

112TH CONGRESS  
2D SESSION

# S. 3691

To minimize the economic and social costs resulting from losses of life, property, well-being, business activity, and economic growth associated with extreme weather events by ensuring that the United States is more resilient to the impacts of extreme weather events in the short- and long-term, and for other purposes.

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## IN THE SENATE OF THE UNITED STATES

DECEMBER 19, 2012

Mr. KERRY (for himself, Mrs. GILLIBRAND, and Mr. LAUTENBERG) introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

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## A BILL

To minimize the economic and social costs resulting from losses of life, property, well-being, business activity, and economic growth associated with extreme weather events by ensuring that the United States is more resilient to the impacts of extreme weather events in the short- and long-term, and for other purposes.

1       *Be it enacted by the Senate and House of Representa-*  
2       *tives of the United States of America in Congress assembled,*

**1 SECTION 1. SHORT TITLE.**

2 This Act may be cited as the “Strengthening The Re-  
3 silency of Our Nation on the Ground Act” or the  
4 “STRONG Act”.

**5 SEC. 2. FINDINGS AND PURPOSE.**

6 (a) FINDINGS.—Congress makes the following find-  
7 ings:

8 (1) Extreme weather has serious economic costs  
9 for Americans, American businesses, and State,  
10 local, and tribal governments. Droughts, floods, hur-  
11 rricanes, tornadoes, extreme heat, and extreme cold  
12 cause death, result in loss of property and well-  
13 being, especially among the most vulnerable popu-  
14 lations, and negatively impact business activity and  
15 economic growth.

16 (2) In the past 30 years, there have been more  
17 than 130 weather-related disasters in the United  
18 States that each generated at least \$1,000,000,000  
19 in damages or more than \$880,000,000,000 in total  
20 standardized loss. In addition, there have been many  
21 other extreme weather events that generated less  
22 than \$1,000,000,000 in damages, but still caused  
23 immeasurable harm to the Nation’s citizens, infra-  
24 structure, and economy.

25 (3) Hurricane Sandy, which devastated the  
26 eastern United States in late October 2012, resulted

1       in more than 100 deaths, the evacuation of hundreds  
2       of thousands of people from their homes, power out-  
3       ages affecting more than 8,500,000 homes, massive  
4       flooding, gasoline shortages, and a crippled regional  
5       energy and transportation infrastructure. The esti-  
6       mated total economic losses could exceed  
7       \$70,000,000,000.

8                 (4) Hurricane Katrina led to more than 1,800  
9       deaths, property damage exceeding  
10      \$80,000,000,000, more than \$120,000,000,000 in  
11      Federal spending, and long-term impacts on the  
12      economy and livelihoods of those living in the Gulf  
13      Coast region.

14                 (5) In 2011, one of the most severe and costly  
15      years for weather and climate on record, extreme  
16      weather hit every region in the United States, result-  
17      ing in—

18                         (A) prolonged droughts in the South and  
19       the West;

20                         (B) deadly floods in the Southeast and  
21       Midwest;

22                         (C) hundreds of devastating tornadoes  
23       across the United States;

24                         (D) Hurricane Irene in the Northeast;

(E) more than \$50,000,000,000 in weather-related damages;

(F) 14 extreme weather events, which resulted in more than \$1,000,000,000 in damages each and caused a combined death toll of hundreds of people; and

(G) many other extreme weather events with lesser, but still significant, impacts.

(6) There have been many similar extreme weather events in 2012. During the 10-month period ending in October 2012, there have been—

(A) drought conditions in more than 60 percent of the contiguous United States at the peak of the drought, including more than 2,200 counties that have received disaster designations from the Secretary of Agriculture due to the drought;

(B) deadly floods in Minnesota, Tropical Storm Debby in Florida, and Hurricane Isaac in Louisiana;

(C) destructive wildfires on more than 9,000,000 acres across 37 States;

23 (D) power outages affecting more than  
24 3,400,000 homes due to severe storms during  
25 the summer; and

(E) deadly heat waves, highlighted by July as the warmest month on record for the contiguous United States and more than 9,600 daily high temperature records broken during June, July, and August.

(7) These events and natural disaster trends, when combined with the volatility of weather, ongoing demographic changes, and development in high risk areas, indicate that the negative impacts of extreme weather events and natural disasters have the potential to increase over time. The fact that a significant number of people and assets continue to be located in areas prone to volatile and extreme weather indicates that these events will continue to be expensive and deadly if the United States fails to enhance its resiliency to such events. Recent studies show that the intensity and frequency of some types of, but not all, extreme weather events will likely increase in the future.

1       a savings of \$4 in future losses. Other studies point  
2       to even higher levels of savings.

3                     (9) There are several efforts currently under-  
4       way at the Federal, regional, tribal, State, and local  
5       levels that have helped lay the foundation for a fed-  
6       erally coordinated effort to increase the Nation's re-  
7       siliency to extreme weather events, such as the Hur-  
8       ricane Sandy Rebuilding Task Force, the Presi-  
9       dential Policy Directive on National Preparedness  
10      (referred to in this Act as "PPD-8"), the National  
11      Preparedness System, the whole community ap-  
12      proach led by the Department of Homeland Secu-  
13      rity, and the Silver Jackets Program by the Army  
14      Corps of Engineers. Other recent reports on this  
15      subject include the National Academies of Sciences'  
16      reports "Disaster Resilience: A National Imperative"  
17      and "Building Community Disaster Resilience  
18      through Public-Private Collaboration".

19                     (b) PURPOSE.—The purpose of this Act is to mini-  
20      mize the economic and social costs and future losses of  
21      life, property, well-being, business activity, and economic  
22      growth by making the United States more resilient to the  
23      impacts of extreme weather events over the short- and  
24      long-term, thereby creating business and job growth op-  
25      portunities by—

1                             (1) ensuring that the Federal Government is  
2                             optimizing its use of existing resources and funding  
3                             to support State, local, and tribal officials, busi-  
4                             nesses, and the public to become more resilient, in-  
5                             cluding—

6                                 (A) encouraging the consideration of, and  
7                             ways to incorporate, extreme weather resilience  
8                             across Federal operations, programs, policies,  
9                             and initiatives;

10                                 (B) promoting improved coordination of  
11                             existing and planned Federal extreme weather  
12                             resilience and adaptation efforts that impact ex-  
13                             treme weather resilience and ensuring their co-  
14                             ordination with, and support of, State, local, re-  
15                             gional, and tribal efforts;

16                                 (C) minimizing Federal policies that may  
17                             unintentionally hinder or reduce resilience, such  
18                             as damaging wetlands or other critical green in-  
19                             frastructure, or lead Federal agencies to oper-  
20                             ate at cross purposes in achieving extreme  
21                             weather resilience; and

22                                 (D) building upon existing related efforts,  
23                             such as the Hurricane Sandy Rebuilding Task  
24                             Force, the PPD–8, the National Preparedness  
25                             System, and the whole community approach;

## 12 SEC. 3. DEFINITIONS.

## 13 In this Act:

21                             (2) RESILIENCE.—The term “resilience” means  
22                             the ability to prepare and plan for, absorb, recover  
23                             from, and more successfully adapt to adverse events  
24                             in a timely manner.

## 1 SEC. 4. EXTREME WEATHER RESILIENCE GAP AND OVER-

## 2 LAP ANALYSIS.

## 3 (a) INTERAGENCY WORKING GROUP.—

## 4 (1) IN GENERAL.—

5 (A) ESTABLISHMENT.—The Director of  
6 the Office of Science and Technology Policy (re-  
7 ferred to in this section as the “Director”),  
8 with input from the Department of Homeland  
9 Security, shall establish and chair an inter-  
10 agency working group with Cabinet-level rep-  
11 resentation from all relevant Federal agencies.

12 (B) DUTIES.—The working group shall—

13 (i) come together to provide a stra-  
14 tegic vision of extreme weather resilience;

15 (ii) conduct a gap and overlap anal-  
16 ysis of Federal agencies’ current and  
17 planned activities related to achieving  
18 short- and long-term resilience to extreme  
19 weather and its impacts on the Nation,  
20 such as storm surge, flooding, drought,  
21 and wildfires; and

22 (iii) develop a National Extreme  
23 Weather Resilience Plan in accordance  
24 with section 5(a).

25 (2) ADDITIONAL REPRESENTATION FROM EXEC-  
26 UTIVE OFFICE OF THE PRESIDENT.—The inter-

1 agency working group established under paragraph  
2 (1) shall include representatives of the relevant of-  
3 fices and councils within the Executive Office of the  
4 President, including—  
5 (A) the Office of Management and Budget;  
6 (B) the National Security Staff;  
7 (C) the Council of Economic Advisors;  
8 (D) the Council on Environmental Quality;  
9 and  
10 (E) the Domestic Policy Council.

11 (3) CONSULTATION WITH STATE, LOCAL, AND  
12 TRIBAL REPRESENTATIVES.—

13 (A) IN GENERAL.—The Federal inter-  
14 agency working group established under para-  
15 graph (1) shall work closely with an advisory  
16 group to take into account the needs of State,  
17 local, and tribal entities across all regions of the  
18 United States. The advisory group shall consist  
19 of—

- 20 (i) 1 representative from the National  
21 Emergency Management Association;  
22 (ii) 7 representatives from States and  
23 State associations; and  
24 (iii) 8 representatives from local enti-  
25 ties and associations, including representa-

1                      tion from a tribal nation and at least 1  
2                      major metropolitan area.

11 (i) the gap and overlap analysis under  
12 this section; and

21                         (5) DETAILEES.—Upon the request of the Di-  
22                         rector, each agency or entity referred to in para-  
23                         graph (1) shall provide the working group with a  
24                         detailee, without reimbursement from the working  
25                         group, to support the activities described in sub-

1       section (b), section 5, and section 7(a). Such detailee  
2       shall retain the rights, status, and privileges of his  
3       or her regular employment without interruption.

4                 (6) VOLUNTEER SERVICES.—Notwithstanding  
5       section 1342 of title 31, United States Code, the  
6       working group may investigate and use such vol-  
7       untary services as the working group determines to  
8       be necessary.

9                 (b) GAP AND OVERLAP ANALYSIS.—In conducting  
10      the gap and overlap analysis required under subsection  
11      (a)(1), Federal agency representatives shall—

12                     (1) develop a Federal Government-wide working  
13       vision for resilience to the impacts of extreme weath-  
14       er events in the short- and long-term, in accordance  
15       with the purpose set forth in section 2(b), through  
16       an effort led by the Director and the interagency  
17       working group, which includes goals and objectives  
18       for key sectors. Key sectors shall include—

19                             (A) agriculture;

20                             (B) forestry and natural resources man-  
21       agement;

22                             (C) water management, including supply  
23       and treatment;

24                             (D) energy supply and transmission;

1                         (E) infrastructure, including natural and  
2                         built forms of water and wastewater, transpor-  
3                         tation, coastal infrastructure, and other land-  
4                         scapes and ecosystems services;

5                         (F) public health and healthcare delivery,  
6                         including mental health and hazardous mate-  
7                         rials management;

8                         (G) communications, including wireless  
9                         communications;

10                         (H) housing and other buildings;

11                         (I) national security;

12                         (J) emergency preparedness;

13                         (K) insurance; and

14                         (L) other sectors that the Director con-  
15                         siders appropriate;

16                         (2) consider and identify the interdependencies  
17                         among the key sectors when developing the vision re-  
18                         ferred to in paragraph (1);

19                         (3) create summaries of the existing and  
20                         planned efforts and programmatic work underway or  
21                         relevant to supporting State, local, and tribal stake-  
22                         holders in achieving greater extreme weather resil-  
23                         ience in the short and long term for each sector  
24                         identified under paragraph (1) and across the sec-  
25                         tors, specifically including summaries of—

(B) areas of collaboration and coordination across Federal agencies; and

1 curate forecasts at the national, regional, State, and  
2 local levels;

3 (7) identify gaps and overlaps in Federal agen-  
4 cy work, resources, and authorities that impair the  
5 ability of the United States to meet the vision for  
6 short- and long-term extreme weather resilience, by  
7 comparing the goals and objectives identified for  
8 each sector and across sectors with the summaries  
9 identified in paragraph (3), specifically identifying  
10 gaps relating to—

11 (A) individual Federal agency programs,  
12 policies, and initiatives, and research data col-  
13 lection and dissemination efforts;

14 (B) areas of collaboration and coordination  
15 across Federal agencies; and

16 (C) areas of coordination with State, local,  
17 and tribal agencies and private entities, and re-  
18 gional cooperation;

19 (8) determine potential measures to address the  
20 issues referred to in paragraph (4) and to address  
21 the gaps and overlaps referred to in paragraph (7)  
22 by—

23 (A) designating individual or multiple Fed-  
24 eral agencies to address these gaps;

(B) building upon existing delivery mechanisms;

11 (E) requesting new authorities and re-  
12 source requirements, if needed; and

13 (F) identifying existing Federal Govern-  
14 ment processes that can be built upon to ad-  
15 dress the purpose of this Act; and

(c) WORKING GROUP.—The Federal advisory working group established pursuant to subsection (b)(9) shall consist of relevant private sector, academic, State and local government, tribal nation, regional organization, vulnerable population, and nongovernmental representatives,

1 with representation from each sector described in para-  
2 graph (1). The Director may designate an existing Federal  
3 advisory committee under which the working group would  
4 operate independently, with the same rights and privileges  
5 held by members of the advisory committee. The members  
6 of the working group established pursuant to subsection  
7 (b)(9) may not simultaneously serve as members of the  
8 advisory committee designated pursuant to this sub-  
9 section. The activities of the working group should com-  
10 plement and not duplicate the stakeholder process con-  
11 ducted under PPD–8.

12 **SEC. 5. NATIONAL EXTREME WEATHER RESILIENCE AC-**  
13 **TION PLAN.**

14 (a) IN GENERAL.—Based on the results of the gap  
15 and overlap analysis conducted under section 4, the Direc-  
16 tor, working with the interagency working group estab-  
17 lished under such section, and considering the efforts de-  
18 scribed in section 2(a)(9), shall develop a National Ex-  
19 treme Weather Resilience Action Plan (referred to in this  
20 section as the “Plan”—

21 (1) to build upon existing Federal Government  
22 processes referred to in section 4(b)(8)(F)—  
23 (A) to address the results of the gap and  
24 overlap analysis under section 4; and

(B) to incorporate the activities required under subsection (c);

3                   (2) to best utilize existing resources and pro-  
4       grams through improved interagency coordination  
5       and collaboration;

14 (5) to facilitate public-private partnerships;

15                         (6) to improve Federal agencies' economic ana-  
16                         lytical capacity to assess—

17 (A) the likelihood and potential costs of ex-  
18 treme weather impacts by region and nation-  
19 ally; and

20 (B) the relative benefits of potential resil-  
21 ience measures to multiple stakeholders;

22 (7) to provide tools to stakeholders—

23 (A) to conduct analyses similar to those  
24 described in paragraph (6); and

(B) to support decisionmaking;

1                         (8) to support resiliency plans developed by  
2 State and local governments, regional entities, and  
3 tribal nations, to the extent possible; and

4                         (9) to request further resources, if necessary, to  
5 fill in gaps to enable national resilience to extreme  
6 weather, including resilience of tribal nations and  
7 particularly vulnerable populations, and the use of  
8 green infrastructure and ecosystem-based solutions.

9                         (b) COOPERATION.—Any Federal agency representa-  
10 tive contacted by the Director, in the course of developing  
11 the Plan, shall be forthright and shall fully cooperate with  
12 the Office of Science and Technology Policy, as requested.

13                         (c) REQUIRED ACTIVITIES.—

14                         (1) RESPONSIBILITIES.—The Plan shall include  
15 specific Federal agency and interagency responsibil-  
16 ities, identify potential new authorities, if necessary,  
17 and employ risk analysis—

18                         (A) to address the gaps identified through  
19 the gap and overlap analysis; and

20                         (B) to improve Federal interagency coordi-  
21 nation and Federal coordination with State, re-  
22 gional, local, and tribal partners.

23                         (2) AVAILABLE FUNDING OPPORTUNITIES.—

24                         (A) IDENTIFICATION.—The Director shall  
25 identify—

(ii) projects to advance extreme weather resiliency.

12 (C) RESPONSIBILITIES.—Each participating agency shall—  
13

24 (3) INFORMATION CLEARINGHOUSE.—

25 (A) IN GENERAL.—The Plan shall—

(ii) build off and be complementary to existing Federal efforts, including data.gov.

13 (C) INFORMATION SUPPLIED.—Information  
14 shall be supplied as requested by Federal  
15 agencies, their partners, academia, and private  
16 stakeholders, in coordination with regional,  
17 State, local, and tribal agencies.

- (i) best or model practices;
- (ii) data;
- (iii) case studies;
- (iv) indicators;

- (v) scientific reports;
  - (vi) resilience and vulnerability assessments;
  - (vii) guidance documents and design standards;
  - (viii) incentives;
  - (ix) education and communication initiatives;
  - (x) decision support tools, including risk management, short- and long-term economic analysis, and predictive models;
  - (xi) planning tools;
  - (xii) public and private sources of assistance; and
  - (xiii) such other information as the coordinating entity considers appropriate.

7                 (5) RESILIENCY OFFICER.—Each Federal agen-  
8                 cy that assists with the gap and overlap analysis re-  
9                 quired under section 4 shall designate, from among  
10                the agency's senior management, a Senior Resiliency  
11               Officer, who shall—

12 (A) facilitate the implementation of the  
13 agency's responsibilities under paragraph (1);

21 (D) serve as the agency lead in ongoing co-  
22 ordination efforts within the Federal agency  
23 and between the coordinating entity, other Fed-  
24 eral agencies, public and private partners, and  
25 stakeholders.

## 1       (d) PUBLICATION.—

2                 (1) DRAFT PLAN.—Not later than 420 days  
3                 after the date of the enactment of this Act, the Di-  
4                 rector shall publish a draft of the Plan developed  
5                 under this section in the Federal Register.

6                 (2) PUBLIC COMMENT PERIOD.—During the  
7                 60-day period beginning on the date on which the  
8                 draft Plan is published under paragraph (1), the Di-  
9                 rector shall—

10                         (A) solicit comment from the public; and  
11                         (B) conduct a briefing for Congress to ex-  
12                 plain the provisions contained in the draft Plan.

13                 (3) FINAL PLAN.—Not later than 120 days  
14                 after the end of the public comment period described  
15                 in paragraph (2), the Director shall publish the final  
16                 Plan in the Federal Register.

17                 (e) IMPLEMENTATION.—Not later than 630 days  
18                 after the date of the enactment of this Act, the Director  
19                 shall begin implementing the final Plan published under  
20                 subsection (d)(3).

21                 (f) FINANCING.—To the extent possible—

22                         (1) Federal funding should be used to leverage  
23                 private sector financing for resilience building activi-  
24                 ties, consistent with the implementation of the Plan,  
25                 through public-private partnerships; and

7       (g) TRIBAL, STATE, AND LOCAL RESPONSIBIL-  
8 ITIES.—The Plan may not place new unfunded require-  
9 ments on State or local governments.

## **10 SEC. 6. AUTHORIZATION OF OTHER ACTIVITIES.**

11       (a) IN GENERAL.—Federal agencies are authorized  
12 to develop tools and disseminate information to improve  
13 extreme weather resilience in the key sectors set forth in  
14 section 4(b)(1).

(b) OFFICE OF SCIENCE AND TECHNOLOGY POLICY.—In conducting the gap and overlap analysis under section 4 and developing the National Extreme Weather Resilience Action Plan under section 5, the Director may carry out additional activities in support of the purpose of this Act.

## 21 SEC. 7. REPORTS.

22 (a) GOVERNMENT ACCOUNTABILITY OFFICE RE-  
23 PORT.—Not later than 1 year after the date of the enact-  
24 ment of this Act, the Comptroller General of the United  
25 States shall submit a report to Congress that—

1                         (1) identifies existing Federal Government pro-  
2                         grams and policies related to disaster relief, re-  
3                         sponse, and recovery that impede improving short-  
4                         and long-term extreme weather resilience; and

5                         (2) make recommendations for how the pro-  
6                         grams or policies could be structured differently to  
7                         better support short- and long-term resilience after  
8                         an extreme weather event.

9                         (b) INITIAL REPORT.—Not later than 2 years after  
10                         the date of the enactment of this Act, the Director shall  
11                         submit a report to Congress that contains—

12                         (1) the results of the gap and overlap analysis;  
13                         (2) the final National Extreme Weather Resil-  
14                         ience Action Plan;

15                         (3) an update on the implementation of the  
16                         plan; and

17                         (4) available resources for the sustained imple-  
18                         mentation of the plan.

19                         (c) TRIENNIAL REPORTS.—Not later than 2 years  
20                         after the submission of the report under subsection (a),  
21                         and every 3 years thereafter, the coordinating entity iden-  
22                         tified under section 5(c)(3), in cooperation with the inter-  
23                         agency working group established under section 4(a), shall  
24                         submit a report to Congress that—

- 1                         (1) contains an update of the National Extreme  
2                         Weather Resilience Action Plan;  
3                         (2) describes the progress of the plan's imple-  
4                         mentation;  
5                         (3) improves upon the original analysis as more  
6                         information and understanding about extreme  
7                         weather events becomes available;  
8                         (4) establishes criteria for prioritization of ac-  
9                         tivities described in the plan;  
10                        (5) reconsiders and makes changes to the plan  
11                         based on the availability of new information de-  
12                         scribed in paragraph (3); and  
13                        (6) identifies cost-effective changes to laws,  
14                         policies, or regulations that could advance the pur-  
15                         pose of this Act.

16                         (d) FEMA REPORTS ON FUNDING.—

- 17                         (1) FINDINGS.—Congress finds the following:  
18                                 (A) The Federal Emergency Management  
19                         Agency grant programs are a key vehicle that  
20                         exists to fund activities related to resiliency  
21                         planning and projects.  
22                                 (B) In order to ensure that the United  
23                         States becomes more resilient to extreme weath-  
24                         er, it is important to ensure that sufficient re-

1           sources are available to support resiliency ac-  
2           tivities

3           (2) REPORTS.—At the end of each fiscal year,  
4           the Director of the Federal Emergency Management  
5           Agency (referred to in this paragraph as “FEMA”)  
6           shall submit a report to Congress that—

7               (A) identifies the amounts that were made  
8               available to the FEMA during such fiscal year  
9               for State, local, and tribal entities to use for ac-  
10              tivities that support the purposes of this Act;

11              (B) identifies the amounts disbursed by  
12              FEMA to State, local, and tribal entities during  
13              such fiscal year for such activities;

14              (C) describes the resources requested by  
15              State, local, and tribal entities for activities  
16              that support the purposes of this Act; and

17              (D) identifies the difference between the  
18              amounts disbursed by FEMA and the amounts  
19              requested from FEMA by State, local, and trib-  
20              al entities.

21 **SEC. 8. AUTHORIZATION OF APPROPRIATIONS.**

22           (a) AMOUNTS FOR ANALYSIS, PLAN DEVELOPMENT  
23 AND IMPLEMENTATION, AND REPORTS.—There are au-  
24 thorized to be appropriated such sums as may be nec-  
25 essary for fiscal years 2013 through 2015—

1                   (1) to conduct the gap and overlap analysis re-  
2                 quired under section 4;

3                   (2) to conduct the activities required under sec-  
4                 tion 5, including the creation and maintenance of  
5                 the information clearinghouse; and

6                   (3) to prepare the reports to Congress required  
7                 under subsections (b) and (c) of section 7.

8                 (b) AVAILABILITY OF FUNDS.—Amounts appro-  
9                 priated pursuant to subsection (a) shall remain available  
10                 for the purposes set forth in such subsection through De-  
11                 cember 31, 2015.

○