

# Calendar No. 329

112TH CONGRESS  
2D SESSION

# S. 646

[Report No. 112-150]

To reauthorize Federal natural hazards reduction programs, and for other purposes.

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IN THE SENATE OF THE UNITED STATES

MARCH 17, 2011

Mrs. BOXER (for herself, Mrs. FEINSTEIN, Ms. CANTWELL, and Mr. ROCKEFELLER) introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

FEBRUARY 27, 2012

Reported by Mr. ROCKEFELLER, with an amendment

[Strike out all after the enacting clause and insert the part printed in italic]

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## A BILL

To reauthorize Federal natural hazards reduction programs,  
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 “Natural Hazards Risk  
5 ~~Reduction Act of 2011~~”.

1 **SEC. 2. FINDINGS.**

2 Congress finds the following:

3 (1) The United States faces significant risks  
4 from many types of natural hazards, including  
5 earthquakes, hurricanes, tornadoes, wildfires, and  
6 floods. Increasing numbers of Americans are living  
7 in areas prone to these hazards.

8 (2) Earthquakes occur without warning and can  
9 have devastating effects. According to the U.S. Geo-  
10 logical Survey, two recent earthquakes, the  
11 Northridge Earthquake in 1994, and the Loma  
12 Prieta Earthquake in 1989, killed nearly 100 people,  
13 injured 12,757, and caused \$33 billion in damages.  
14 Nearly all States face some level of seismic risk.  
15 Twenty-six urban areas in 14 States have a signifi-  
16 cant seismic risk.

17 (3) Severe weather is the most costly natural  
18 hazard, measured on a per year basis. According to  
19 data from the National Weather Service over the  
20 last 10 years, tornadoes, thunderstorms, and hurri-  
21 canes have caused an average of 226 fatalities and  
22 \$16 billion of property damage per year. The 2005  
23 hurricane season was one of the most destructive in  
24 United States history, killing 1,836 people, and  
25 causing \$80 billion in damage.

1           (4) The United States Fire Administration re-  
2           ports that 38 percent of new home construction in  
3           2002 was in areas adjacent to, or intermixed with,  
4           wildlands. Fires in the wildland-urban interface are  
5           costly. For example, the 2007 California Witch fire  
6           alone caused \$1.3 billion in insured property losses,  
7           according to the Insurance Services Office (ISO). In  
8           addition, Government Accountability Office reported  
9           in 2007 that the Federal spending for wildfire sup-  
10          pression between 2001 and 2005 was, on average,  
11          \$2.9 billion per year.

12          (5) Developing better knowledge about natural  
13          hazard phenomena and their effects is crucial to as-  
14          sessing the risks these hazards pose to communities.  
15          Instrumentation, monitoring, and data gathering to  
16          characterize earthquakes and wind events are impor-  
17          tant activities to increase this knowledge.

18          (6) Current building codes and standards can  
19          mitigate the damages caused by natural hazards.  
20          The Institute for Business and Home Safety esti-  
21          mated that the \$19 billion in damage caused by  
22          Hurricane Andrew in 1994 could have been reduced  
23          by half if such codes and standards were in effect.  
24          Research for the continuous improvement of building  
25          codes, standards, and design practices—and for de-

1 veloping methods to retrofit existing structures—is  
2 crucial to mitigating losses from natural hazards.

3 (7) Since its creation in 1977, the National  
4 Earthquake Hazards Reduction Program (NEHRP)  
5 has supported research to develop seismic codes,  
6 standards, and building practices that have been  
7 widely adopted. The NEHRP Recommended Provi-  
8 sions for Seismic Regulations for New Buildings and  
9 Other Structures and the Guidance for Seismic Per-  
10 formance Assessment of Buildings are two examples.

11 (8) Research to understand the institutional,  
12 social, behavioral, and economic factors that influ-  
13 ence how households, businesses, and communities  
14 perceive risk and prepare for natural hazards, and  
15 how well they recover after a disaster, can increase  
16 the implementation of risk mitigation measures.

17 (9) A major goal of the Federal natural haz-  
18 ards-related research and development effort should  
19 be to reduce the loss of life and damage to commu-  
20 nities and infrastructure through increasing the  
21 adoption of hazard mitigation measures.

22 (10) Research, development, and technology  
23 transfer to secure infrastructure is vitally important.  
24 Infrastructure that supports electricity, transpor-  
25 tation, drinking water, and other services is vital im-

1       mediately after a disaster, and their quick return to  
 2       function speeds the economic recovery of a disaster-  
 3       impacted community.

## 4                   **TITLE I—EARTHQUAKES**

### 5   **SEC. 101. SHORT TITLE.**

6       This title may be cited as the “National Earthquake  
 7   Hazards Reduction Program Reauthorization Act of  
 8   2011”.

### 9   **SEC. 102. FINDINGS.**

10       Section 2 of the Earthquake Hazards Reduction Act  
 11   of 1977 (42 U.S.C. 7701) is repealed.

### 12   **SEC. 103. DEFINITIONS.**

13       Section 4 of the Earthquake Hazards Reduction Act  
 14   of 1977 (42 U.S.C. 7703) is amended by striking para-  
 15   graphs (8) and (9).

### 16   **SEC. 104. NATIONAL EARTHQUAKE HAZARDS REDUCTION** 17                   **PROGRAM.**

18       Section 5 of the Earthquake Hazards Reduction Act  
 19   of 1977 (42 U.S.C. 7704) is amended—

20               (1) in subsection (a)—

21                       (A) by amending paragraph (2) to read as  
 22               follows:

23               “(2) PROGRAM ACTIVITIES.—The activities of  
 24               the Program shall be designed to—

1           “(A) research and develop effective meth-  
2           ods, tools, and technologies to reduce the risk  
3           posed by earthquakes to the built environment,  
4           especially to lessen the risk to existing struc-  
5           tures and lifelines;

6           “(B) improve the understanding of earth-  
7           quakes and their effects on households, busi-  
8           nesses, communities, buildings, structures, and  
9           lifelines, through interdisciplinary and multi-  
10          disciplinary research that involves engineering,  
11          natural sciences, and social sciences; and

12          “(C) facilitate the adoption of earthquake  
13          risk reduction measures by households, busi-  
14          nesses, communities, local, State, and Federal  
15          governments, national standards and model  
16          building code organizations, architects and engi-  
17          neers, building owners, and others with a role  
18          in planning for disasters and planning, con-  
19          structing, retrofitting, and insuring buildings,  
20          structures, and lifelines through—

21                  “(i) grants, contracts, cooperative  
22                  agreements, and technical assistance;

23                  “(ii) development of standards, guide-  
24                  lines, voluntary consensus standards, and  
25                  other design guidance for earthquake haz-

1 ards risk reduction for buildings, struc-  
 2 tures, and lifelines;

3 “(iii) outreach and information dis-  
 4 semination to communities on location-spe-  
 5 cific earthquake hazards and methods to  
 6 reduce the risks from those hazards; and

7 “(iv) development and maintenance of  
 8 a repository of information, including tech-  
 9 nical data, on seismic risk and hazards re-  
 10 duction.”; and

11 (B) by striking paragraphs (3) through  
 12 (5);

13 (2) by amending subsection (b) to read as fol-  
 14 lows:

15 “(b) RESPONSIBILITIES OF PROGRAM AGENCIES.—

16 “(1) LEAD AGENCY.—The National Institute of  
 17 Standards and Technology (in this section referred  
 18 to as the ‘Institute’) shall be responsible for plan-  
 19 ning and coordinating the Program. In carrying out  
 20 this paragraph, the Director of the Institute shall—

21 “(A) ensure that the Program includes the  
 22 necessary components to promote the imple-  
 23 mentation of earthquake hazards risk reduction  
 24 measures by households, businesses, commu-  
 25 nities, local, State, and Federal governments;

1 national standards and model building code or-  
2 ganizations, architects and engineers, building  
3 owners, and others with a role in preparing for  
4 disasters, or the planning, constructing, retro-  
5 fitting, and insuring of buildings, structures,  
6 and lifelines;

7 “(B) support the development of perform-  
8 ance-based seismic engineering tools, and work  
9 with the appropriate groups to promote the  
10 commercial application of such tools, through  
11 earthquake-related building codes, standards,  
12 and construction practices;

13 “(C) ensure the use of social science re-  
14 search and findings in informing research and  
15 technology development priorities, commu-  
16 nicating earthquake risks to the public, devel-  
17 oping earthquake risk mitigation strategies, and  
18 preparing for earthquake disasters;

19 “(D) coordinate all Federal post-earth-  
20 quake investigations; and

21 “(E) when warranted by research or inves-  
22 tigative findings, issue recommendations for  
23 changes in model codes to the relevant code de-  
24 velopment organizations, and report back to



1 Congress on whether such recommendations  
2 were adopted.

3 ~~“(2) NATIONAL INSTITUTE OF STANDARDS AND~~  
4 ~~TECHNOLOGY.—~~In addition to the lead agency re-  
5 sponsibilities described under paragraph (1), the In-  
6 stitute shall be responsible for carrying out research  
7 and development to improve building codes and  
8 standards and practices for buildings, structures,  
9 and lifelines. In carrying out this paragraph, the Di-  
10 rector of the Institute shall—

11 ~~“(A) work, in conjunction with other ap-~~  
12 ~~propriate Federal agencies, to support the de-~~  
13 ~~velopment of improved seismic standards and~~  
14 ~~model codes;~~

15 ~~“(B) in coordination with other appro-~~  
16 ~~propriate Federal agencies, work closely with~~  
17 ~~standards and model code development organi-~~  
18 ~~zations, professional societies, and practicing~~  
19 ~~engineers, architects, and others involved in the~~  
20 ~~construction of buildings, structures, and life-~~  
21 ~~lines, to promote better building practices, in-~~  
22 ~~cluding by—~~

23 ~~“(i) developing technical resources for~~  
24 ~~practitioners on new knowledge and stand-~~  
25 ~~ards of practice; and~~

1           “(ii) developing methods and tools to  
2           facilitate the incorporation of earthquake  
3           engineering principles into design and con-  
4           struction practices;

5           “(C) develop tools, technologies, methods,  
6           and practitioner guidance to feasibly and cost-  
7           effectively retrofit existing buildings and struc-  
8           tures to increase their earthquake resiliency;  
9           and

10          “(D) work closely with national standards  
11          organizations, and other interested parties, to  
12          develop seismic safety standards and practices  
13          for new and existing lifelines.

14          “(3) FEDERAL EMERGENCY MANAGEMENT  
15          AGENCY.—

16          “(A) IN GENERAL.—The Federal Emer-  
17          gency Management Agency (in this paragraph  
18          referred to as the ‘Agency’), consistent with the  
19          Agency’s all hazards approach, shall be respon-  
20          sible for facilitating the development and adop-  
21          tion of standards, model building codes, and  
22          better seismic building practices, developing  
23          tools to assess earthquake hazards, promoting  
24          the adoption of hazard mitigation measures,  
25          and carrying out a program of direct assistance

1 to States and localities to mitigate earthquake  
2 risks to buildings, structures, lifelines, and com-  
3 munities.

4 “(B) DIRECTOR’S DUTIES.—The Director  
5 of the Agency shall—

6 “(i) work closely with other relevant  
7 Federal agencies, standards and model  
8 building code development organizations,  
9 architects, engineers, and other profes-  
10 sionals, to facilitate the development and  
11 adoption of standards, model codes, and  
12 design and construction practices to in-  
13 crease the earthquake resiliency of new  
14 and existing buildings, structures, and life-  
15 lines in the—

16 “(I) preparation, maintenance,  
17 and wide dissemination of design  
18 guidance, model building codes and  
19 standards, and practices to increase  
20 the earthquake resiliency of new and  
21 existing buildings, structures, and life-  
22 lines;

23 “(II) development of perform-  
24 ance-based design guidelines and  
25 methodologies supporting model codes

1 for buildings, structures, and lifelines;  
2 and

3 “(III) development of methods  
4 and tools to facilitate the incorpora-  
5 tion of earthquake engineering prin-  
6 ciples into design and construction  
7 practices;

8 “(ii) develop tools, technologies, and  
9 methods to assist local planners, and oth-  
10 ers, to model and predict the potential im-  
11 pact of earthquake damage in seismically  
12 hazardous areas; and

13 “(iii) support the implementation of a  
14 comprehensive earthquake education and  
15 public awareness program, including the  
16 development of materials and their wide  
17 dissemination to all appropriate audiences,  
18 and support public access to locality-spe-  
19 cific information that may assist the public  
20 in preparing for, mitigating against, re-  
21 sponding to, and recovering from earth-  
22 quakes and related disasters.

23 “(C) STATE ASSISTANCE GRANT PRO-  
24 GRAM.—The Director of the Agency shall oper-  
25 ate a program of grants and assistance to en-

1           able States to develop mitigation, preparedness,  
2           and response plans; compare inventories and  
3           conduct seismic safety inspections of critical  
4           structures and lifelines; update building and  
5           zoning codes and ordinances to enhance seismic  
6           safety; increase earthquake awareness and edu-  
7           cation; and encourage the development of  
8           multistate groups for such purposes. The Direc-  
9           tor shall operate such programs in coordination  
10          with the all hazards mitigation and prepared-  
11          ness programs authorized by the Robert T.  
12          Stafford Disaster Relief and Emergency Assist-  
13          ance Act (42 U.S.C. 5121 et seq.); in order to  
14          ensure that such programs are as consistent as  
15          possible. In order to qualify for assistance  
16          under this subparagraph, a State must—

17                 “(i) demonstrate that the assistance  
18                 will result in enhanced seismic safety in  
19                 the State;

20                 “(ii) provide 50 percent of the costs of  
21                 the activities for which assistance is being  
22                 given; except that the Director may lower  
23                 or waive the cost-share requirement for  
24                 these activities in exceptional cases of eco-  
25                 nomic hardship; and

1           “(iii) meet such other requirements as  
2           the Director of the Agency shall prescribe.

3           “(D) ~~FEDERAL EMERGENCY MANAGEMENT~~  
4           ~~AGENCY ROLE AND RESPONSIBILITY.~~—Nothing  
5           in this Act shall be construed to diminish the  
6           role and responsibility of the Federal Emer-  
7           gency Management Agency with regard to all  
8           hazards preparedness, response, recovery, and  
9           mitigation.

10          “(4) ~~UNITED STATES GEOLOGICAL SURVEY.~~—  
11          The United States Geological Survey (in this para-  
12          graph referred to as the ‘Survey’) shall conduct re-  
13          search and other activities necessary to characterize  
14          and identify earthquake hazards, assess earthquake  
15          risks, monitor seismic activity, and provide real-time  
16          earthquake information. In carrying out this para-  
17          graph, the Director of the Survey shall—

18               “(A) conduct a systematic assessment of  
19               the seismic risks in each region of the Nation  
20               prone to earthquakes, including, where appro-  
21               priate, the establishment and operation of in-  
22               tensive monitoring projects on hazardous faults,  
23               detailed seismic hazard and risk studies in  
24               urban and other developed areas where earth-

1 quake risk is determined to be significant, and  
2 engineering seismology studies;

3 “(B) work with officials of State and local  
4 governments to ensure that they are knowledge-  
5 able about the specific seismic risks in their  
6 areas;

7 “(C) develop standard procedures, in con-  
8 sultation with the Director of the Federal  
9 Emergency Management Agency, for issuing  
10 earthquake alerts, including aftershock  
11 advisories, and, to the extent possible, ensure  
12 that such alerts are compatible with the Inte-  
13 grated Public Alerts and Warning System pro-  
14 gram authorized by section 202 of the Robert  
15 T. Stafford Disaster Relief and Emergency As-  
16 sistance Act (42 U.S.C. 5132);

17 “(D) issue when justified, and notify the  
18 Director of the Federal Emergency Manage-  
19 ment Agency of, an earthquake prediction or  
20 other earthquake advisory, which may be evalu-  
21 ated by the National Earthquake Prediction  
22 Evaluation Council;

23 “(E) operate, as integral parts of the Ad-  
24 vanced National Seismic Research and Moni-  
25 toring System, a National Earthquake Informa-

1           tion Center and a national seismic network, to-  
2           gether providing timely and accurate informa-  
3           tion on earthquakes world-wide;

4           “(F) support the operation of regional seis-  
5           mic networks in areas of higher seismic risk;

6           “(G) develop and support seismic instru-  
7           mentation of buildings and other structures to  
8           obtain data on their response to earthquakes  
9           for use in engineering studies and assessment  
10          of damage;

11          “(H) monitor and assess Earth surface de-  
12          formation as it pertains to the evaluation of  
13          earthquake hazards and impacts;

14          “(I) work with other Program agencies to  
15          maintain awareness of, and where appropriate  
16          cooperate with, earthquake risk reduction ef-  
17          forts in other countries; to ensure that the Pro-  
18          gram benefits from relevant information and  
19          advances in those countries;

20          “(J) maintain suitable seismic hazard  
21          maps in support of building codes for structures  
22          and lifelines; including additional maps needed  
23          for performance-based design approaches; and,  
24          to the extent possible; ensure that such maps  
25          are developed consistent with the multihazard



1 advisory maps authorized by section 203(k) of  
2 the Robert T. Stafford Disaster Relief and  
3 Emergency Assistance Act (42 U.S.C. 5133(k));

4 “(K) conduct a competitive, peer-reviewed  
5 process which awards grants and cooperative  
6 agreements to complement and extend related  
7 internal Survey research and monitoring activi-  
8 ties; and

9 “(L) operate, in cooperation with the Na-  
10 tional Science Foundation, a Global Seis-  
11 mographic Network for detection of earth-  
12 quakes around the world and research into fun-  
13 damental earth processes.

14 “(5) NATIONAL SCIENCE FOUNDATION.—The  
15 National Science Foundation shall be responsible for  
16 funding basic research that furthers the under-  
17 standing of earthquakes, earthquake engineering,  
18 and community preparation and response to earth-  
19 quakes. In carrying out this paragraph, the Director  
20 of the National Science Foundation shall—

21 “(A) support multidisciplinary and inter-  
22 disciplinary research that will improve the resil-  
23 iency of communities to earthquakes, includ-  
24 ing—

1           “(i) research that improves the safety  
2           and performance of buildings, structures,  
3           and lifelines, including the use of the large-  
4           scale experimental and computational fa-  
5           cilities of the George E. Brown, Jr. Net-  
6           work for Engineering Earthquake Simula-  
7           tion;

8           “(ii) research to support more effec-  
9           tive earthquake mitigation and response  
10          measures, such as developing better knowl-  
11          edge of the specific types of vulnerabilities  
12          faced by segments of the community vul-  
13          nerable to earthquakes, addressing the bar-  
14          riers they face in adopting mitigation and  
15          preparation measures, and developing  
16          methods to better communicate the risks of  
17          earthquakes and to promote mitigation;  
18          and

19          “(iii) research on the response of com-  
20          munities, households, businesses, and  
21          emergency responders to earthquakes;

22          “(B) support research to understand  
23          earthquake processes, earthquake patterns, and  
24          earthquake frequencies;

1           “(C) encourage prompt dissemination of  
2           significant findings, sharing of data, samples,  
3           physical collections, and other supporting mate-  
4           rials, and development of intellectual property  
5           so research results can be used by appropriate  
6           organizations to mitigate earthquake damage;

7           “(D) work with other Program agencies to  
8           maintain awareness of, and where appropriate  
9           cooperate with, earthquake risk reduction re-  
10          search efforts in other countries, to ensure that  
11          the Program benefits from relevant information  
12          and advances in those countries; and

13          “(E) include to the maximum extent prac-  
14          ticable diverse institutions, including Histori-  
15          cally Black Colleges and Universities, Hispanic-  
16          serving institutions, Tribal Colleges and Univer-  
17          sities, Alaska Native-serving institutions, and  
18          Native Hawaiian-serving institutions.”; and

19          (3) in subsection (c)(1) by inserting “on Nat-  
20          ural Hazards Risk Reduction established under sec-  
21          tion 301 of the Natural Hazards Risk Reduction Act  
22          of 2011” after “Interagency Coordinating Com-  
23          mittee”.

1 **SEC. 105. POST-EARTHQUAKE INVESTIGATIONS PROGRAM.**

2 Section 11 of the Earthquake Hazards Reduction Act  
 3 of 1977 (42 U.S.C. 7705e) is amended by striking “There  
 4 is established” and all that follows through “conduct of  
 5 such earthquake investigations.” and inserting “The Pro-  
 6 gram shall include a post-earthquake investigations pro-  
 7 gram, the purpose of which is to investigate major earth-  
 8 quakes so as to learn lessons which can be applied to re-  
 9 duce the loss of lives and property in future earthquakes.  
 10 The lead Program agency, in consultation with each Pro-  
 11 gram agency, shall organize investigations to study the im-  
 12 plications of the earthquakes in the areas of responsibility  
 13 of each Program agency. The investigations shall begin  
 14 as rapidly as possible and may be conducted by grantees  
 15 and contractors. The Program agencies shall ensure that  
 16 the results of the investigations are disseminated widely.”.

17 **SEC. 106. AUTHORIZATION OF APPROPRIATIONS.**

18 (a) IN GENERAL.—Section 12 of the Earthquake  
 19 Hazards Reduction Act of 1977 (42 U.S.C. 7706) is  
 20 amended—

21 (1) by adding at the end of subsection (a) the  
 22 following:

23 “(9) There are authorized to be appropriated to the  
 24 Federal Emergency Management Agency for carrying out  
 25 this Act—

26 “(A) \$10,238,000 for fiscal year 2011;

1           ~~“(B) \$10,545,000 for fiscal year 2012;~~  
2           ~~“(C) \$10,861,000 for fiscal year 2013;~~  
3           ~~“(D) \$11,187,000 for fiscal year 2014; and~~  
4           ~~“(E) \$11,523,000 for fiscal year 2015.”;~~

5           (2) by adding at the end of subsection (b) the  
6           following:

7           ~~“(3) There are authorized to be appropriated to the~~  
8           ~~United States Geological Survey for carrying out this~~  
9           ~~Act—~~

10           ~~“(A) \$90,000,000 for fiscal year 2011, of which~~  
11           ~~\$36,000,000 shall be made available for completion~~  
12           ~~of the Advanced National Seismic Research and~~  
13           ~~Monitoring System;~~

14           ~~“(B) \$92,100,000 for fiscal year 2012, of which~~  
15           ~~\$37,000,000 shall be made available for completion~~  
16           ~~of the Advanced National Seismic Research and~~  
17           ~~Monitoring System;~~

18           ~~“(C) \$94,263,000 for fiscal year 2013, of which~~  
19           ~~\$38,000,000 shall be made available for completion~~  
20           ~~of the Advanced National Seismic Research and~~  
21           ~~Monitoring System;~~

22           ~~“(D) \$96,491,000 for fiscal year 2014, of which~~  
23           ~~\$39,000,000 shall be made available for completion~~  
24           ~~of the Advanced National Seismic Research and~~  
25           ~~Monitoring System; and~~

1           “(E) \$98,786,000 for fiscal year 2015, of which  
2           \$40,000,000 shall be made available for completion  
3           of the Advanced National Seismic Research and  
4           Monitoring System.”;

5           (3) by adding at the end of subsection (e) the  
6           following:

7           “(3) There are authorized to be appropriated to the  
8           National Science Foundation for carrying out this Act—

9           “(A) \$64,125,000 for fiscal year 2011;

10           “(B) \$66,049,000 for fiscal year 2012;

11           “(C) \$68,030,000 for fiscal year 2013;

12           “(D) \$70,071,000 for fiscal year 2014; and

13           “(E) \$72,173,000 for fiscal year 2015.”; and

14           (4) by adding at the end of subsection (d) the  
15           following:

16           “(3) There are authorized to be appropriated to the  
17           National Institute of Standards and Technology for ear-  
18           rying out this Act—

19           “(A) \$7,000,000 for fiscal year 2011;

20           “(B) \$7,700,000 for fiscal year 2012;

21           “(C) \$7,931,000 for fiscal year 2013;

22           “(D) \$8,169,000 for fiscal year 2014; and

23           “(E) \$8,414,000 for fiscal year 2015.”.

1 (b) CONFORMING AMENDMENT.—Section 14 of the  
 2 National Earthquake Hazards Reduction Act of 1977 (42  
 3 U.S.C. 7708) is amended—

4 (1) by striking “(a) ESTABLISHMENT.—”; and  
 5 (2) by striking subsection (b).

## 6 **TITLE II—WIND**

### 7 **SEC. 201. SHORT TITLE.**

8 This title may be cited as the “National Windstorm  
 9 Impact Reduction Act Reauthorization of 2011”.

### 10 **SEC. 202. PURPOSE.**

11 Section 202 of the National Windstorm Impact Re-  
 12 duction Act of 2004 (42 U.S.C. 15701) is amended to  
 13 read as follows:

#### 14 **“SEC. 202. PURPOSE.**

15 “It is the purpose of the Congress in this title to  
 16 achieve a major measurable reduction in losses of life and  
 17 property from windstorms through the establishment and  
 18 maintenance of an effective Windstorm Impact Reduction  
 19 Program. The objectives of such Program shall include—

20 “(1) the education of households, businesses,  
 21 and communities about the risks posed by wind-  
 22 storms, and the identification of locations, struc-  
 23 tures, lifelines, and segments of the community  
 24 which are especially vulnerable to windstorm damage

1 and disruption, and the dissemination of information  
2 on methods to reduce those risks;

3 “(2) the development of technologically and eco-  
4 nomically feasible design and construction methods  
5 and procedures to make new and existing structures,  
6 in areas of windstorm risk, windstorm resilient, giv-  
7 ing high priority to the development of such methods  
8 and procedures for lifelines, structures associated  
9 with a potential high loss of life, and structures that  
10 are especially needed in times of disasters, such as  
11 hospitals and public safety and shelter facilities;

12 “(3) the implementation, in areas of major  
13 windstorm risk, of instrumentation to record and  
14 gather data on windstorms and the characteristics of  
15 the wind during those events, and continued re-  
16 search to increase the understanding of windstorm  
17 phenomena;

18 “(4) the development, publication, and pro-  
19 motion, in conjunction with State and local officials  
20 and professional organizations, of model building  
21 codes and standards and other means to encourage  
22 consideration of information about windstorm risk in  
23 making decisions about land use policy and construc-  
24 tion activity; and



1           “(5) the facilitation of the adoption of wind-  
 2           storm risk mitigation measures in areas of wind-  
 3           storm risk by households, businesses, and commu-  
 4           nities through outreach, incentive programs, and  
 5           other means.”.

6   **SEC. 203. DEFINITIONS.**

7           Section 203(1) of the National Windstorm Impact  
 8   Reduction Act of 2004 (42 U.S.C. 15702(1)) is amended  
 9   by striking “Director of the Office of Science and Tech-  
 10   nology Policy” and inserting “Director of the National In-  
 11   stitute of Standards and Technology”.

12   **SEC. 204. NATIONAL WINDSTORM IMPACT REDUCTION PRO-**  
 13                           **GRAM.**

14           Section 204 of the National Windstorm Impact Re-  
 15   duction Act of 2004 (42 U.S.C. 15703) is amended to  
 16   read as follows:

17   **“SEC. 204. NATIONAL WINDSTORM IMPACT REDUCTION**  
 18                           **PROGRAM.**

19           “(a) **ESTABLISHMENT.**—There is established the Na-  
 20   tional Windstorm Impact Reduction Program.

21           “(b) **PROGRAM ACTIVITIES.**—The activities of the  
 22   Program shall be designed to—

23                   “(1) research and develop cost-effective, feasible  
 24                   methods, tools, and technologies to reduce the risks  
 25                   posed by windstorms to the built environment, espe-

1 eially to lessen the risk to existing structures and  
 2 lifelines;

3 “(2) improve the understanding of windstorms  
 4 and their impacts on households, businesses, com-  
 5 munities, buildings, structures, and lifelines, through  
 6 interdisciplinary and multidisciplinary research that  
 7 involves engineering, natural sciences, and social  
 8 sciences; and

9 “(3) facilitate the adoption of windstorm risk  
 10 reduction measures by households, businesses, com-  
 11 munities, local, State and Federal governments, na-  
 12 tional standards and model building code organiza-  
 13 tions, architects and engineers, building owners, and  
 14 others with a role in planning for disasters and plan-  
 15 ning, constructing, retrofitting, and insuring build-  
 16 ings, structures, and lifelines through—

17 “(A) grants, contracts, cooperative agree-  
 18 ments, and technical assistance;

19 “(B) development of hazard maps, stand-  
 20 ards, guidelines, voluntary consensus standards,  
 21 and other design guidance for windstorm risk  
 22 reduction for buildings, structures, and lifelines;

23 “(C) outreach and information dissemina-  
 24 tion to communities on site specific windstorm

1 hazards and ways to reduce the risks from  
2 those hazards; and

3 “(D) development and maintenance of a  
4 repository of information, including technical  
5 data, on windstorm hazards and risk reduction;

6 “(e) RESPONSIBILITIES OF PROGRAM AGENCIES.—

7 “(1) LEAD AGENCY.—The National Institute of  
8 Standards and Technology (in this section referred  
9 to as the ‘Institute’) shall be responsible for plan-  
10 ning and coordinating the Program. In carrying out  
11 this paragraph, the Director of the Institute shall—

12 “(A) ensure that the Program includes the  
13 necessary components to promote the imple-  
14 mentation of windstorm risk reduction meas-  
15 ures by households, businesses, communities,  
16 local, State, and Federal governments, national  
17 standards and model building code organiza-  
18 tions, architects and engineers, building owners,  
19 and others with a role in planning and pre-  
20 paring for disasters, and planning constructing,  
21 and retrofitting, and insuring buildings, struc-  
22 tures, and lifelines;

23 “(B) support the development of perform-  
24 ance-based engineering tools, and work with the  
25 appropriate groups to promote the commercial

1 application of such tools, through wind-related  
2 building codes, standards, and construction  
3 practices;

4 “(C) ensure the use of social science re-  
5 search and findings in informing the develop-  
6 ment of technology and research priorities; in  
7 communicating windstorm risks to the public;  
8 in developing windstorm risk mitigation strate-  
9 gies; and in preparing for windstorm disasters;

10 “(D) coordinate all Federal post-windstorm  
11 investigations; and

12 “(E) when warranted by research or inves-  
13 tigative findings, issue recommendations for  
14 changes in model codes to the relevant code de-  
15 velopment organizations; and report back to  
16 Congress on whether such recommendations  
17 were adopted.

18 “(2) NATIONAL INSTITUTE OF STANDARDS AND  
19 TECHNOLOGY.—In addition to the lead agency re-  
20 sponsibilities described under paragraph (1), the In-  
21 stitute shall be responsible for carrying out research  
22 and development to improve model codes, standards,  
23 design guidance and practices for the construction  
24 and retrofit of buildings, structures, and lifelines. In

1 carrying out this paragraph, the Director of the In-  
2 stitute shall—

3 “(A) support the development of instru-  
4 mentation, data processing, and archival capa-  
5 bilities, and standards for the instrumentation  
6 and its deployment, to measure wind, wind  
7 loading, and other properties of severe wind and  
8 structure response;

9 “(B) coordinate with other appropriate  
10 Federal agencies to make the data described in  
11 subparagraph (A) available to researchers,  
12 standards and code developers, and local plan-  
13 ners;

14 “(C) support the development of tools and  
15 methods for the collection of data on the loss of  
16 and damage to structures, and data on sur-  
17 viving structures after severe windstorm events;

18 “(D) improve the knowledge of the impact  
19 of severe wind on buildings, structures, lifelines,  
20 and communities;

21 “(E) develop cost-effective windstorm im-  
22 pact reduction tools, methods, and technologies;

23 “(F) work, in conjunction with other ap-  
24 propriate Federal agencies, to support the de-

1           velopment of wind standards and model codes;  
2           and

3           “(G) in conjunction with other appropriate  
4           Federal agencies, work closely with standards  
5           and model code development organizations, pro-  
6           fessional societies, and practicing engineers, ar-  
7           chitects, and others involved in the construction  
8           of buildings, structures, and lifelines, to pro-  
9           mote better building practices, including by—

10                   “(i) supporting the development of  
11                   technical resources for practitioners to im-  
12                   plement new knowledge; and

13                   “(ii) supporting the development of  
14                   methods and tools to incorporate wind en-  
15                   gineering principles into design and con-  
16                   struction practices.

17           “(3) FEDERAL EMERGENCY MANAGEMENT  
18           AGENCY.—The Federal Emergency Management  
19           Agency, consistent with the Agency’s all hazards ap-  
20           proach, shall support the development of risk assess-  
21           ment tools and effective mitigation techniques; assist  
22           with windstorm-related data collection and analysis;  
23           and support outreach, information dissemination,  
24           and implementation of windstorm preparedness and

1 mitigation measures by households, businesses, and  
2 communities, including by—

3 “(A) working to develop or improve risk-  
4 assessment tools, methods, and models;

5 “(B) work closely with other appropriate  
6 Federal agencies to develop and facilitate the  
7 adoption of windstorm impact reduction meas-  
8 ures, including by—

9 “(i) developing cost-effective retrofit  
10 measures for existing buildings, structures,  
11 and lifelines to improve windstorm per-  
12 formance;

13 “(ii) developing methods, tools, and  
14 technologies to improve the planning, de-  
15 sign, and construction of new buildings,  
16 structures, and lifelines;

17 “(iii) supporting the development of  
18 model wind codes and standards for build-  
19 ings, structures, and lifelines; and

20 “(iv) developing technical resources  
21 for practitioners that reflect new knowl-  
22 edge and standards of practice; and

23 “(C) develop and disseminate guidelines  
24 for the construction of windstorm shelters.

1 Nothing in this Act shall be construed to diminish  
2 the role and responsibility of the Federal Emergency  
3 Management Agency with regard to all hazards pre-  
4 paredness, response, recovery, and mitigation.

5 “(4) NATIONAL OCEANIC AND ATMOSPHERIC  
6 ADMINISTRATION.—The National Oceanic and At-  
7 mospheric Administration shall support atmospheric  
8 sciences research and data collection to improve the  
9 understanding of the behavior of windstorms and  
10 their impact on buildings, structures, and lifelines,  
11 including by—

12 “(A) working with other appropriate Fed-  
13 eral agencies to develop and deploy instrumen-  
14 tation to measure speed and other characteris-  
15 ties of wind, and to collect, analyze, and make  
16 available such data;

17 “(B) working with officials of State and  
18 local governments to ensure that they are  
19 knowledgeable about, and prepared for, the spe-  
20 cific windstorm risks in their area;

21 “(C) supporting the development of suit-  
22 able wind speed maps and other derivative  
23 products that support building codes and other  
24 hazard mitigation approaches for buildings,  
25 structures, and lifelines, and, to the extent pos-



1           sible, ensure that such maps and other deriva-  
2           tive products are developed consistent with the  
3           multihazard advisory maps authorized by sec-  
4           tion 203(k) of the Robert T. Stafford Disaster  
5           Relief and Emergency Assistance Act (42  
6           U.S.C. 5133(k));

7           “(D) conducting a competitive, peer-re-  
8           viewed process which awards grants and cooper-  
9           ative agreements to complement the National  
10          Oceanic and Atmospheric Administration’s  
11          wind-related and storm surge-related research  
12          and data collection activities;

13          “(E) working with other appropriate Fed-  
14          eral agencies and State and local governments  
15          to develop or improve risk-assessment tools,  
16          methods, and models; and

17          “(F) working with other appropriate Fed-  
18          eral agencies to develop storm surge models to  
19          better understand the interaction between wind-  
20          storms and bodies of water.

21          “(5) NATIONAL SCIENCE FOUNDATION.—The  
22          National Science Foundation shall be responsible for  
23          funding basic research that furthers the under-  
24          standing of windstorms, wind engineering, and com-  
25          munity preparation and response to windstorms. In

1 carrying out this paragraph, the Director of the Na-  
2 tional Science Foundation shall—

3 “(A) support multidisciplinary and inter-  
4 disciplinary research that will improve the resil-  
5 iency of communities to windstorms, includ-  
6 ing—

7 “(i) research that improves the safety  
8 and performance of buildings, structures,  
9 and lifelines;

10 “(ii) research to support more effec-  
11 tive windstorm mitigation and response  
12 measures, such as developing better knowl-  
13 edge of the specific types of vulnerabilities  
14 faced by segments of the community vul-  
15 nerable to windstorms, addressing the bar-  
16 riers they face in adopting mitigation and  
17 preparation measures, and developing  
18 methods to better communicate the risks of  
19 windstorms and to promote mitigation; and

20 “(iii) research on the response of com-  
21 munities to windstorms, including on the  
22 effectiveness of the emergency response,  
23 and the recovery process of communities,  
24 households, and businesses;

1           “(B) support research to understand wind-  
2 storm processes, windstorm patterns, and wind-  
3 storm frequencies;

4           “(C) encourage prompt dissemination of  
5 significant findings, sharing of data, samples,  
6 physical collections, and other supporting mate-  
7 rials, and development of intellectual property  
8 so research results can be used by appropriate  
9 organizations to mitigate windstorm damage;

10          “(D) work with other Program agencies to  
11 maintain awareness of, and where appropriate  
12 cooperate with, windstorm risk reduction re-  
13 search efforts in other countries, to ensure that  
14 the Program benefits from relevant information  
15 and advances in those countries; and

16          “(E) include to the maximum extent prac-  
17 ticable diverse institutions, including Histori-  
18 cally Black Colleges and Universities, Hispanic-  
19 serving institutions, Tribal Colleges and Univer-  
20 sities, Alaska Native-serving institutions, and  
21 Native Hawaiian-serving institutions.”.

22 **SEC. 205. AUTHORIZATION OF APPROPRIATIONS.**

23          Section 207 of the National Windstorm Impact Re-  
24 duction Program of 2004 (42 U.S.C. 15706) is amended  
25 to read as follows:

1 **“SEC. 207. AUTHORIZATION OF APPROPRIATIONS.**

2       “(a) **FEDERAL EMERGENCY MANAGEMENT AGEN-**  
3 **CY.**—There are authorized to be appropriated to the Fed-  
4 eral Emergency Management Agency for carrying out this  
5 title—

- 6           “(1) \$9,682,000 for fiscal year 2011;  
7           “(2) \$9,972,500 for fiscal year 2012;  
8           “(3) \$10,271,600 for fiscal year 2013;  
9           “(4) \$10,579,800 for fiscal year 2014; and  
10          “(5) \$10,897,200 for fiscal year 2015.

11       “(b) **NATIONAL SCIENCE FOUNDATION.**—There are  
12 authorized to be appropriated to the National Science  
13 Foundation for carrying out this title—

- 14           “(1) \$9,682,000 for fiscal year 2011;  
15           “(2) \$9,972,500 for fiscal year 2012;  
16           “(3) \$10,271,600 for fiscal year 2013;  
17           “(4) \$10,579,800 for fiscal year 2014; and  
18           “(5) \$10,897,200 for fiscal year 2015.

19       “(c) **NATIONAL INSTITUTE OF STANDARDS AND**  
20 **TECHNOLOGY.**—There are authorized to be appropriated  
21 to the National Institute of Standards and Technology for  
22 carrying out this title—

- 23           “(1) \$4,120,000 for fiscal year 2011;  
24           “(2) \$4,243,600 for fiscal year 2012;  
25           “(3) \$4,370,900 for fiscal year 2013;  
26           “(4) \$4,502,000 for fiscal year 2014; and

1 “(5) \$4,637,100 for fiscal year 2015.

2 “(d) NATIONAL OCEANIC AND ATMOSPHERIC ADMIN-  
3 STRATION.—There are authorized to be appropriated to  
4 the National Oceanic and Atmospheric Administration for  
5 carrying out this title—

6 “(1) \$2,266,000 for fiscal year 2011;

7 “(2) \$2,334,000 for fiscal year 2012;

8 “(3) \$2,404,000 for fiscal year 2013;

9 “(4) \$2,476,100 for fiscal year 2014; and

10 “(5) \$2,550,400 for fiscal year 2015.”

11 **TITLE III—INTERAGENCY CO-**  
12 **ORDINATING COMMITTEE ON**  
13 **NATURAL HAZARDS RISK RE-**  
14 **DUCTION**

15 **SEC. 301. INTERAGENCY COORDINATING COMMITTEE ON**  
16 **NATURAL HAZARDS RISK REDUCTION.**

17 (a) IN GENERAL.—There is established an Inter-  
18 agency Coordinating Committee on Natural Hazards Risk  
19 Reduction, chaired by the Director of the National Insti-  
20 tute of Standards and Technology.

21 (1) MEMBERSHIP.—In addition to the chair,  
22 the Committee shall be composed of—

23 (A) the directors of—

24 (i) the Federal Emergency Manage-  
25 ment Agency;

- 1                   (ii) the United States Geological Sur-  
2                   vey;  
3                   (iii) the National Oceanic and Atmos-  
4                   pheric Administration;  
5                   (iv) the National Science Foundation;  
6                   (v) the Office of Science and Tech-  
7                   nology Policy; and  
8                   (vi) the Office of Management and  
9                   Budget; and  
10                  (B) the head of any other Federal agency  
11                  the Committee considers appropriate.

12                  (2) MEETINGS.—The Committee shall not meet  
13                  less than 2 times a year at the call of the Director  
14                  of the National Institute of Standards and Tech-  
15                  nology.

16                  (3) GENERAL PURPOSE AND DUTIES.—The  
17                  Committee shall oversee the planning and coordina-  
18                  tion of the National Earthquake Hazards Reduction  
19                  Program and the National Windstorm Impact Re-  
20                  duction Program, and shall make proposals for plan-  
21                  ning and coordination of any other Federal research  
22                  for natural hazard mitigation that the Committee  
23                  considers appropriate.

1           (4) STRATEGIC PLANS.—The Committee shall  
2 develop and submit to Congress, not later than one  
3 year after the date of enactment of this Act—

4           (A) a Strategic Plan for the National  
5 Earthquake Hazards Reduction Program that  
6 includes—

7           (i) prioritized goals for such Program  
8 that will mitigate against the loss of life  
9 and property from future earthquakes;

10          (ii) short-term, mid-term, and long-  
11 term research objectives to achieve those  
12 goals;

13          (iii) a description of the role of each  
14 Program agency in achieving the  
15 prioritized goals;

16          (iv) the methods by which progress to-  
17 wards the goals will be assessed;

18          (v) an explanation of how the Pro-  
19 gram will foster the transfer of research  
20 results onto outcomes, such as improved  
21 building codes;

22          (vi) a description of the role of social  
23 science in informing the development of  
24 the prioritized goals and research objec-  
25 tives; and

1                   (vii) a description of how the George  
2                   E. Brown, Jr. Network for Earthquake  
3                   Engineering Simulation and the Advanced  
4                   National Seismic Research and Monitoring  
5                   System will be used in achieving the  
6                   prioritized goals and research objectives;  
7                   and

8                   (B) a Strategic Plan for the National  
9                   Windstorm Impact Reduction Program that in-  
10                  cludes—

11                   (i) prioritized goals for such Program  
12                   that will mitigate against the loss of life  
13                   and property from future windstorms;

14                   (ii) short-term, mid-term, and long-  
15                   term research objectives to achieve those  
16                   goals;

17                   (iii) a description of the role of each  
18                   Program agency in achieving the  
19                   prioritized goals;

20                   (iv) the methods by which progress to-  
21                   wards the goals will be assessed;

22                   (v) an explanation of how the Pro-  
23                   gram will foster the transfer of research  
24                   results onto outcomes, such as improved  
25                   building codes; and



1           (vi) a description of the role of social  
2           science in informing the development of  
3           the prioritized goals and research objec-  
4           tives.

5           (5) PROGRESS REPORTS.—Not later than one  
6           year after the date of enactment of this Act, and at  
7           least once every two years thereafter, the Committee  
8           shall submit to the Congress—

9           (A) a report on the progress of the Na-  
10          tional Earthquake Hazards Reduction Program  
11          that includes—

12           (i) a description of the activities fund-  
13           ed for the previous two years of the Pro-  
14           gram; a description of how these activities  
15           align with the prioritized goals and re-  
16           search objectives established in the Stra-  
17           tegic Plan; and the budgets, per agency,  
18           for these activities;

19           (ii) the outcomes achieved by the Pro-  
20           gram for each of the goals identified in the  
21           Strategic Plan;

22           (iii) a description of any recommenda-  
23           tions made to change existing building  
24           codes that were the result of Program ac-  
25           tivities; and

1 (iv) a description of the extent to  
2 which the Program has incorporated rec-  
3 ommendations from the Advisory Com-  
4 mittee on Earthquake Hazards Reduction;  
5 and

6 (B) a report on the progress of the Na-  
7 tional Windstorm Impact Reduction Program  
8 that includes—

9 (i) a description of the activities fund-  
10 ed for the previous two years of the Pro-  
11 gram; a description of how these activities  
12 align with the prioritized goals and re-  
13 search objectives established in the Stra-  
14 tegic Plan; and the budgets, per agency,  
15 for these activities;

16 (ii) the outcomes achieved by the Pro-  
17 gram for each of the goals identified in the  
18 Strategic Plan;

19 (iii) a description of any recommenda-  
20 tions made to change existing building  
21 codes that were the result of Program ac-  
22 tivities; and

23 (iv) a description of the extent to  
24 which the Program has incorporated rec-

1                   ommendations from the Advisory Com-  
2                   mittee on Windstorm Impact Reduction.

3                   (6) COORDINATED BUDGET.—The Committee  
4                   shall develop a coordinated budget for the National  
5                   Earthquake Hazards Reduction Program and a co-  
6                   ordinated budget for the National Windstorm Im-  
7                   pact Reduction Program. These budgets shall be  
8                   submitted to the Congress at the time of the Presi-  
9                   dent’s budget submission for each fiscal year.

10                  (b) ADVISORY COMMITTEES ON NATURAL HAZARDS  
11                  REDUCTION.—

12                   (1) IN GENERAL.—The Director of the National  
13                   Institute of Standards and Technology shall estab-  
14                   lish an Advisory Committee on Earthquake Hazards  
15                   Reduction, an Advisory Committee on Windstorm  
16                   Impact Reduction, and other such advisory commit-  
17                   tees as the Director considers necessary to advise  
18                   the Institute on research, development, and tech-  
19                   nology transfer activities to mitigate the impact of  
20                   natural disasters.

21                   (2) ADVISORY COMMITTEE ON EARTHQUAKE  
22                   HAZARDS REDUCTION.—The Advisory Committee on  
23                   Earthquake Hazards Reduction shall be composed of  
24                   at least 11 members, none of whom may be employ-  
25                   ees of the Federal Government, including represent-

1       atives of research and academic institutions, indus-  
2       try standards development organizations, emergency  
3       management agencies, State and local government,  
4       and business communities who are qualified to pro-  
5       vide advice on earthquake hazards reduction and  
6       represent all related scientific, architectural, and en-  
7       gineering disciplines. The recommendations of the  
8       Advisory Committee shall be considered by Federal  
9       agencies in implementing the National Earthquake  
10      Hazards Reduction Program.

11           (3) ~~ADVISORY COMMITTEE ON WINDSTORM IM-~~  
12      ~~PACT REDUCTION.~~—The Advisory Committee on  
13      Windstorm Impact Reduction shall be composed of  
14      at least 7 members, none of whom may be employees  
15      of the Federal Government, including representa-  
16      tives of research and academic institutions, industry  
17      standards development organizations, emergency  
18      management agencies, State and local government,  
19      and business communities who are qualified to pro-  
20      vide advice on windstorm impact reduction and rep-  
21      resent all related scientific, architectural, and engi-  
22      neering disciplines. The recommendations of the Ad-  
23      visory Committee shall be considered by Federal  
24      agencies in implementing the National Windstorm  
25      Impact Reduction Program.

1           (4) ASSESSMENTS.—The Advisory Committee  
2           on Earthquake Hazards Reduction and the Advisory  
3           Committee on Windstorm Impact Reduction shall  
4           offer assessments on—

5                   (A) trends and developments in the nat-  
6                   ural, social, and engineering sciences and prac-  
7                   tices of earthquake hazards or windstorm im-  
8                   pact mitigation;

9                   (B) the priorities of the Programs' Stra-  
10                  tegic Plans;

11                  (C) the coordination of the Programs; and

12                  (D) and any revisions to the Programs  
13                  which may be necessary.

14           (5) REPORTS.—At least every two years, the  
15           Advisory Committees shall report to the Director of  
16           the National Institute of Standards and Technology  
17           on the assessments carried out under paragraph (4)  
18           and their recommendations for ways to improve the  
19           Programs. In developing recommendations for the  
20           National Earthquake Hazards Reduction Program,  
21           the Advisory Committee on Earthquake Hazards Re-  
22           duction shall consider the recommendations of the  
23           United States Geological Survey Scientific Earth-  
24           quake Studies Advisory Committee.

1 (e) COORDINATION OF FEDERAL DISASTER RE-  
 2 SEARCH, DEVELOPMENT, AND TECHNOLOGY TRANS-  
 3 FER.—Not later than 2 years after the date of enactment  
 4 of this Act, the Subcommittee on Disaster Reduction of  
 5 the Committee on Environment and Natural Resources of  
 6 the National Science and Technology Council shall submit  
 7 a report to the Congress identifying—

8 (1) current Federal research, development, and  
 9 technology transfer activities that address hazard  
 10 mitigation for natural disasters, including earth-  
 11 quakes, hurricanes, tornados, wildfires, floods, and  
 12 the current budgets for these activities;

13 (2) areas of research that are common to two  
 14 or more of the hazards identified in paragraph (1);  
 15 and

16 (3) opportunities to create synergies between  
 17 the research activities for the hazards identified in  
 18 paragraph (1).

19 **TITLE IV—NATIONAL CON-**  
 20 **STRUCTION SAFETY TEAM**  
 21 **ACT AMENDMENTS**

22 **SEC. 401. NATIONAL CONSTRUCTION SAFETY TEAM ACT**  
 23 **AMENDMENTS.**

24 The National Construction Safety Team Act (15  
 25 U.S.C. 7301 et seq.) is amended—

1 (1) in section 2(a)—

2 (A) by striking “a building or buildings”  
3 and inserting “a building, buildings, or infra-  
4 structure”; and

5 (B) by striking “To the maximum extent  
6 practicable, the Director shall establish and de-  
7 ploy a Team within 48 hours after such an  
8 event.” and inserting “The Director shall make  
9 a decision whether to deploy a Team within 72  
10 hours after such an event.”;

11 (2) in section 2(b)(1), by striking “buildings”  
12 and inserting “buildings or infrastructure”;

13 (3) in section 2(b)(2)(A), by striking “building”  
14 and inserting “building or infrastructure”;

15 (4) in section 2(b)(2)(D), by striking “build-  
16 ings” and inserting “buildings or infrastructure”;

17 (5) in section 2(e)(1), by striking “the United  
18 States Fire Administration and”;

19 (6) in section 2(e)(1)(G), by striking “building”  
20 and inserting “building or infrastructure”;

21 (7) in section 2(e)(1)(J)—

22 (A) by striking “building” and inserting  
23 “building or infrastructure”; and

1           (B) by inserting “and the National Wind-  
2           storm Impact Reduction Act of 2004” after  
3           ~~“Act of 1977”~~;

4           (8) in section 4(a), by striking “investigating a  
5           building” and inserting “investigating building and  
6           infrastructure”;

7           (9) in section 4(a)(1)—

8           (A) by striking “a building” and inserting  
9           “a building or infrastructure”; and

10          (B) by striking “building” both of the  
11          other places it appears and inserting “building  
12          or infrastructure”;

13          (10) in section 4(a)(3), by striking “building”  
14          both places it appears and inserting “building or in-  
15          frastructure”;

16          (11) in section 4(b), by striking “building” both  
17          places it appears and inserting “building or infra-  
18          structure”;

19          (12) in section 4(c) (1) and (2), by striking  
20          “building” both places it appears and inserting  
21          “building or infrastructure”;

22          (13) by amending section 4(d)(1) to read as fol-  
23          lows:

24               “(1) IN GENERAL.—Except as otherwise pro-  
25               vided in this subsection, a Team investigation shall



1 have priority over any other investigation which is  
2 related to the purpose and duties set forth in section  
3 2(b) and undertaken by any other Federal agency.”;

4 (14) in section 4(d) (3) and (4), by striking  
5 “building” both places it appears and inserting  
6 “building or infrastructure”;

7 (15) in section 4, by adding at the end the fol-  
8 lowing new paragraph:

9 “(5) INFRASTRUCTURE INVESTIGATIONS.—With  
10 respect to an investigation relating to an infrastruc-  
11 ture failure, a Federal agency with primary jurisdic-  
12 tion over the failed infrastructure which is con-  
13 ducting an investigation and asserts priority over the  
14 Team investigation shall have such priority. Such  
15 priority shall not otherwise affect the authority of  
16 the Team to continue its investigation under this  
17 Act.”;

18 (16) in section 7(a), by striking “on request  
19 and at reasonable cost”;

20 (17) in section 7(e), by striking “building” and  
21 inserting “building or infrastructure”;

22 (18) in section 8 (1) and (4), by striking  
23 “building” both places it appears and inserting  
24 “building or infrastructure”;

1           (19) in section 9, by striking “the United  
2 States Fire Administration and”;

3           (20) in section 9(2)(C), by striking “building”  
4 and inserting “building or infrastructure”;

5           (21) in section 10(3), by striking “building”  
6 and inserting “building and infrastructure”;

7           (22) in section 11(a), by striking “the United  
8 States Fire Administration and”; and

9           (23) by striking section 12.

## 10           **TITLE V—FIRE RESEARCH** 11           **PROGRAM**

### 12           **SEC. 501. FIRE RESEARCH PROGRAM.**

13           Section 16(a)(1) of the National Institute of Stand-  
14 ards and Technology Act (15 U.S.C. 278f(a)(1)) is  
15 amended—

16           (1) in subparagraph (D), by inserting “fires at  
17 the wildland-urban interface,” after “but not limited  
18 to,”; and

19           (2) in subparagraph (E), by inserting “fires at  
20 the wildland-urban interface,” after “types of fires,  
21 including”.

### 22           **SECTION 1. SHORT TITLE.**

23           *This Act may be cited as the “Natural Hazards Risk*  
24 *Reduction Act of 2011”.*

1 **SEC. 2. FINDINGS.**

2 *Congress finds the following:*

3 *(1) The United States faces significant risks*  
4 *from many types of natural hazards, including earth-*  
5 *quakes, hurricanes, tornadoes, wildfires, and floods.*  
6 *Increasing numbers of Americans are living in areas*  
7 *prone to these hazards.*

8 *(2) Earthquakes occur without warning and can*  
9 *have devastating effects. According to the U.S. Geo-*  
10 *logical Survey, two recent earthquakes, the Northridge*  
11 *Earthquake in 1994, and the Loma Prieta Earth-*  
12 *quake in 1989, killed nearly 100 people, injured*  
13 *12,757, and caused \$33 billion in damages. Nearly all*  
14 *States face some level of seismic risk. Twenty-six*  
15 *urban areas in 14 States have a significant seismic*  
16 *risk.*

17 *(3) Severe weather is the most costly natural*  
18 *hazard, measured on a per year basis. According to*  
19 *data from the National Weather Service over the last*  
20 *10 years, tornadoes, thunderstorms, and hurricanes*  
21 *have caused an average of 226 fatalities and \$16 bil-*  
22 *lion of property damage per year. The 2005 hurricane*  
23 *season was one of the most destructive in United*  
24 *States history, killing 1,836 people, and causing \$80*  
25 *billion in damage.*

1           (4) *The United States Fire Administration re-*  
2           *ports that 38 percent of new home construction in*  
3           *2002 was in areas adjacent to, or intermixed with,*  
4           *wildlands. Fires in the wildland-urban interface are*  
5           *costly. For example, the 2007 California Witch fire*  
6           *alone caused \$1.3 billion in insured property losses,*  
7           *according to the Insurance Services Office (ISO). In*  
8           *addition, Government Accountability Office reported*  
9           *in 2007 that the Federal spending for wildfire sup-*  
10          *pression between 2001 and 2005 was, on average, \$2.9*  
11          *billion per year.*

12          (5) *Developing better knowledge about natural*  
13          *hazard phenomena and their effects is crucial to as-*  
14          *sessing the risks these hazards pose to communities.*  
15          *Instrumentation, monitoring, and data gathering to*  
16          *characterize earthquakes and wind events are impor-*  
17          *tant activities to increase this knowledge.*

18          (6) *Current building codes and standards can*  
19          *mitigate the damages caused by natural hazards. The*  
20          *Institute for Business and Home Safety estimated*  
21          *that the \$19 billion in damage caused by Hurricane*  
22          *Andrew in 1994 could have been reduced by half if*  
23          *such codes and standards were in effect. Research for*  
24          *the continuous improvement of building codes, stand-*  
25          *ards, and design practices—and for developing meth-*

1        *ods to retrofit existing structures—is crucial to miti-*  
2        *gating losses from natural hazards.*

3            *(7) Since its creation in 1977, the National*  
4        *Earthquake Hazards Reduction Program (NEHRP)*  
5        *has supported research to develop seismic codes,*  
6        *standards, and building practices that have been*  
7        *widely adopted. The NEHRP Recommended Provi-*  
8        *sions for Seismic Regulations for New Buildings and*  
9        *Other Structures and the Guidance for Seismic Per-*  
10       *formance Assessment of Buildings are two examples.*

11           *(8) Research to understand the institutional, so-*  
12        *cial, behavioral, and economic factors that influence*  
13        *how households, businesses, and communities perceive*  
14        *risk and prepare for natural hazards, and how well*  
15        *they recover after a disaster, can increase the imple-*  
16        *mentation of risk mitigation measures.*

17           *(9) A major goal of the Federal natural hazards-*  
18        *related research and development effort should be to*  
19        *reduce the loss of life and damage to communities and*  
20        *infrastructure through increasing the adoption of haz-*  
21        *ard mitigation measures.*

22           *(10) Research, development, and technology*  
23        *transfer to secure infrastructure is vitally important.*  
24        *Infrastructure that supports electricity, transpor-*  
25        *tation, drinking water, and other services is vital im-*

1        *mediately after a disaster, and their quick return to*  
 2        *function speeds the economic recovery of a disaster-*  
 3        *impacted community.*

## 4                    **TITLE I—EARTHQUAKES**

### 5    **SEC. 101. SHORT TITLE.**

6            *This title may be cited as the “National Earthquake*  
 7        *Hazards Reduction Program Reauthorization Act of 2011”.*

### 8    **SEC. 102. FINDINGS.**

9            *Section 2 of the Earthquake Hazards Reduction Act*  
 10        *of 1977 (42 U.S.C. 7701) is repealed.*

### 11   **SEC. 103. DEFINITIONS.**

12            *Section 4 of the Earthquake Hazards Reduction Act*  
 13        *of 1977 (42 U.S.C. 7703) is amended by striking para-*  
 14        *graphs (8) and (9).*

### 15   **SEC. 104. NATIONAL EARTHQUAKE HAZARDS REDUCTION** 16                    **PROGRAM.**

17            *Section 5 of the Earthquake Hazards Reduction Act*  
 18        *of 1977 (42 U.S.C. 7704) is amended—*

19                    *(1) in subsection (a)—*

20                            *(A) by amending paragraph (2) to read as*  
 21        *follows:*

22                    *“(2) PROGRAM ACTIVITIES.—The activities of the*  
 23        *Program shall be designed to—*

24                            *“(A) research and develop effective methods,*  
 25        *tools, and technologies to reduce the risk posed by*

1           *earthquakes to the built environment, especially*  
2           *to lessen the risk to existing structures and life-*  
3           *lines;*

4           “(B) *improve the understanding of earth-*  
5           *quakes and their effects on households, businesses,*  
6           *communities, buildings, structures, and lifelines,*  
7           *through interdisciplinary and multidisciplinary*  
8           *research that involves engineering, natural*  
9           *sciences, and social sciences; and*

10           “(C) *facilitate the adoption of earthquake*  
11           *risk reduction measures by households, busi-*  
12           *nesses, communities, local, State, and Federal*  
13           *governments, national standards and model*  
14           *building code organizations, architects and engi-*  
15           *neers, building owners, and others with a role in*  
16           *planning for disasters and planning, con-*  
17           *structing, retrofitting, and insuring buildings,*  
18           *structures, and lifelines through—*

19                   “(i) *grants, contracts, cooperative*  
20                   *agreements, and technical assistance;*

21                   “(ii) *development of standards, guide-*  
22                   *lines, voluntary consensus standards, and*  
23                   *other design guidance for earthquake haz-*  
24                   *ards risk reduction for buildings, structures,*  
25                   *and lifelines;*

1                   “(iii) outreach and information dis-  
 2                   semination to communities on location-spe-  
 3                   cific earthquake hazards and methods to re-  
 4                   duce the risks from those hazards; and

5                   “(iv) development and maintenance of  
 6                   a repository of information, including tech-  
 7                   nical data, on seismic risk and hazards re-  
 8                   duction.”; and

9                   (B) by striking paragraphs (3) through (5);

10                  (2) by amending subsection (b) to read as fol-

11                  lows:

12                  “(b) *RESPONSIBILITIES OF PROGRAM AGENCIES.*—

13                   “(1) *LEAD AGENCY.*—The National Institute of  
 14                   Standards and Technology (in this section referred to  
 15                   as the ‘Institute’) shall be responsible for planning  
 16                   and coordinating the Program. In carrying out this  
 17                   paragraph, the Director of the Institute shall—

18                   “(A) ensure that the Program includes the  
 19                   necessary components to promote the implemen-  
 20                   tation of earthquake hazards risk reduction  
 21                   measures by households, businesses, communities,  
 22                   local, State, and Federal governments, national  
 23                   standards and model building code organiza-  
 24                   tions, architects and engineers, building owners,  
 25                   and others with a role in preparing for disasters,



1            *or the planning, constructing, retrofitting, and*  
2            *insuring of buildings, structures, and lifelines;*

3            *“(B) support the development of perform-*  
4            *ance-based seismic engineering tools, and work*  
5            *with the appropriate groups to promote the com-*  
6            *mmercial application of such tools, through earth-*  
7            *quake-related building codes, standards, and con-*  
8            *struction practices;*

9            *“(C) ensure the use of social science research*  
10           *and findings in informing research and tech-*  
11           *nology development priorities, communicating*  
12           *earthquake risks to the public, developing earth-*  
13           *quake risk mitigation strategies, and preparing*  
14           *for earthquake disasters;*

15           *“(D) coordinate all Federal post-earthquake*  
16           *investigations; and*

17           *“(E) when warranted by research or inves-*  
18           *tigative findings, issue recommendations for*  
19           *changes in model codes to the relevant code devel-*  
20           *opment organizations, and report back to Con-*  
21           *gress on whether such recommendations were*  
22           *adopted.*

23           *“(2) NATIONAL INSTITUTE OF STANDARDS AND*  
24           *TECHNOLOGY.—In addition to the lead agency re-*  
25           *sponsibilities described under paragraph (1), the In-*

1        *stitute shall be responsible for carrying out research*  
2        *and development to improve building codes and*  
3        *standards and practices for buildings, structures, and*  
4        *lifelines. In carrying out this paragraph, the Director*  
5        *of the Institute shall—*

6                *“(A) work, in conjunction with other appro-*  
7                *priate Federal agencies, to support the develop-*  
8                *ment of improved seismic standards and model*  
9                *codes;*

10                *“(B) in coordination with other appro-*  
11                *priate Federal agencies, work closely with stand-*  
12                *ards and model code development organizations,*  
13                *professional societies, and practicing engineers,*  
14                *architects, and others involved in the construc-*  
15                *tion of buildings, structures, and lifelines, to pro-*  
16                *mote better building practices, including by—*

17                        *“(i) developing technical resources for*  
18                        *practitioners on new knowledge and stand-*  
19                        *ards of practice; and*

20                        *“(ii) developing methods and tools to*  
21                        *facilitate the incorporation of earthquake*  
22                        *engineering principles into design and con-*  
23                        *struction practices;*

24                *“(C) develop tools, technologies, methods,*  
25        *and practitioner guidance to feasibly and cost-ef-*

1           *fectively retrofit existing buildings and structures*  
2           *to increase their earthquake resiliency; and*

3           “(D) *work closely with national standards*  
4           *organizations, and other interested parties, to de-*  
5           *velop seismic safety standards and practices for*  
6           *new and existing lifelines.*

7           “(3) *FEDERAL EMERGENCY MANAGEMENT AGEN-*  
8           *CY.—*

9           “(A) *IN GENERAL.—The Federal Emergency*  
10           *Management Agency (in this paragraph referred*  
11           *to as the ‘Agency’), consistent with the Agency’s*  
12           *all hazards approach, shall be responsible for fa-*  
13           *ilitating the development and adoption of*  
14           *standards, model building codes, and better seis-*  
15           *mic building practices, developing tools to assess*  
16           *earthquake hazards, promoting the adoption of*  
17           *hazard mitigation measures, and carrying out a*  
18           *program of direct assistance to States and local-*  
19           *ities to mitigate earthquake risks to buildings,*  
20           *structures, lifelines, and communities.*

21           “(B) *DIRECTOR’S DUTIES.—The Director of*  
22           *the Agency shall—*

23           “(i) *work closely with other relevant*  
24           *Federal agencies, standards and model*  
25           *building code development organizations,*

1 *architects, engineers, and other profes-*  
2 *sionals, to facilitate the development and*  
3 *adoption of standards, model codes, and de-*  
4 *sign and construction practices to increase*  
5 *the earthquake resiliency of new and exist-*  
6 *ing buildings, structures, and lifelines in*  
7 *the—*

8 *“(I) preparation, maintenance,*  
9 *and wide dissemination of design guid-*  
10 *ance, model building codes and stand-*  
11 *ards, and practices to increase the*  
12 *earthquake resiliency of new and exist-*  
13 *ing buildings, structures, and lifelines;*

14 *“(II) development of performance-*  
15 *based design guidelines and methodolo-*  
16 *gies supporting model codes for build-*  
17 *ings, structures, and lifelines; and*

18 *“(III) development of methods and*  
19 *tools to facilitate the incorporation of*  
20 *earthquake engineering principles into*  
21 *design and construction practices;*

22 *“(ii) develop tools, technologies, and*  
23 *methods to assist local planners, and others,*  
24 *to model and predict the potential impact of*

1           *earthquake damage in seismically haz-*  
2           *ardous areas; and*

3           “(iii) *support the implementation of a*  
4           *comprehensive earthquake education and*  
5           *public awareness program, including the*  
6           *development of materials and their wide*  
7           *dissemination to all appropriate audiences,*  
8           *and support public access to locality-spe-*  
9           *cific information that may assist the public*  
10          *in preparing for, mitigating against, re-*  
11          *sponding to, and recovering from earth-*  
12          *quakes and related disasters.*

13          “(C) *STATE ASSISTANCE GRANT PRO-*  
14          *GRAM.—The Director of the Agency shall operate*  
15          *a program of grants and assistance to enable*  
16          *States to develop mitigation, preparedness, and*  
17          *response plans, compare inventories and conduct*  
18          *seismic safety inspections of critical structures*  
19          *and lifelines, update building and zoning codes*  
20          *and ordinances to enhance seismic safety, in-*  
21          *crease earthquake awareness and education, and*  
22          *encourage the development of multistate groups*  
23          *for such purposes. The Director shall operate*  
24          *such programs in coordination with the all haz-*  
25          *ards mitigation and preparedness programs au-*

1 *thorized by the Robert T. Stafford Disaster Relief*  
2 *and Emergency Assistance Act (42 U.S.C. 5121*  
3 *et seq.), in order to ensure that such programs*  
4 *are as consistent as possible. In order to qualify*  
5 *for assistance under this subparagraph, a State*  
6 *must—*

7 *“(i) demonstrate that the assistance*  
8 *will result in enhanced seismic safety in the*  
9 *State;*

10 *“(ii) provide 50 percent of the costs of*  
11 *the activities for which assistance is being*  
12 *given, except that the Director may lower or*  
13 *waive the cost-share requirement for these*  
14 *activities in exceptional cases of economic*  
15 *hardship; and*

16 *“(iii) meet such other requirements as*  
17 *the Director of the Agency shall prescribe.*

18 *“(D) FEDERAL EMERGENCY MANAGEMENT*  
19 *AGENCY ROLE AND RESPONSIBILITY.—Nothing in*  
20 *this Act shall be construed to diminish the role*  
21 *and responsibility of the Federal Emergency*  
22 *Management Agency with regard to all hazards*  
23 *preparedness, response, recovery, and mitigation.*

24 *“(4) UNITED STATES GEOLOGICAL SURVEY.—The*  
25 *United States Geological Survey (in this paragraph*

1       referred to as the ‘Survey’) shall conduct research and  
2       other activities necessary to characterize and identify  
3       earthquake hazards, assess earthquake risks, monitor  
4       seismic activity, and provide real-time earthquake in-  
5       formation. In carrying out this paragraph, the Direc-  
6       tor of the Survey shall—

7               “(A) conduct a systematic assessment of the  
8               seismic risks in each region of the Nation prone  
9               to earthquakes, including, where appropriate, the  
10              establishment and operation of intensive moni-  
11              toring projects on hazardous faults, detailed seis-  
12              mic hazard and risk studies in urban and other  
13              developed areas where earthquake risk is deter-  
14              mined to be significant, and engineering seis-  
15              mology studies;

16             “(B) work with officials of State and local  
17             governments to ensure that they are knowledge-  
18             able about the specific seismic risks in their  
19             areas;

20             “(C) develop standard procedures, in con-  
21             sultation with the Director of the Federal Emer-  
22             gency Management Agency, for issuing earth-  
23             quake alerts, including aftershock advisories,  
24             and, to the extent possible, ensure that such  
25             alerts are compatible with the Integrated Public

1        *Alerts and Warning System program authorized*  
2        *by section 202 of the Robert T. Stafford Disaster*  
3        *Relief and Emergency Assistance Act (42 U.S.C.*  
4        *5132);*

5                *“(D) issue when justified, and notify the*  
6        *Director of the Federal Emergency Management*  
7        *Agency of, an earthquake prediction or other*  
8        *earthquake advisory, which may be evaluated by*  
9        *the National Earthquake Prediction Evaluation*  
10        *Council;*

11                *“(E) operate, as integral parts of the Ad-*  
12        *vanced National Seismic Research and Moni-*  
13        *toring System, a National Earthquake Informa-*  
14        *tion Center and a national seismic network, to-*  
15        *gether providing timely and accurate informa-*  
16        *tion on earthquakes world-wide;*

17                *“(F) support the operation of regional seis-*  
18        *mic networks in areas of higher seismic risk;*

19                *“(G) develop and support seismic instru-*  
20        *mentation of buildings and other structures to*  
21        *obtain data on their response to earthquakes for*  
22        *use in engineering studies and assessment of*  
23        *damage;*



1           “(H) monitor and assess Earth surface de-  
2           formation as it pertains to the evaluation of  
3           earthquake hazards and impacts;

4           “(I) work with other Program agencies to  
5           maintain awareness of, and where appropriate  
6           cooperate with, earthquake risk reduction efforts  
7           in other countries, to ensure that the Program  
8           benefits from relevant information and advances  
9           in those countries;

10          “(J) maintain suitable seismic hazard maps  
11          in support of building codes for structures and  
12          lifelines, including additional maps needed for  
13          performance-based design approaches, and, to the  
14          extent possible, ensure that such maps are devel-  
15          oped consistent with the multihazard advisory  
16          maps authorized by section 203(k) of the Robert  
17          T. Stafford Disaster Relief and Emergency As-  
18          sistance Act (42 U.S.C. 5133(k));

19          “(K) conduct a competitive, peer-reviewed  
20          process which awards grants and cooperative  
21          agreements to complement and extend related in-  
22          ternal Survey research and monitoring activi-  
23          ties; and

24          “(L) operate, in cooperation with the Na-  
25          tional Science Foundation, a Global Seis-

1            *mographic Network for detection of earthquakes*  
2            *around the world and research into fundamental*  
3            *earth processes.*

4            “(5) NATIONAL SCIENCE FOUNDATION.—*The Na-*  
5            *tional Science Foundation shall be responsible for*  
6            *funding basic research that furthers the under-*  
7            *standing of earthquakes, earthquake engineering, and*  
8            *community preparation and response to earthquakes.*  
9            *In carrying out this paragraph, the Director of the*  
10           *National Science Foundation shall—*

11                    “(A) *support multidisciplinary and inter-*  
12                    *disciplinary research that will improve the resil-*  
13                    *ency of communities to earthquakes, includ-*  
14                    *ing—*

15                            “(i) *research that improves the safety*  
16                            *and performance of buildings, structures,*  
17                            *and lifelines, including the use of the large-*  
18                            *scale experimental and computational fa-*  
19                            *cilities of the George E. Brown, Jr. Network*  
20                            *for Engineering Earthquake Simulation;*

21                            “(ii) *research to support more effective*  
22                            *earthquake mitigation and response meas-*  
23                            *ures, such as developing better knowledge of*  
24                            *the specific types of vulnerabilities faced by*  
25                            *segments of the community vulnerable to*

1           *earthquakes, addressing the barriers they*  
2           *face in adopting mitigation and prepara-*  
3           *tion measures, and developing methods to*  
4           *better communicate the risks of earthquakes*  
5           *and to promote mitigation; and*

6           “(iii) *research on the response of com-*  
7           *munities, households, businesses, and emer-*  
8           *gency responders to earthquakes;*

9           “(B) *support research to understand earth-*  
10          *quake processes, earthquake patterns, and earth-*  
11          *quake frequencies;*

12          “(C) *encourage prompt dissemination of*  
13          *significant findings, sharing of data, samples,*  
14          *physical collections, and other supporting mate-*  
15          *rials, and development of intellectual property so*  
16          *research results can be used by appropriate orga-*  
17          *nizations to mitigate earthquake damage;*

18          “(D) *work with other Program agencies to*  
19          *maintain awareness of, and where appropriate*  
20          *cooperate with, earthquake risk reduction re-*  
21          *search efforts in other countries, to ensure that*  
22          *the Program benefits from relevant information*  
23          *and advances in those countries; and*

24          “(E) *include to the maximum extent prac-*  
25          *ticable diverse institutions, including Histori-*

1           *cally Black Colleges and Universities, Hispanic-*  
2           *serving institutions, Tribal Colleges and Univer-*  
3           *sities, Alaska Native-serving institutions, and*  
4           *Native Hawaiian-serving institutions.”; and*  
5           *(3) in subsection (c)(1) by inserting “on Natural*  
6           *Hazards Risk Reduction established under section 301*  
7           *of the Natural Hazards Risk Reduction Act of 2011”*  
8           *after “Interagency Coordinating Committee”.*

9   **SEC. 105. POST-EARTHQUAKE INVESTIGATIONS PROGRAM.**

10        *Section 11 of the Earthquake Hazards Reduction Act*  
11        *of 1977 (42 U.S.C. 7705e) is amended by striking “There*  
12        *is established” and all that follows through “conduct of such*  
13        *earthquake investigations.” and inserting “The Program*  
14        *shall include a post-earthquake investigations program, the*  
15        *purpose of which is to investigate major earthquakes so as*  
16        *to learn lessons which can be applied to reduce the loss of*  
17        *lives and property in future earthquakes. The lead Program*  
18        *agency, in consultation with each Program agency, shall*  
19        *organize investigations to study the implications of the*  
20        *earthquakes in the areas of responsibility of each Program*  
21        *agency. The investigations shall begin as rapidly as possible*  
22        *and may be conducted by grantees and contractors. The*  
23        *Program agencies shall ensure that the results of the inves-*  
24        *tigations are disseminated widely.”.*

1 **SEC. 106. AUTHORIZATION OF APPROPRIATIONS.**

2 (a) *IN GENERAL.*—Section 12 of the *Earthquake Haz-*  
3 *ards Reduction Act of 1977 (42 U.S.C. 7706)* is amended—

4 (1) *by adding at the end of subsection (a) the fol-*  
5 *lowing:*

6 “(9) *There are authorized to be appropriated to the*  
7 *Federal Emergency Management Agency for carrying out*  
8 *this Act—*

9 “(A) *\$10,238,000 for fiscal year 2011;*

10 “(B) *\$10,545,000 for fiscal year 2012;*

11 “(C) *\$10,861,000 for fiscal year 2013;*

12 “(D) *\$11,187,000 for fiscal year 2014; and*

13 “(E) *\$11,523,000 for fiscal year 2015.”;*

14 (2) *by adding at the end of subsection (b) the fol-*  
15 *lowing:*

16 “(3) *There are authorized to be appropriated to the*  
17 *United States Geological Survey for carrying out this Act—*

18 “(A) *\$90,000,000 for fiscal year 2011, of which*  
19 *\$36,000,000 shall be made available for completion of*  
20 *the Advanced National Seismic Research and Moni-*  
21 *toring System;*

22 “(B) *\$92,100,000 for fiscal year 2012, of which*  
23 *\$37,000,000 shall be made available for completion of*  
24 *the Advanced National Seismic Research and Moni-*  
25 *toring System;*

1           “(C) \$94,263,000 for fiscal year 2013, of which  
2           \$38,000,000 shall be made available for completion of  
3           the Advanced National Seismic Research and Moni-  
4           toring System;

5           “(D) \$96,491,000 for fiscal year 2014, of which  
6           \$39,000,000 shall be made available for completion of  
7           the Advanced National Seismic Research and Moni-  
8           toring System; and

9           “(E) \$98,786,000 for fiscal year 2015, of which  
10          \$40,000,000 shall be made available for completion of  
11          the Advanced National Seismic Research and Moni-  
12          toring System.”;

13          (3) by adding at the end of subsection (c) the fol-  
14          lowing:

15          “(3) There are authorized to be appropriated to the  
16          National Science Foundation for carrying out this Act—

17                 “(A) \$64,125,000 for fiscal year 2011;

18                 “(B) \$66,049,000 for fiscal year 2012;

19                 “(C) \$68,030,000 for fiscal year 2013;

20                 “(D) \$70,071,000 for fiscal year 2014; and

21                 “(E) \$72,173,000 for fiscal year 2015.”; and

22          (4) by adding at the end of subsection (d) the fol-  
23          lowing:

1       “(3) *There are authorized to be appropriated to the*  
 2 *National Institute of Standards and Technology for car-*  
 3 *rying out this Act—*

4               “(A) \$7,000,000 for fiscal year 2011;

5               “(B) \$7,700,000 for fiscal year 2012;

6               “(C) \$7,931,000 for fiscal year 2013;

7               “(D) \$8,169,000 for fiscal year 2014; and

8               “(E) \$8,414,000 for fiscal year 2015.”.

9       (b) *CONFORMING AMENDMENT.*—Section 14 of the Na-  
 10 *tional Earthquake Hazards Reduction Act of 1977 (42*  
 11 *U.S.C. 7708) is amended—*

12               (1) *by striking “(a) ESTABLISHMENT.—”; and*

13               (2) *by striking subsection (b).*

## 14                               **TITLE II—WIND**

### 15       **SEC. 201. SHORT TITLE.**

16       *This title may be cited as the “National Windstorm*  
 17 *Impact Reduction Act Reauthorization of 2011”.*

### 18       **SEC. 202. PURPOSE.**

19       *Section 202 of the National Windstorm Impact Reduc-*  
 20 *tion Act of 2004 (42 U.S.C. 15701) is amended to read as*  
 21 *follows:*

#### 22       **“SEC. 202. PURPOSE.**

23               *“It is the purpose of the Congress in this title to*  
 24 *achieve a major measurable reduction in losses of life and*  
 25 *property from windstorms through the establishment and*

1 *maintenance of an effective Windstorm Impact Reduction*  
2 *Program. The objectives of such Program shall include—*

3           “(1) *the education of households, businesses, and*  
4 *communities about the risks posed by windstorms,*  
5 *and the identification of locations, structures, life-*  
6 *lines, and segments of the community which are espe-*  
7 *cially vulnerable to windstorm damage and interrup-*  
8 *tion, and the dissemination of information on meth-*  
9 *ods to reduce those risks;*

10           “(2) *the development of technologically and eco-*  
11 *nomically feasible design and construction methods*  
12 *and procedures to make new and existing structures,*  
13 *in areas of windstorm risk, windstorm resilient, giv-*  
14 *ing high priority to the development of such methods*  
15 *and procedures for lifelines, structures associated with*  
16 *a potential high loss of life, and structures that are*  
17 *especially needed in times of disasters, such as hos-*  
18 *pitals and public safety and shelter facilities;*

19           “(3) *the implementation, in areas of major*  
20 *windstorm risk, of instrumentation to record and*  
21 *gather data on windstorms and the characteristics of*  
22 *the wind during those events, and continued research*  
23 *to increase the understanding of windstorm phe-*  
24 *nomena;*





1 **“SEC. 204. NATIONAL WINDSTORM IMPACT REDUCTION**  
2 **PROGRAM.**

3 “(a) *ESTABLISHMENT.*—*There is established the Na-*  
4 *tional Windstorm Impact Reduction Program.*

5 “(b) *PROGRAM ACTIVITIES.*—*The activities of the Pro-*  
6 *gram shall be designed to—*

7 “(1) *research and develop cost-effective, feasible*  
8 *methods, tools, and technologies to reduce the risks*  
9 *posed by windstorms to the built environment, espe-*  
10 *cially to lessen the risk to existing structures and life-*  
11 *lines;*

12 “(2) *improve the understanding of windstorms*  
13 *and their impacts on households, businesses, commu-*  
14 *nities, buildings, structures, and lifelines, through*  
15 *interdisciplinary and multidisciplinary research that*  
16 *involves engineering, natural sciences, and social*  
17 *sciences; and*

18 “(3) *facilitate the adoption of windstorm risk re-*  
19 *duction measures by households, businesses, commu-*  
20 *nities, local, State and Federal governments, national*  
21 *standards and model building code organizations, ar-*  
22 *chitects and engineers, building owners, and others*  
23 *with a role in planning for disasters and planning,*  
24 *constructing, retrofitting, and insuring buildings,*  
25 *structures, and lifelines through—*

1           “(A) grants, contracts, cooperative agree-  
2           ments, and technical assistance;

3           “(B) development of hazard maps, stand-  
4           ards, guidelines, voluntary consensus standards,  
5           and other design guidance for windstorm risk re-  
6           duction for buildings, structures, and lifelines;

7           “(C) outreach and information dissemina-  
8           tion to communities on site specific windstorm  
9           hazards and ways to reduce the risks from those  
10          hazards; and

11          “(D) development and maintenance of a re-  
12          pository of information, including technical  
13          data, on windstorm hazards and risk reduction;

14          “(c) RESPONSIBILITIES OF PROGRAM AGENCIES.—

15                 “(1) LEAD AGENCY.—The National Institute of  
16                 Standards and Technology (in this section referred to  
17                 as the ‘Institute’) shall be responsible for planning  
18                 and coordinating the Program. In carrying out this  
19                 paragraph, the Director of the Institute shall—

20                         “(A) ensure that the Program includes the  
21                         necessary components to promote the implemen-  
22                         tation of windstorm risk reduction measures by  
23                         households, businesses, communities, local, State,  
24                         and Federal governments, national standards  
25                         and model building code organizations, archi-

1            *pects and engineers, building owners, and others*  
2            *with a role in planning and preparing for disas-*  
3            *ters, and planning constructing, and retrofitting,*  
4            *and insuring buildings, structures, and lifelines;*

5            *“(B) support the development of perform-*  
6            *ance-based engineering tools, and work with the*  
7            *appropriate groups to promote the commercial*  
8            *application of such tools, through wind-related*  
9            *building codes, standards, and construction prac-*  
10           *tices;*

11           *“(C) ensure the use of social science research*  
12           *and findings in informing the development of*  
13           *technology and research priorities, in commu-*  
14           *nicating windstorm risks to the public, in devel-*  
15           *oping windstorm risk mitigation strategies, and*  
16           *in preparing for windstorm disasters;*

17           *“(D) coordinate all Federal post-windstorm*  
18           *investigations; and*

19           *“(E) when warranted by research or inves-*  
20           *tigative findings, issue recommendations for*  
21           *changes in model codes to the relevant code devel-*  
22           *opment organizations, and report back to Con-*  
23           *gress on whether such recommendations were*  
24           *adopted.*

1           “(2) NATIONAL INSTITUTE OF STANDARDS AND  
2           TECHNOLOGY.—In addition to the lead agency re-  
3           sponsibilities described under paragraph (1), the In-  
4           stitute shall be responsible for carrying out research  
5           and development to improve model codes, standards,  
6           design guidance and practices for the construction  
7           and retrofit of buildings, structures, and lifelines. In  
8           carrying out this paragraph, the Director of the Insti-  
9           tute shall—

10                   “(A) support the development of instrumen-  
11                   tation, data processing, and archival capabili-  
12                   ties, and standards for the instrumentation and  
13                   its deployment, to measure wind, wind loading,  
14                   and other properties of severe wind and structure  
15                   response;

16                   “(B) coordinate with other appropriate  
17                   Federal agencies to make the data described in  
18                   subparagraph (A) available to researchers, stand-  
19                   ards and code developers, and local planners;

20                   “(C) support the development of tools and  
21                   methods for the collection of data on the loss of  
22                   and damage to structures, and data on surviving  
23                   structures after severe windstorm events;

1           “(D) improve the knowledge of the impact  
2 of severe wind on buildings, structures, lifelines,  
3 and communities;

4           “(E) develop cost-effective windstorm im-  
5 pact reduction tools, methods, and technologies;

6           “(F) work, in conjunction with other appro-  
7 priate Federal agencies, to support the develop-  
8 ment of wind standards and model codes; and

9           “(G) in conjunction with other appropriate  
10 Federal agencies, work closely with standards  
11 and model code development organizations, pro-  
12 fessional societies, and practicing engineers, ar-  
13 chitects, and others involved in the construction  
14 of buildings, structures, and lifelines, to promote  
15 better building practices, including by—

16           “(i) supporting the development of  
17 technical resources for practitioners to im-  
18 plement new knowledge; and

19           “(ii) supporting the development of  
20 methods and tools to incorporate wind engi-  
21 neering principles into design and construc-  
22 tion practices.

23           “(3) FEDERAL EMERGENCY MANAGEMENT AGEN-  
24 CY.—The Federal Emergency Management Agency,  
25 consistent with the Agency’s all hazards approach,

1       *shall support the development of risk assessment tools*  
2       *and effective mitigation techniques, assist with wind-*  
3       *storm-related data collection and analysis, and sup-*  
4       *port outreach, information dissemination, and imple-*  
5       *mentation of windstorm preparedness and mitigation*  
6       *measures by households, businesses, and communities,*  
7       *including by—*

8               *“(A) working to develop or improve risk-as-*  
9               *essment tools, methods, and models;*

10              *“(B) working closely with other appropriate*  
11              *Federal agencies to develop and facilitate the*  
12              *adoption of windstorm impact reduction meas-*  
13              *ures, including by—*

14                    *“(i) developing cost-effective retrofit*  
15                    *measures for existing buildings, structures,*  
16                    *and lifelines to improve windstorm per-*  
17                    *formance;*

18                    *“(ii) developing methods, tools, and*  
19                    *technologies to improve the planning, de-*  
20                    *sign, and construction of new buildings,*  
21                    *structures, and lifelines;*

22                    *“(iii) supporting the development of*  
23                    *model wind codes and standards for build-*  
24                    *ings, structures, and lifelines; and*

1                   “(iv) developing technical resources for  
2                   practitioners that reflect new knowledge and  
3                   standards of practice; and

4                   “(C) developing and disseminating guide-  
5                   lines for the construction of windstorm shelters.

6                   Nothing in this Act shall be construed to diminish the  
7                   role and responsibility of the Federal Emergency  
8                   Management Agency with regard to all hazards pre-  
9                   paredness, response, recovery, and mitigation.

10                   “(4) NATIONAL OCEANIC AND ATMOSPHERIC AD-  
11                   MINISTRATION.—The National Oceanic and Atmos-  
12                   pheric Administration shall support atmospheric  
13                   sciences research and data collection to improve the  
14                   understanding of the behavior of windstorms and  
15                   their impact on buildings, structures, and lifelines,  
16                   including by—

17                   “(A) working with other appropriate Fed-  
18                   eral agencies to develop and deploy instrumenta-  
19                   tion to measure speed and other characteristics  
20                   of wind, and to collect, analyze, and make avail-  
21                   able such data;

22                   “(B) working with officials of State and  
23                   local governments to ensure that they are knowl-  
24                   edgeable about, and prepared for, the specific  
25                   windstorm risks in their area;



1           “(C) supporting the development of suitable  
2 wind speed maps and other derivative products  
3 that support building codes and other hazard  
4 mitigation approaches for buildings, structures,  
5 and lifelines, and, to the extent possible, ensure  
6 that such maps and other derivative products are  
7 developed consistent with the multihazard advi-  
8 sory maps authorized by section 203(k) of the  
9 Robert T. Stafford Disaster Relief and Emer-  
10 gency Assistance Act (42 U.S.C. 5133(k));

11           “(D) conducting a competitive, peer-re-  
12 viewed process which awards grants and cooper-  
13 ative agreements to complement the National  
14 Oceanic and Atmospheric Administration’s  
15 wind-related and storm surge-related research  
16 and data collection activities;

17           “(E) working with other appropriate Fed-  
18 eral agencies and State and local governments to  
19 develop or improve risk-assessment tools, meth-  
20 ods, and models; and

21           “(F) working with other appropriate Fed-  
22 eral agencies to develop storm surge models to  
23 better understand the interaction between wind-  
24 storms and bodies of water.

1           “(5) NATIONAL SCIENCE FOUNDATION.—*The Na-*  
2           *tional Science Foundation shall be responsible for*  
3           *funding basic research that furthers the under-*  
4           *standing of windstorms, wind engineering, and com-*  
5           *munity preparation and response to windstorms. In*  
6           *carrying out this paragraph, the Director of the Na-*  
7           *tional Science Foundation shall—*

8                   “(A) *support multidisciplinary and inter-*  
9                   *disciplinary research that will improve the resil-*  
10                  *ency of communities to windstorms, including—*

11                           “(i) *research that improves the safety*  
12                           *and performance of buildings, structures,*  
13                           *and lifelines;*

14                           “(ii) *research to support more effective*  
15                           *windstorm mitigation and response meas-*  
16                           *ures, such as developing better knowledge of*  
17                           *the specific types of vulnerabilities faced by*  
18                           *segments of the community vulnerable to*  
19                           *windstorms, addressing the barriers they*  
20                           *face in adopting mitigation and prepara-*  
21                           *tion measures, and developing methods to*  
22                           *better communicate the risks of windstorms*  
23                           *and to promote mitigation; and*

24                           “(iii) *research on the response of com-*  
25                           *munities to windstorms, including on the*

1           *effectiveness of the emergency response, and*  
2           *the recovery process of communities, house-*  
3           *holds, and businesses;*

4           “(B) *support research to understand wind-*  
5           *storm processes, windstorm patterns, and wind-*  
6           *storm frequencies;*

7           “(C) *encourage prompt dissemination of*  
8           *significant findings, sharing of data, samples,*  
9           *physical collections, and other supporting mate-*  
10          *rials, and development of intellectual property so*  
11          *research results can be used by appropriate orga-*  
12          *nizations to mitigate windstorm damage;*

13          “(D) *work with other Program agencies to*  
14          *maintain awareness of, and where appropriate*  
15          *cooperate with, windstorm risk reduction re-*  
16          *search efforts in other countries, to ensure that*  
17          *the Program benefits from relevant information*  
18          *and advances in those countries; and*

19          “(E) *include to the maximum extent prac-*  
20          *ticable diverse institutions, including Histori-*  
21          *cally Black Colleges and Universities, Hispanic-*  
22          *serving institutions, Tribal Colleges and Univer-*  
23          *sities, Alaska Native-serving institutions, and*  
24          *Native Hawaiian-serving institutions.”.*

1 **SEC. 205. AUTHORIZATION OF APPROPRIATIONS.**

2 *Section 207 of the National Windstorm Impact Reduc-*  
 3 *tion Program of 2004 (42 U.S.C. 15706) is amended to read*  
 4 *as follows:*

5 **“SEC. 207. AUTHORIZATION OF APPROPRIATIONS.**

6 *“(a) FEDERAL EMERGENCY MANAGEMENT AGENCY.—*  
 7 *There are authorized to be appropriated to the Federal*  
 8 *Emergency Management Agency for carrying out this*  
 9 *title—*

10 *“(1) \$9,682,000 for fiscal year 2011;*

11 *“(2) \$9,972,500 for fiscal year 2012;*

12 *“(3) \$10,271,600 for fiscal year 2013;*

13 *“(4) \$10,579,800 for fiscal year 2014; and*

14 *“(5) \$10,897,200 for fiscal year 2015.*

15 *“(b) NATIONAL SCIENCE FOUNDATION.—There are au-*  
 16 *thorized to be appropriated to the National Science Foun-*  
 17 *dition for carrying out this title—*

18 *“(1) \$9,682,000 for fiscal year 2011;*

19 *“(2) \$9,972,500 for fiscal year 2012;*

20 *“(3) \$10,271,600 for fiscal year 2013;*

21 *“(4) \$10,579,800 for fiscal year 2014; and*

22 *“(5) \$10,897,200 for fiscal year 2015.*

23 *“(c) NATIONAL INSTITUTE OF STANDARDS AND TECH-*  
 24 *NOLOGY.—There are authorized to be appropriated to the*  
 25 *National Institute of Standards and Technology for car-*  
 26 *rying out this title—*

- 1           “(1) \$4,120,000 for fiscal year 2011;  
 2           “(2) \$4,243,600 for fiscal year 2012;  
 3           “(3) \$4,370,900 for fiscal year 2013;  
 4           “(4) \$4,502,000 for fiscal year 2014; and  
 5           “(5) \$4,637,100 for fiscal year 2015.

6           “(d) NATIONAL OCEANIC AND ATMOSPHERIC ADMINIS-  
 7 TRATION.—There are authorized to be appropriated to the  
 8 National Oceanic and Atmospheric Administration for car-  
 9 rying out this title—

- 10           “(1) \$2,266,000 for fiscal year 2011;  
 11           “(2) \$2,334,000 for fiscal year 2012;  
 12           “(3) \$2,404,000 for fiscal year 2013;  
 13           “(4) \$2,476,100 for fiscal year 2014; and  
 14           “(5) \$2,550,400 for fiscal year 2015.”.

15 **TITLE III—INTERAGENCY CO-**  
 16 **ORDINATING COMMITTEE ON**  
 17 **NATURAL HAZARDS RISK RE-**  
 18 **DUCTION**

19 **SEC. 301. INTERAGENCY COORDINATING COMMITTEE ON**  
 20 **NATURAL HAZARDS RISK REDUCTION.**

21           (a) IN GENERAL.—There is established an Interagency  
 22 Coordinating Committee on Natural Hazards Risk Reduc-  
 23 tion, chaired by the Director of the National Institute of  
 24 Standards and Technology.

1           (1) *MEMBERSHIP.*—*In addition to the chair, the*  
2 *Committee shall be composed of—*

3           (A) *the directors of—*

4                 (i) *the Federal Emergency Manage-*  
5 *ment Agency;*

6                 (ii) *the United States Geological Sur-*  
7 *vey;*

8                 (iii) *the National Oceanic and Atmos-*  
9 *pheric Administration;*

10                (iv) *the National Science Foundation;*

11                (v) *the Office of Science and Tech-*  
12 *nology Policy; and*

13                (vi) *the Office of Management and*  
14 *Budget; and*

15           (B) *the head of any other Federal agency*  
16 *the Committee considers appropriate.*

17           (2) *MEETINGS.*—*The Committee shall not meet*  
18 *less than 2 times a year at the call of the Director*  
19 *of the National Institute of Standards and Tech-*  
20 *nology.*

21           (3) *GENERAL PURPOSE AND DUTIES.*—*The Com-*  
22 *mittee shall oversee the planning and coordination of*  
23 *the National Earthquake Hazards Reduction Pro-*  
24 *gram and the National Windstorm Impact Reduction*  
25 *Program, and shall make proposals for planning and*

1       *coordination of any other Federal research for natural*  
2       *hazard mitigation that the Committee considers ap-*  
3       *propriate.*

4               (4) *STRATEGIC PLANS.—The Committee shall de-*  
5       *velop and submit to Congress, not later than one year*  
6       *after the date of enactment of this Act—*

7                       (A) *a Strategic Plan for the National*  
8       *Earthquake Hazards Reduction Program that*  
9       *includes—*

10                               (i) *prioritized goals for such Program*  
11       *that will mitigate against the loss of life*  
12       *and property from future earthquakes;*

13                               (ii) *short-term, mid-term, and long-*  
14       *term research objectives to achieve those*  
15       *goals;*

16                               (iii) *a description of the role of each*  
17       *Program agency in achieving the*  
18       *prioritized goals;*

19                               (iv) *the methods by which progress to-*  
20       *wards the goals will be assessed;*

21                               (v) *an explanation of how the Program*  
22       *will foster the transfer of research results*  
23       *onto outcomes, such as improved building*  
24       *codes;*

1                   (vi) a description of the role of social  
2 science in informing the development of the  
3 prioritized goals and research objectives;  
4 and

5                   (vii) a description of how the George  
6 E. Brown, Jr. Network for Earthquake En-  
7 gineering Simulation and the Advanced Na-  
8 tional Seismic Research and Monitoring  
9 System will be used in achieving the  
10 prioritized goals and research objectives;  
11 and

12                   (B) a Strategic Plan for the National  
13 Windstorm Impact Reduction Program that in-  
14 cludes—

15                   (i) prioritized goals for such Program  
16 that will mitigate against the loss of life  
17 and property from future windstorms;

18                   (ii) short-term, mid-term, and long-  
19 term research objectives to achieve those  
20 goals;

21                   (iii) a description of the role of each  
22 Program agency in achieving the  
23 prioritized goals;

24                   (iv) the methods by which progress to-  
25 wards the goals will be assessed;



1                   (v) an explanation of how the Program  
2                   will foster the transfer of research results  
3                   onto outcomes, such as improved building  
4                   codes; and

5                   (vi) a description of the role of social  
6                   science in informing the development of the  
7                   prioritized goals and research objectives.

8                   (5) *PROGRESS REPORTS.*—Not later than one  
9                   year after the date of enactment of this Act, and at  
10                  least once every two years thereafter, the Committee  
11                  shall submit to the Congress—

12                  (A) a report on the progress of the National  
13                  Earthquake Hazards Reduction Program that  
14                  includes—

15                   (i) a description of the activities fund-  
16                   ed for the previous two years of the Pro-  
17                   gram, a description of how these activities  
18                   align with the prioritized goals and re-  
19                   search objectives established in the Strategic  
20                   Plan, and the budgets, per agency, for these  
21                   activities;

22                   (ii) the outcomes achieved by the Pro-  
23                   gram for each of the goals identified in the  
24                   Strategic Plan;

1                   (iii) a description of any recommenda-  
2                   tions made to change existing building codes  
3                   that were the result of Program activities;  
4                   and

5                   (iv) a description of the extent to  
6                   which the Program has incorporated rec-  
7                   ommendations from the Advisory Committee  
8                   on Earthquake Hazards Reduction; and

9                   (B) a report on the progress of the National  
10                  Windstorm Impact Reduction Program that in-  
11                  cludes—

12                   (i) a description of the activities fund-  
13                   ed for the previous two years of the Pro-  
14                   gram, a description of how these activities  
15                   align with the prioritized goals and re-  
16                   search objectives established in the Strategic  
17                   Plan, and the budgets, per agency, for these  
18                   activities;

19                   (ii) the outcomes achieved by the Pro-  
20                   gram for each of the goals identified in the  
21                   Strategic Plan;

22                   (iii) a description of any recommenda-  
23                   tions made to change existing building codes  
24                   that were the result of Program activities;  
25                   and

1                   (iv) a description of the extent to  
2                   which the Program has incorporated rec-  
3                   ommendations from the Advisory Committee  
4                   on Windstorm Impact Reduction.

5                   (6) *COORDINATED BUDGET.*—The Committee  
6                   shall develop a coordinated budget for the National  
7                   Earthquake Hazards Reduction Program and a co-  
8                   ordinated budget for the National Windstorm Impact  
9                   Reduction Program. These budgets shall be submitted  
10                  to the Congress at the time of the President’s budget  
11                  submission for each fiscal year.

12                  (b) *ADVISORY COMMITTEES ON NATURAL HAZARDS*  
13 *REDUCTION.*—

14                  (1) *IN GENERAL.*—In addition to the National  
15                  Advisory Committee on Windstorm Impact Reduction  
16                  established under section 205 of the National Wind-  
17                  storm Impact Reduction Act of 2004 (42 U.S.C.  
18                  15704), the Director of the National Institute of  
19                  Standards and Technology shall establish an Advisory  
20                  Committee on Earthquake Hazards Reduction and  
21                  such other advisory committees as the Director con-  
22                  siders necessary to advise the Institute on research,  
23                  development, and technology transfer activities to  
24                  mitigate the impact of natural disasters.

1           (2) *ADVISORY COMMITTEE ON EARTHQUAKE*  
2           *HAZARDS REDUCTION.—The Advisory Committee on*  
3           *Earthquake Hazards Reduction shall be composed of*  
4           *at least 11 members, none of whom may be employees*  
5           *of the Federal Government, including representatives*  
6           *of research and academic institutions, industry stand-*  
7           *ards development organizations, emergency manage-*  
8           *ment agencies, State and local government, and busi-*  
9           *ness communities who are qualified to provide advice*  
10          *on earthquake hazards reduction and represent all re-*  
11          *lated scientific, architectural, and engineering dis-*  
12          *ciplines. The recommendations of the Advisory Com-*  
13          *mittee shall be considered by Federal agencies in im-*  
14          *plementing the National Earthquake Hazards Reduc-*  
15          *tion Program.*

16           (3) *MODIFICATION OF NATIONAL ADVISORY COM-*  
17          *MITTEE ON WINDSTORM IMPACT REDUCTION.—Section*  
18          *205 of the National Windstorm Impact Reduction Act*  
19          *of 2004 (42 U.S.C. 15704) is amended by striking*  
20          *subsections (a) through (c) and inserting the fol-*  
21          *lowing:*

22          “(a) *ESTABLISHMENT.—The Director shall establish a*  
23          *commission to be known as the ‘National Advisory Com-*  
24          *mittee on Windstorm Impact Reduction’ (hereafter in this*  
25          *section referred to as the ‘Advisory Committee’).*

1       “(b) *MEMBERSHIP.*—

2               “(1) *COMPOSITION.*—*The Advisory Committee*  
3       *shall be composed of not fewer than 7 members se-*  
4       *lected by the Director—*

5                       “(A) *from research and academic institu-*  
6       *tions, industry standards development organiza-*  
7       *tions, emergency management agencies, State*  
8       *and local government, and business communities;*

9                       “(B) *who represent all related scientific, ar-*  
10       *chitectural, and engineering disciplines; and*

11                      “(C) *who are qualified to provide advice on*  
12       *windstorm impact reduction.*

13               “(2) *PROHIBITION.*—*A member of the Advisory*  
14       *Committee may not be an employee of the Federal*  
15       *Government.*

16       “(c) *DUTIES.*—*The Advisory Committee shall develop*  
17       *recommendations for Federal agencies on implementation*  
18       *of the Program.”.*

19               (4) *ASSESSMENTS.*—*The Advisory Committee on*  
20       *Earthquake Hazards Reduction and the National Ad-*  
21       *visory Committee on Windstorm Impact Reduction*  
22       *shall offer assessments on—*

23                      (A) *trends and developments in the natural,*  
24       *social, and engineering sciences and practices of*

1           *earthquake hazards or windstorm impact mitiga-*  
2           *tion;*

3                   *(B) the priorities of the Programs' Strategic*  
4           *Plans;*

5                   *(C) the coordination of the Programs; and*

6                   *(D) and any revisions to the Programs*  
7           *which may be necessary.*

8           (5) *BIENNIAL REPORTS.*—*Not less frequently*  
9           *than once every two years, the Advisory Committees*  
10          *shall report to the Director of the National Institute*  
11          *of Standards and Technology on the assessments car-*  
12          *ried out under paragraph (4) and their recommenda-*  
13          *tions for ways to improve the Programs. In devel-*  
14          *oping recommendations for the National Earthquake*  
15          *Hazards Reduction Program, the Advisory Committee*  
16          *on Earthquake Hazards Reduction shall consider the*  
17          *recommendations of the United States Geological Sur-*  
18          *vey Scientific Earthquake Studies Advisory Com-*  
19          *mittee.*

20          (c) *COORDINATION OF FEDERAL DISASTER RE-*  
21          *SEARCH, DEVELOPMENT, AND TECHNOLOGY TRANSFER.*—  
22          *Not later than 2 years after the date of enactment of this*  
23          *Act, the Subcommittee on Disaster Reduction of the Com-*  
24          *mittee on Environment and Natural Resources of the Na-*

1 *tional Science and Technology Council shall submit a re-*  
 2 *port to the Congress identifying—*

3           (1) *current Federal research, development, and*  
 4 *technology transfer activities that address hazard*  
 5 *mitigation for natural disasters, including earth-*  
 6 *quakes, hurricanes, tornados, wildfires, floods, and the*  
 7 *current budgets for these activities;*

8           (2) *areas of research that are common to two or*  
 9 *more of the hazards identified in paragraph (1); and*

10           (3) *opportunities to create synergies between the*  
 11 *research activities for the hazards identified in para-*  
 12 *graph (1).*

13 ***TITLE IV—NATIONAL CONSTRU-***  
 14 ***CTION SAFETY TEAM ACT***  
 15 ***AMENDMENTS***

16 ***SEC. 401. NATIONAL CONSTRUCTION SAFETY TEAM ACT***  
 17 ***AMENDMENTS.***

18 *The National Construction Safety Team Act (15*  
 19 *U.S.C. 7301 et seq.) is amended—*

20           (1) *in section 2(a)—*

21                   (A) *by striking “a building or buildings”*  
 22 *and inserting “a building, buildings, or infra-*  
 23 *structure”;* and

24                   (B) *by striking “To the maximum extent*  
 25 *practicable, the Director shall establish and de-*

1            *ploy a Team within 48 hours after such an*  
2            *event.” and inserting “The Director shall make*  
3            *a decision whether to deploy a Team within 72*  
4            *hours after such an event.”;*

5            *(2) in section 2(b)(1), by striking “buildings”*  
6            *and inserting “buildings or infrastructure”;*

7            *(3) in section 2(b)(2)(A), by striking “building”*  
8            *and inserting “building or infrastructure”;*

9            *(4) in section 2(b)(2)(D), by striking “buildings”*  
10           *and inserting “buildings or infrastructure”;*

11           *(5) in section 2(c)(1), by striking “the United*  
12           *States Fire Administration and”;*

13           *(6) in section 2(c)(1)(G), by striking “building”*  
14           *and inserting “building or infrastructure”;*

15           *(7) in section 2(c)(1)(J)—*

16           *(A) by striking “building” and inserting*  
17           *“building or infrastructure”; and*

18           *(B) by inserting “and the National Wind-*  
19           *storm Impact Reduction Act of 2004” after “Act*  
20           *of 1977”;*

21           *(8) in section 4(a), by striking “investigating a*  
22           *building” and inserting “investigating building and*  
23           *infrastructure”;*

24           *(9) in section 4(a)(1)—*



1           (A) by striking “a building” and inserting  
2           “a building or infrastructure”; and

3           (B) by striking “building” both of the other  
4           places it appears and inserting “building or in-  
5           frastructure”;

6           (10) in section 4(a)(3), by striking “building”  
7           both places it appears and inserting “building or in-  
8           frastructure”;

9           (11) in section 4(b), by striking “building” both  
10          places it appears and inserting “building or infra-  
11          structure”;

12          (12) in section 4(c) (1) and (2), by striking  
13          “building” both places it appears and inserting  
14          “building or infrastructure”;

15          (13) by amending section 4(d)(1) to read as fol-  
16          lows:

17               “(1) *IN GENERAL.*—*Except as otherwise provided*  
18               *in this subsection, a Team investigation shall have*  
19               *priority over any other investigation which is related*  
20               *to the purpose and duties set forth in section 2(b) and*  
21               *undertaken by any other Federal agency.*”;

22          (14) in section 4(d) (3) and (4), by striking  
23          “building” both places it appears and inserting  
24          “building or infrastructure”;

1           (15) in section 4, by adding at the end the fol-  
2           lowing new paragraph:

3           “(5) *INFRASTRUCTURE INVESTIGATIONS.*—With  
4           respect to an investigation relating to an infrastruc-  
5           ture failure, a Federal agency with primary jurisdic-  
6           tion over the failed infrastructure which is conducting  
7           an investigation and asserts priority over the Team  
8           investigation shall have such priority. Such priority  
9           shall not otherwise affect the authority of the Team to  
10          continue its investigation under this Act.”;

11          (16) in section 7(a), by striking “on request and  
12          at reasonable cost”;

13          (17) in section 7(c), by striking “building” and  
14          inserting “building or infrastructure”;

15          (18) in section 8 (1) and (4), by striking “build-  
16          ing” both places it appears and inserting “building  
17          or infrastructure”;

18          (19) in section 9, by striking “the United States  
19          Fire Administration and”;

20          (20) in section 9(2)(C), by striking “building”  
21          and inserting “building or infrastructure”;

22          (21) in section 10(3), by striking “building” and  
23          inserting “building and infrastructure”;

24          (22) in section 11(a), by striking “the United  
25          States Fire Administration and”; and

1           (23) by striking section 12.

2           **TITLE V—FIRE RESEARCH**  
3           **PROGRAM**

4   **SEC. 501. FIRE RESEARCH PROGRAM.**

5           *Section 16(a)(1) of the National Institute of Standards*  
6   *and Technology Act (15 U.S.C. 278f(a)(1)) is amended—*

7           (1) *in subparagraph (D), by inserting “fires at*  
8   *the wildland-urban interface,” after “but not limited*  
9   *to,”; and*

10          (2) *in subparagraph (E), by inserting “fires at*  
11   *the wildland-urban interface,” after “types of fires,*  
12   *including”.*

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## **A BILL**

To reauthorize Federal natural hazards reduction programs, and for other purposes.

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FEBRUARY 27, 2012

Reported with an amendment