

118TH CONGRESS  
2D SESSION

# S. 3606

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## AN ACT

To reauthorize the Earthquake Hazards Reduction Act of  
1977, 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,*

1 **SECTION 1. SHORT TITLE.**

2 This Act may be cited as the “National Earthquake  
3 Hazards Reduction Program Reauthorization Act of  
4 2024”.

5 **SEC. 2. MODIFICATION OF FINDINGS.**

6 Section 2 of the Earthquake Hazards Reduction Act  
7 of 1977 (42 U.S.C. 7701) is amended—

8 (1) in paragraph (1)—

9 (A) by striking “50 States, and the Com-  
10 monwealth of Puerto Rico,” and inserting  
11 “States and Tribal jurisdictions”;

12 (B) by striking “of them” and inserting  
13 “States”; and

14 (C) by adding at the end the following:  
15 “Almost half of the United States population  
16 resides in areas that are at risk or experiencing  
17 a damaging earthquake during the 50-year pe-  
18 riod beginning on the date of the enactment of  
19 the National Earthquake Hazards Reduction  
20 Program Reauthorization Act of 2024”;

21 (2) in paragraph (2)—

22 (A) by inserting after the first sentence the  
23 following: “A 2023 report by the Federal Emer-  
24 gency Management Agency and the United  
25 States Geological Survey (FEMA P-366) esti-  
26 mates the annualized earthquake losses to the

1 national building stock is \$14,700,000,000 per  
2 year and the total economic exposure to earth-  
3 quake losses (buildings and contents) across the  
4 nation is \$107,800,000,000,000.”; and

5 (B) in the third sentence—

6 (i) by striking “and construction” and  
7 inserting “, construction, evaluation, and  
8 retrofitting”;

9 (ii) by striking “and (E)” and insert-  
10 ing the following: “(E) inventories of build-  
11 ings and infrastructure with high seismic  
12 risk, especially those that are critical to  
13 community resilience, (F) programs that  
14 require or incentivize replacement or ret-  
15 rofit of existing buildings and infrastruc-  
16 ture with high seismic risk, especially those  
17 that are critical to community resilience,  
18 and (G)”;

19 (3) in paragraph (3), by inserting “Tribal,”  
20 after “local,”;

21 (4) in paragraph (4), by striking “could pro-  
22 vide” and all that follows through the period at the  
23 end and inserting “is necessary to provide the sci-  
24 entific understanding needed to improve and expand  
25 the earthquake early warning system.”;

1 (5) in paragraph (8), by striking “cave-ins” and  
2 inserting “collapse”;

3 (6) in paragraph (9)—

4 (A) in the first sentence, by striking “and  
5 local” and inserting “local, and Tribal govern-  
6 ment”; and

7 (B) in the second sentence, by striking  
8 “transfer knowledge and information to” and  
9 inserting “exchange knowledge and information  
10 between”; and

11 (C) in the third sentence, by striking  
12 “specifications, criteria” and inserting “guide-  
13 lines, codes, standards”;

14 (7) in paragraph (12)—

15 (A) in the second sentence—

16 (i) by striking “When earthquakes  
17 occur, the built environment is generally”  
18 and inserting “Relatively newer buildings  
19 and infrastructure have generally been”;

20 (ii) by striking “and is” and inserting  
21 “when earthquakes occur, but most are”;  
22 and

23 (B) by adding at the end the following: “In  
24 addition, buildings and infrastructure built to  
25 older codes and standards may pose significant

1 risk of injury, loss of life, or irreparable dam-  
2 age. A 2021 report submitted to Congress pur-  
3 suant to section 8(b), as amended by section 5  
4 of the National Earthquake Hazards Reduction  
5 Program Reauthorization Act of 2018 (Public  
6 Law 115–307), by the Federal Emergency  
7 Management Agency and the National Institute  
8 of Standards and Technology (FEMA P2090/  
9 NST SP–1254) provides recommendations for  
10 improving post-earthquake functional recovery  
11 time of the built environment to support com-  
12 munity resilience goals and many of these rec-  
13 ommendations still need to be implemented.”;  
14 and

15 (8) in paragraph (13)—

16 (A) in the first sentence, by inserting “in  
17 2011” after “a study”;

18 (B) in the second sentence, by inserting  
19 “(in 2011 dollars)” after “\$300,000,000”; and

20 (C) by adding at the end the following:

21 “The cost of actual seismic retrofits to reduce  
22 known risks is not included in such valuation.”.

23 **SEC. 3. MODIFICATION OF PURPOSE.**

24 Section 3 of the Earthquake Hazards Reduction Act  
25 of 1977 (42 U.S.C. 7702) is amended—

1 (1) in paragraph (1)—

2 (A) by striking “and local” and inserting  
3 “, local, and Tribal government”; and

4 (B) by striking “locations and structures”  
5 and inserting “buildings and infrastructure”;

6 (2) in paragraph (2)—

7 (A) by striking “and construction” and in-  
8 serting “, construction, evaluation, and retro-  
9 fitting”; and

10 (B) by inserting “housing and care facili-  
11 ties for vulnerable populations,” after “occu-  
12 pancy buildings”; and

13 (3) in paragraph (4)—

14 (A) by striking “and local” and inserting  
15 “, local, and Tribal government”; and

16 (B) by striking “encourage consideration  
17 of” and inserting “incorporate”.

18 **SEC. 4. MODIFICATION OF DEFINITIONS.**

19 Section 4 of the Earthquake Hazards Reduction Act  
20 of 1977 (42 U.S.C. 7703) is amended—

21 (1) in paragraph (3), by inserting “, including  
22 secondary effects such as earthquake-caused  
23 tsunamis”; and

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

1           “(11) The term ‘Tribal government’ has the  
2 meaning given the term ‘tribal government’ in sec-  
3 tion in section 421 of the Congressional Budget Act  
4 of 1974 (2 U.S.C. 658).

5           “(12) The term ‘functional recovery’ means a  
6 post-earthquake performance state in which a build-  
7 ing or lifeline infrastructure system is maintained,  
8 or restored, to safely and adequately support the  
9 basic intended functions associated with the pre-  
10 earthquake use or occupancy of a building, or the  
11 pre-earthquake service level of a lifeline infrastruc-  
12 ture system.

13           “(13) The term ‘earthquake forecast’ means a  
14 statement of probabilities that 1 or more earth-  
15 quakes within a clearly specified magnitude range  
16 may occur within a specified time interval and geo-  
17 graphic region.”.

18 **SEC. 5. IMPROVEMENTS TO NATIONAL EARTHQUAKE HAZ-**

19 **ARDS REDUCTION PROGRAM.**

20           (a) PROGRAM ACTIVITIES.—Subsection (a)(2) of sec-  
21 tion 5 of the Earthquake Hazards Reduction Act of 1977  
22 (42 U.S.C. 7704) is amended—

23           (1) in subparagraph (B)—

24           (A) in the matter before clause (i)—

1 (i) by striking “and local” and insert-  
2 ing “, local, and Tribal”; and

3 (ii) by striking “and constructing”  
4 and inserting “, designing, constructing,  
5 evaluating, and retrofitting”;

6 (B) by amending clause (ii) to read as fol-  
7 lows:

8 “(ii) development of standards, guide-  
9 lines, and voluntary standards, guidelines,  
10 and consensus codes for earthquake haz-  
11 ards reduction for buildings, structures,  
12 and lifeline infrastructure, including post-  
13 earthquake recovery-based performance ob-  
14 jectives that address reoccupancy and  
15 downtime of community-prioritized build-  
16 ings, structures, and services provided by  
17 lifeline infrastructure;”;

18 (C) in clause (iii), by striking “and haz-  
19 ards reduction; and” and inserting “functional  
20 recovery, and other hazards reduction topics;”;

21 (D) in clause (iv)—

22 (i) by inserting “and maintaining”  
23 after “publishing”;

24 (ii) by inserting “in coordination with  
25 the National Tsunami Hazards Mitigation



1 Program, tsunami susceptibility,” after  
2 “liquefaction susceptibility,”; and

3 (iii) by striking “; and” and inserting  
4 a semicolon; and

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

6 “(v) subject to the availability of  
7 funds, development of best practices and  
8 guidelines to create an inventory of and  
9 conduct seismic performance evaluations of  
10 buildings, structures, and lifeline infra-  
11 structure with high seismic risk, especially  
12 those that are critical to community resil-  
13 ience; and

14 “(vi) subject to the availability of  
15 funds, the provision of technical assistance  
16 upon request by a State, local, or Tribal  
17 government regarding—

18 “(I) the creation of an inventory  
19 of buildings, structures, and lifeline  
20 infrastructure;

21 “(II) the performance of seismic  
22 performance evaluations; and

23 “(III) cost-effective best practices  
24 for retrofitting existing buildings,

1 structures, and lifeline infrastruc-  
2 ture.”;

3 (2) in subparagraph (C), by striking “; and”  
4 and inserting a semicolon;

5 (3) by redesignating subparagraph (D) as sub-  
6 paragraph (E); and

7 (4) by inserting after subparagraph (C) the fol-  
8 lowing:

9 “(D) improve the understanding of—

10 “(i) the multiple hazards associated  
11 with earthquakes, including liquefaction,  
12 tsunamis, landslides, structural fires, and  
13 the compounding effects of climate on  
14 these hazards; and

15 “(ii) potential mitigation measures for  
16 such hazards; and”.

17 (b) DUTIES OF INTERAGENCY COORDINATING COM-  
18 MITTEE ON EARTHQUAKE HAZARDS REDUCTION.—Sub-  
19 section (a)(3)(D)(ii) of such section is amended—

20 (1) in subclause (V), by inserting “and associ-  
21 ated secondary hazards” before the period at the  
22 end; and

23 (2) by adding at the end the following:

24 “(VIII) Coordinating with the  
25 Chair of the Federal Communications

1 Commission on the timely broad-  
2 casting of emergency alerts generated  
3 by the earthquake early warning sys-  
4 tem.”.

5 (c) BIENNIAL REPORT.—Subsection (a)(4)(A) of  
6 such section is amended by striking “under paragraph  
7 (3)(D)(i)(I)” each place it appears and inserting “under  
8 paragraph (3)(D)(ii)(I)”.

9 (d) ADVISORY COMMITTEE.—Subsection (a)(5)(A) of  
10 such section is amended—

11 (1) by inserting “the Chair of the Scientific  
12 Earthquake Studies Advisory Committee and” after  
13 “including”;

14 (2) by striking “and local government” and in-  
15 serting “, local, and Tribal governments”; and

16 (3) by inserting “social,” after “scientific,”.

17 (e) LEAD AGENCY FOR RESPONSIBILITIES OF PRO-  
18 GRAM AGENCIES.—Subsection (b)(1) of such section is  
19 amended—

20 (1) in subparagraph (A)—

21 (A) by striking “and local” and inserting  
22 “local, and Tribal governments”; and

23 (B) by striking “plan and constructing”  
24 and inserting “planning, designing, con-  
25 structing, evaluating, and retrofitting”;

1           (2) by redesignating subparagraphs (C) and  
2           (D) as subparagraphs (F) and (G), respectively; and

3           (3) by inserting after subparagraph (B) the fol-  
4           lowing:

5                   “(C) improve the understanding of earth-  
6                   quake-caused fires and support the development  
7                   of engineering tools and construction methods  
8                   that mitigate the risk of fire following earth-  
9                   quakes;

10                   “(D) develop, in coordination with the Ad-  
11                   ministrators of the Federal Emergency Manage-  
12                   ment Agency, best practices and guidelines for  
13                   a State, local, or Tribal government to create  
14                   an inventory of buildings, structures, or lifeline  
15                   infrastructure that are critical to community re-  
16                   silience or otherwise have high seismic risk;

17                   “(E) provide, in coordination with the Ad-  
18                   ministrators of the Federal Emergency Manage-  
19                   ment Agency, technical assistance to a State,  
20                   local, or Tribal government requesting such as-  
21                   sistance with respect to the creation of an in-  
22                   ventory of buildings, structures, or lifeline in-  
23                   frastructure;”.

1 (f) RESPONSIBILITIES OF FEDERAL EMERGENCY  
2 MANAGEMENT AGENCY.—Subsection (b)(2) of such sec-  
3 tion is amended—

4 (1) in subparagraph (A)—

5 (A) in clause (i)—

6 (i) by inserting “and Tribal govern-  
7 ments” after “States”;

8 (ii) by inserting “and performance  
9 evaluations” after “safety inspections”;

10 and

11 (iii) by inserting “and improve post-  
12 earthquake functional recovery” after  
13 “seismic safety”;

14 (B) in clause (ii), by inserting “, including  
15 Tribal entities,” after “appropriate audiences”;

16 (C) in clause (iii)—

17 (i) by striking “of seismic resistant”  
18 and inserting “to all appropriate audi-  
19 ences, including Tribal governments, of”;  
20 and

21 (ii) by inserting “that enhance seismic  
22 safety, improve post-earthquake functional  
23 recovery, and reduce losses from earth-  
24 quakes” after “and lifeline infrastructure”;

25 (D) in clause (iv)—

1 (i) in striking “and local” and insert-  
2 ing “, local, and Tribal”; and

3 (ii) by striking “; and” and inserting  
4 a semicolon;

5 (E) by redesignating clause (v) as clause  
6 (vi); and

7 (F) by inserting after clause (iv) the fol-  
8 lowing:

9 “(v) shall provide technical assistance  
10 to State, local, or Tribal governmental en-  
11 tities in the creation of evacuation plans in  
12 the event of an earthquake, landslide, tsu-  
13 nami, or other earthquake-related hazard;  
14 and”; and

15 (2) in subparagraph (B)—

16 (A) in the subparagraph heading, by in-  
17 serting “AND TRIBAL” after “STATE”;

18 (B) in the matter before clause (i), by in-  
19 serting “or Tribal government” after “State”;  
20 and

21 (C) in clause (i), by striking “safety” and  
22 inserting “performance, community resilience,  
23 or public awareness”.

1 (g) RESPONSIBILITIES OF UNITED STATES GEOLOGI-  
2 CAL SURVEY.—Subsection (b)(3) of such section is  
3 amended—

4 (1) in subparagraph (B), by striking “and  
5 local” and inserting “, local, and Tribal”;

6 (2) in subparagraph (C), by inserting “, the  
7 Chair of the Federal Communications Commission,”  
8 after “Agency”;

9 (3) by redesignating subparagraphs (D)  
10 through (K) as subparagraphs (L) through (Q), re-  
11 spectively;

12 (4) by inserting after subparagraph (C) the fol-  
13 lowing:

14 “(D) coordinate with the Administrator of  
15 the National Oceanic and Atmospheric Admin-  
16 istration and the Administrator of the Federal  
17 Emergency Management Agency on data shar-  
18 ing and resource allocation to support a timely  
19 response to oceanic earthquakes and tsunamis;

20 “(E) in consultation with the Chair of the  
21 Federal Communications Commission, ensure  
22 that earthquake alerts and early warnings are  
23 broadcast as rapidly and reliably as possible, in  
24 the predominant languages in the affected re-

1           gion, to ensure maximum warning time for  
2           nearby persons;

3           “(F) expand the earthquake early warning  
4           system within and to additional high risk haz-  
5           ard areas, including making improvements as  
6           practicable to improve detection and increase  
7           the time between warning messages and percep-  
8           tible ground motion;

9           “(G) coordinating with affected State and  
10          Tribal governments on earthquake early warn-  
11          ing system improvements;

12          “(H) issue earthquake forecasts, when ap-  
13          propriate, for aftershocks associated with sig-  
14          nificant earthquakes in the United States;”;

15          (5) in subparagraph (I), as redesignated by  
16          paragraph (3), by inserting “the Chair of the Fed-  
17          eral Communications Commission,” after “Agency;”;

18          (6) in subparagraph (L), as redesignated by  
19          paragraph (3), by striking “; and” and inserting a  
20          semicolon;

21          (7) in subparagraph (M), as redesignated by  
22          paragraph (3), by striking the period at the end and  
23          inserting a semicolon; and



1 (8) in subparagraph (O), as redesignated by  
2 paragraph (3), by inserting “maps of natural haz-  
3 ards associated with earthquakes and”.

4 (h) RESPONSIBILITIES OF NATIONAL SCIENCE  
5 FOUNDATION.—Subsection (b)(4)(A) of such section is  
6 amended—

7 (1) in clause (iii), by inserting “including up-  
8 dated tsunami and liquefaction risk maps,”; and

9 (2) in clause (vii), by striking “Historically  
10 Black Colleges and Universities and those serving  
11 large proportions of Hispanics, Native Americans,  
12 Asian-Pacific Americans, and other underrep-  
13 resented populations” and inserting “institutions de-  
14 scribed in section 371(a) of the Higher Education  
15 Act of 1965 (20 U.S.C. 1067q(a))”.

16 **SEC. 6. SEISMIC PERFORMANCE PROPERTY STANDARDS.**

17 Section 947 of the Cranston-Gonzales National Af-  
18 fordable Housing Act (42 U.S.C. 7704a) is amended—

19 (1) in subsection (a), by striking “safety” both  
20 places it appears and inserting “performance”; and

21 (2) in subsection (b), by striking “shake-related  
22 property damage” and inserting “seismic-related  
23 property damage to improve the post-earthquake  
24 functional recovery time”.

1 **SEC. 7. SEISMIC STANDARDS.**

2 Section 8 of the Earthquake Hazards Reduction Act  
3 of 1977 (42 U.S.C. 7705b) is amended—

4 (1) in subsection (b), by striking “under para-  
5 graph (1)” and inserting “under subsection (a)”;  
6 and

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

8 “(c) IMPLEMENTATION OF RECOMMENDATIONS.—  
9 Each Program agency, as part of their Program respon-  
10 sibilities, shall execute research, projects, grants, and  
11 other activities that support, promote, advance, or other-  
12 wise implement the recommendations in the report sub-  
13 mitted pursuant to subsection (b) to improve the perform-  
14 ance of the built environment in terms of post-earthquake  
15 reoccupancy and functional recovery time.

16 “(d) BIENNIAL REPORTS.—

17 “(1) BIENNIAL REPORTS TO INTERAGENCY CO-  
18 ORDINATING COMMITTEE.—No later than September  
19 30, 2025, and not less frequently than once every 2  
20 years thereafter, each Program agency shall submit  
21 to the Interagency Coordinating Committee a report  
22 on activities and progress made to support, promote,  
23 or advance the implementation of the recommenda-  
24 tions included in the report submitted pursuant to  
25 subsection (b).

1           “(2) INCLUSION IN BIENNIAL REPORTS OF  
 2 INTERAGENCY COORDINATING COMMITTEE.—The  
 3 Interagency Coordinating Committee shall include  
 4 the information received under paragraph (1) in  
 5 each biennial report submitted under section 5(a)(4),  
 6 including consideration of a prioritized work plan to  
 7 coordinate activities among the Program agencies  
 8 and the necessary Program budget to fully imple-  
 9 ment the recommendations described in paragraph  
 10 (1).”.

11 **SEC. 8. IMPROVEMENTS TO POST-EARTHQUAKE INVES-**  
 12 **TIGATIONS PROGRAM.**

13           Section 11 of the Earthquake Hazards Reduction Act  
 14 of 1977 (42 U.S.C. 7705e) is amended, in the matter be-  
 15 fore paragraph (1)—

16           (1) in the first sentence, by inserting “domestic  
 17 and international” after “investigate major”; and

18           (2) in the fifth sentence, by inserting “Federal  
 19 Emergency Management” before “Agency”.

20 **SEC. 9. AUTHORIZATION OF APPROPRIATIONS.**

21           (a) GENERAL AUTHORIZATION FOR PROGRAM.—Sub-  
 22 section (a)(8) of section 12 of the Earthquake Hazards  
 23 Reduction Act of 1977 (42 U.S.C. 7706) is amended—

24           (1) in subparagraph (I), by striking “, and”  
 25 and inserting a comma; and

1           (2) by inserting after subparagraph (J) the fol-  
2       lowing:

3                   “(K) \$10,590,000 for fiscal year 2024,

4                   “(L) \$10,590,000 for fiscal year 2025,

5                   “(M) \$10,590,000 for fiscal year 2026,

6                   “(N) \$10,590,000 for fiscal year 2027,

7           and

8                   “(O) \$10,590,000 for fiscal year 2028.”.

9       (b) UNITED STATES GEOLOGICAL SURVEY.—Sub-  
10 section (b)(2) of such section is amended—

11           (1) in subparagraph (I), by striking “; and”  
12       and inserting a semicolon;

13           (2) in subparagraph (J), by striking the period  
14       at the end and inserting a semicolon; and

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

16                   “(K) \$100,900,000 for fiscal year 2024, of  
17       which not less than \$36,000,000 shall be made  
18       available for completion of the Advanced Na-  
19       tional Seismic System established under section  
20       13;

21                   “(L) \$100,900,000 for fiscal year 2025, of  
22       which not less than \$36,000,000 shall be made  
23       available for completion of the Advanced Na-  
24       tional Seismic System established under section  
25       13;

1           “(M) \$100,900,000 for fiscal year 2026, of  
2           which not less than \$36,000,000 shall be made  
3           available for completion of the Advanced Na-  
4           tional Seismic System established under section  
5           13;

6           “(N) \$100,900,000 for fiscal year 2027, of  
7           which not less than \$36,000,000 shall be made  
8           available for completion of the Advanced Na-  
9           tional Seismic System established under section  
10          13; and

11          “(O) \$100,900,000 for fiscal year 2028, of  
12          which not less than \$36,000,000 shall be made  
13          available for completion of the Advanced Na-  
14          tional Seismic System established under section  
15          13.”.

16          (c) NATIONAL SCIENCE FOUNDATION.—Subsection  
17          (c)(2) of such section is amended—

18                 (1) in subparagraph (I), by striking “, and”  
19                 and inserting a comma;

20                 (2) in subparagraph (J), by striking the period  
21                 at the end and inserting a comma; and

22                 (3) by adding at the end the following:

23                         “(K) \$58,000,000 for fiscal year 2024,

24                         “(L) \$58,000,000 for fiscal year 2025,

25                         “(M) \$58,000,000 for fiscal year 2026,

1                   “(N) \$58,000,000 for fiscal year 2027,  
2                   and  
3                   “(O) \$58,000,000 for fiscal year 2028.”.

4           (d) NATIONAL INSTITUTE OF STANDARDS AND  
5 TECHNOLOGY.—Subsection (d)(2) of such section is  
6 amended—

7           (1) in subparagraph (I), by striking “, and”  
8           and inserting a comma;

9           (2) in subparagraph (J), by striking the period  
10          at the end and inserting a comma; and

11          (3) by inserting after subparagraph (J) the fol-  
12          lowing:

13                   “(K) \$5,900,000 for fiscal year 2024,

14                   “(L) \$5,900,000 for fiscal year 2025,

15                   “(M) \$5,900,000 for fiscal year 2026,

16                   “(N) \$5,900,000 for fiscal year 2027, and

17                   “(O) \$5,900,000 for fiscal year 2028,”.

Passed the Senate December 5, 2024.

Attest:

*Secretary.*



118<sup>TH</sup> CONGRESS  
2<sup>D</sup> SESSION

**S. 3606**

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**AN ACT**

To reauthorize the Earthquake Hazards Reduction Act of 1977, and for other purposes.