (c) REPORT.—As soon as practicable, but not later
10 than 3 years after the date of the enactment of this Act,
11 the Comptroller General shall submit to the Committee
12 on Commerce, Science, and Transportation, the Com-
13 mittee on Energy and Natural Resources, and the Com-
14 mittee on Homeland Security and Governmental Affairs
15 of the Senate and the Committee on Energy and Com-
16 merce, the Committee on Natural Resources, and the
17 Committee on Homeland Security of the House of Rep-
18 resentatives a report on the findings of the Comptroller
19 General with respect to the review completed under sub-
20 section (a).

21 **SEC. 5. SEISMIC STANDARDS.**

22 Section 8 of the Earthquake Hazards Reduction Act
23 of 1977 (42 U.S.C. 7705b) is amended to read as follows:

1 **“SEC. 8. SEISMIC STANDARDS.**

2 “(a) ASSESSMENT AND RECOMMENDATIONS.—Not
3 later than December 1, 2019, the Director of the National
4 Institute of Standards and Technology and the Adminis-
5 trator of the Federal Emergency Management Agency
6 shall jointly convene a committee of experts from Federal
7 agencies, nongovernmental organizations, private sector
8 entities, disaster management professional associations,
9 engineering professional associations, and professional
10 construction and homebuilding industry associations, to
11 assess and recommend options for improving the built en-
12 vironment and critical infrastructure to reflect perform-
13 ance goals stated in terms of post-earthquake reoccupancy
14 and functional recovery time.

15 “(b) REPORT TO CONGRESS.—Not later than June
16 30, 2020, the committee convened under paragraph (1)
17 shall submit to Congress a report on recommended options
18 for improving the built environment and critical infra-
19 structure to reflect performance goals stated in terms of
20 post-earthquake reoccupancy and functional recovery
21 time.”.

22 **SEC. 6. MANAGEMENT PLAN FOR ADVANCED NATIONAL**
23 **SEISMIC SYSTEM.**

24 (a) PLAN REQUIRED.—Not later than 1 year after
25 the date of the enactment of this Act, the United States
26 Geological Survey shall submit to Congress a 5-year man-

1 agement plan for the continued operation of the Advanced
2 National Seismic System.

3 (b) ELEMENTS.—The plan required by subsection (a)
4 shall include the following:

5 (1) Strategies to continue the development of
6 an earthquake early warning system.

7 (2) A mechanism for securing the participation
8 of State and regional level earthquake monitoring
9 entities, including those defunded by the Advanced
10 National Seismic System in the last five years.

11 (3) A plan to encourage and support the inte-
12 gration of geospatial data products into earthquake
13 monitoring in regions experiencing large earth-
14 quakes.

15 (4) A plan to ensure that there is an active,
16 geographically diverse, management and advisory
17 structure for the Advanced National Seismic Sys-
18 tem.

19 **SEC. 7. REPEAL OF EXPIRED AUTHORIZATIONS.**

20 Section 12 of the Earthquake Hazards Reduction Act
21 of 1977 (42 U.S.C. 7706) is hereby repealed.

22 **SEC. 8. TECHNICAL CORRECTIONS.**

23 (a) CORRECTION OF TITLE OF ADMINISTRATOR OF
24 THE FEDERAL EMERGENCY MANAGEMENT AGENCY.—

1 The Earthquake Hazards Reduction Act of 1977 (42
2 U.S.C. 7701 et seq.) is amended—

3 (1) in section 5 of the Earthquake Hazards Re-
4 duction Act of 1977 (42 U.S.C. 7704)—

5 (A) in subsection (a)(3)(B), as amended by
6 section 3(b)(1)—

7 (i) in the matter preceding clause (i),
8 by striking “the directors of”;

9 (ii) in clause (i), by inserting “the Ad-
10 ministrator of” before “the”; and

11 (iii) in clauses (ii) through (v), by in-
12 serting “the Director of” before “the” each
13 place it appears; and

14 (B) in subsection (b)(3)(C), as amended by
15 section 3(e), by striking “Director of the Fed-
16 eral” and inserting “Administrator of the Fed-
17 eral”; and

18 (2) in section 9 of such Act (42 U.S.C. 7705e),
19 by striking “Director of the Agency” and inserting
20 “Administrator of the Federal Emergency Manage-
21 ment Agency” each place it appears.

22 (b) REFERENCES TO THE ADVANCED NATIONAL
23 SEISMIC SYSTEM.—Such Act is amended—

24 (1) in section 13, in the section heading, by
25 striking “**ADVANCED NATIONAL SEISMIC RE-**

1 **SEARCH AND MONITORING SYSTEM**” and insert-
 2 ing “**ADVANCED NATIONAL SEISMIC SYSTEM**”;
 3 and

4 (2) by striking “Advanced National Seismic Re-
 5 search and Monitoring System” each place it ap-
 6 pears and inserting “Advanced National Seismic
 7 System”.

8 (c) **INCORRECT CROSS-REFERENCES.**—Paragraph
 9 (4) of section 5(a) of such Act (42 U.S.C. 7704(a)), as
 10 amended by section 3(b)(4)(A), is amended—

11 (1) in clauses (i) and (ii) of subparagraph (A),
 12 as redesignated by section 3(b)(4)(A), by striking
 13 “subparagraph (3)(A)” both places it appears and
 14 inserting “paragraph (3)(D)(i)(I)”; and

15 (2) in clause (iii), as redesignated, by striking
 16 “under (3)(A)” and inserting “under paragraph
 17 (3)(D)(i)(I)”.

○