

110TH CONGRESS  
1ST SESSION

# S. 2211

To ensure the recovery, resiliency, and health of ocean, coastal, and Great Lakes ecosystems, and for other purposes.

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IN THE SENATE OF THE UNITED STATES

OCTOBER 19, 2007

Mr. WHITEHOUSE (for himself and Mrs. BOXER) 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 ensure the recovery, resiliency, and health of ocean, coastal, and Great Lakes ecosystems, 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; TABLE OF CONTENTS.**

4       (a) **SHORT TITLE.**—This Act may be cited as the  
5 “Global Warming and Acidification Coastal and Ocean  
6 Resiliency Act”.

7       (b) **TABLE OF CONTENTS.**—The table of contents of  
8 this Act is as follows:

- Sec. 1. Short title; table of contents.
- Sec. 2. Findings.
- Sec. 3. Definitions.

TITLE I—NATIONAL POLICY FOR OCEAN, COASTAL, AND GREAT  
LAKES ECOSYSTEM HEALTH AND RESILIENCY

- Sec. 101. National policy on ocean, coastal, and great lakes ecosystem health and resiliency.  
 Sec. 102. National ocean, coastal, and Great Lakes resiliency strategy.  
 Sec. 103. Advisory Board.  
 Sec. 104. Implementation of national strategy.  
 Sec. 105. Reports.  
 Sec. 106. Authorization of appropriations.

TITLE II—PLANNING FOR CLIMATE CHANGE IN COASTAL ZONE

- Sec. 201. Planning for climate change in coastal zone.

1 **SEC. 2. FINDINGS.**

2 Congress finds that—

3 (1) healthy, diverse, and productive coastal,  
 4 ocean, and Great Lakes ecosystems, communities,  
 5 and habitats are critical to securing the full range  
 6 of natural resource benefits for the United States;

7 (2) healthy ecosystems are more resilient than  
 8 degraded ecosystems;

9 (3) resilient ecosystems can better adapt to  
 10 changing environmental conditions, including global  
 11 warming and ocean acidification;

12 (4) the effects of global warming, including rel-  
 13 ative sea level rise and ocean acidification pose sig-  
 14 nificant threats to healthy ocean, coastal, and Great  
 15 Lakes ecosystems; and

16 (5) policies and programs designed to ensure  
 17 the recovery, resilience, and health of coastal, ocean,  
 18 and Great Lakes ecosystems and the resources of

1 the ecosystems in the face of environmental change  
2 are an urgent national priority.

3 **SEC. 3. DEFINITIONS.**

4 In this Act:

5 (1) ECOLOGICAL PROCESSES.—

6 (A) IN GENERAL.—The term “ecological  
7 processes” means the biological, chemical, and  
8 physical interactions between the biotic and abi-  
9 otic components of an ecosystem.

10 (B) INCLUSIONS.—The term “ecological  
11 processes” includes—

12 (i) nutrient cycling;

13 (ii) pollination;

14 (iii) predator-prey relationships;

15 (iv) soil formation;

16 (v) gene flow;

17 (vi) hydrologic cycling;

18 (vii) decomposition; and

19 (viii) disturbance regimes, such as fire  
20 and flooding.

21 (2) HABITAT.—

22 (A) IN GENERAL.—The term “habitat”  
23 means the physical, chemical, and biological  
24 properties that are used by wildlife for growth,  
25 reproduction, and survival.

1           (B) INCLUSIONS.—The term “habitat” in-  
2           cludes aquatic and terrestrial plant commu-  
3           nities, food, water, cover, and space on a tract  
4           of land, in a body of water, or in an area or re-  
5           gion.

6           (3) INDIAN TRIBE.—The term “Indian tribe”  
7           has the meaning given the term in section 4 of the  
8           Indian Self-Determination and Education Assistance  
9           Act (25 U.S.C. 450b).

10          (4) SECRETARY.—The term “Secretary” means  
11          the Secretary of Commerce.

12          (5) WILDLIFE.—The term “wildlife” means—

13               (A) any species of wild, free-ranging fauna,  
14               including fish and other aquatic species; and

15               (B) any fauna in a captive breeding pro-  
16               gram the object of which is to reintroduce indi-  
17               viduals of a depleted indigenous species into  
18               previously occupied range.

1 **TITLE I—NATIONAL POLICY FOR**  
2 **OCEAN, COASTAL, AND GREAT**  
3 **LAKES ECOSYSTEM HEALTH**  
4 **AND RESILIENCY**

5 **SEC. 101. NATIONAL POLICY ON OCEAN, COASTAL, AND**  
6 **GREAT LAKES ECOSYSTEM HEALTH AND RE-**  
7 **SILIENCY.**

8 It is the policy of the Federal Government, in co-  
9 operation with State, tribal, and affected local govern-  
10 ments, other concerned public and private organizations,  
11 coastal and ocean resource users, and citizens to take ef-  
12 fective measures—

13 (1) to ensure the recovery, resiliency, and  
14 health of ocean, coastal, and Great Lakes eco-  
15 systems;

16 (2) to predict, plan for, and mitigate the impact  
17 on coastal, ocean, and Great Lakes ecosystems from  
18 global warming, including relative sea level rise, and  
19 from ocean acidification;

20 (3) to plan for and mitigate the impact of the  
21 development of offshore alternative energy resources  
22 and appropriate carbon capture and sequestration  
23 activities; and

1           (4) to cooperate and collaborate to support im-  
2           proved and enhanced ocean and coastal management  
3           in the United States.

4 **SEC. 102. NATIONAL OCEAN, COASTAL, AND GREAT LAKES**  
5 **RESILIENCY STRATEGY.**

6           (a) REQUIREMENT.—

7           (1) IN GENERAL.—Not later than 2 years after  
8           the date of enactment of this Act, the Secretary  
9           shall implement the national policy under section  
10          101 by establishing a national strategy to protect,  
11          maintain, and restore coastal and marine ecosystems  
12          so that the ecosystems are more resilient and better  
13          able to withstand the additional stresses associated  
14          with global warming, including relative sea level rise,  
15          and with ocean acidification.

16          (2) MEASURES.—In establishing the national  
17          strategy, the Secretary shall provide for research  
18          and design of practical measures—

19                  (A) to avoid, alleviate, or mitigate the im-  
20                  pact of global warming, including relative sea  
21                  level rise, and of ocean acidification on ocean,  
22                  coastal, and Great Lakes ecosystems and re-  
23                  sources in the United States; and

1 (B) to ensure the recovery, resiliency, and  
2 health of ocean, coastal, and Great Lakes eco-  
3 systems.

4 (3) ADMINISTRATION.—Before and during the  
5 development of the national strategy, the Secretary  
6 shall—

7 (A) base the national strategy on the best  
8 available science;

9 (B) consult with—

10 (i) the Secretary of the Interior;

11 (ii) the Administrator of the Environ-  
12 mental Protection Agency;

13 (iii) Regional Fishery Management  
14 Councils;

15 (iv) State coastal management and  
16 fish and wildlife agencies;

17 (v) Indian tribes;

18 (vi) local governments;

19 (vii) conservation organizations;

20 (viii) scientists; and

21 (ix) other interested stakeholders; and

22 (C) provide public notice and opportunity  
23 for comment.

24 (b) CONTENTS.—

1           (1) IN GENERAL.—The Secretary shall include  
2           in the national strategy prioritized goals and meas-  
3           ures and a plan for implementation (including a  
4           timeframe)—

5                   (A) to incorporate climate change adapta-  
6                   tion strategies into the planning and manage-  
7                   ment of ocean and coastal programs and re-  
8                   sources administered by the Department of  
9                   Commerce;

10                   (B) to incorporate the strategies into the  
11                   planning and management of ocean and coastal  
12                   resources administered by Federal and non-  
13                   Federal governmental entities other than the  
14                   Department of Commerce;

15                   (C) to support predictions of relative sea  
16                   level rise;

17                   (D) to protect, maintain, and restore  
18                   coastal and marine ecosystems so that the eco-  
19                   systems are more resilient and better able to  
20                   withstand the additional stresses associated  
21                   with global warming, including relative sea level  
22                   rise, and with ocean acidification;

23                   (E) to protect ocean and coastal species  
24                   from the impact of global warming and ocean  
25                   acidification;



1 (F) to incorporate adaptation strategies for  
2 relative sea level rise into coastal zone planning;

3 (G) to protect and restore ocean and coast-  
4 al habitats to build healthy and resilient eco-  
5 systems, including the purchase of coastal and  
6 island land; and

7 (H) to promote the development of plans  
8 to mitigate at the community level the economic  
9 consequences of global warming, including rel-  
10 ative sea level rise and ocean acidification.

11 (2) COORDINATION WITH OTHER PLANS.—In  
12 developing the national strategy, the Secretary shall,  
13 to the maximum extent practicable—

14 (A) take into consideration research and  
15 information contained in—

16 (i) Federal, regional, and State man-  
17 agement and restoration plans;

18 (ii) the reports of the Pew Oceans  
19 Commission and the United States Com-  
20 mission on Ocean Policy; and

21 (iii) any other relevant reports and in-  
22 formation; and

23 (B) encourage and take into account re-  
24 gional plans for protecting and restoring the

1 health and resilience of ocean and coastal eco-  
2 systems, including the Great Lakes.

3 (c) REVISIONS.—Not later than 5 years after the  
4 date of the initial establishment of the national strategy  
5 and each 10 years thereafter, the Secretary shall revise  
6 the national strategy to reflect—

7 (1) new information on the impact of global  
8 warming, including relative sea level rise, and of  
9 acidification on ocean, coastal and Great Lakes eco-  
10 systems and the resources of the ecosystems; and

11 (2) advances in the development of strategies  
12 for adapting to or mitigating for the impact.

13 (d) IMPLEMENTATION.—To achieve the goals of the  
14 national strategy, each Federal agency shall (directly and  
15 in cooperation with other agencies) implement measures  
16 for the conservation of ocean, coastal, and Great Lakes  
17 ecosystems under the jurisdiction of the Federal agency  
18 that promote the national strategy established under this  
19 section.

20 **SEC. 103. ADVISORY BOARD.**

21 (a) IN GENERAL.—The Secretary shall establish and  
22 appoint the members of an Advisory Board that is com-  
23 posed of not less than 10, and not more than 20, members  
24 recommended by the President of the National Academy  
25 of Sciences with expertise in ocean, coastal, and Great

1 Lakes biology, ecology, fisheries, climate change, ocean  
2 acidification, and other relevant disciplines, including eco-  
3 nomics at the community level.

4 (b) FUNCTION.—The Advisory Board shall—

5 (1) provide scientific and technical advice and  
6 recommendations to the Secretary on—

7 (A) the impact of global warming, includ-  
8 ing relative sea level rise, and of acidification on  
9 ocean and coastal ecosystems, resources, eco-  
10 logical and coastal communities, and habitats;  
11 and

12 (B) strategies and mechanisms to mitigate  
13 the impact of global warming, including relative  
14 sea level rise, and of acidification on ocean and  
15 coastal ecosystems;

16 (2) advise the Secretary on priorities for re-  
17 search or information collection; and

18 (3) advise the Secretary on priority needs for  
19 achieving systematic improvements in ocean and  
20 coastal resiliency for the purposes of section 102.

21 **SEC. 104. IMPLEMENTATION OF NATIONAL STRATEGY.**

22 (a) IN GENERAL.—Of the amount that is made avail-  
23 able to carry out this title for each fiscal year—

24 (1) 40 percent shall be made available for the  
25 carrying out of Federal responsibilities to develop

1 and implement the national strategy established  
2 under section 102; and

3 (2) 60 percent shall be used to make grants  
4 under subsection (b).

5 (b) GRANTS.—

6 (1) IN GENERAL.—The Secretary shall make  
7 grants to eligible entities to pay the Federal share  
8 (as determined by the Secretary) to carry out activi-  
9 ties that contribute to or result in protecting, main-  
10 taining, or restoring the resilience and health of  
11 coastal, ocean, and Great Lakes ecosystems and re-  
12 sources, including planning and scientific research to  
13 support such purposes.

14 (2) ELIGIBLE ENTITIES.—To be eligible to re-  
15 ceive a grant under this subsection, an entity shall  
16 be—

17 (A) a Federal agency;

18 (B) an agency of a State or political sub-  
19 division;

20 (C) a regional partnership;

21 (D) an Indian tribe;

22 (E) an institution of higher education; or

23 (F) a nongovernmental organization.

24 (3) ELIGIBLE USES.—A grant provided under  
25 this subsection may only be used to carry out an ac-

1 tivity described in paragraph (1) that is approved by  
2 the Secretary.

3 (4) PRIORITIZATION.—In approving applica-  
4 tions under this subsection, the Secretary shall give  
5 priority to proposals that—

6 (A) implement measures to enhance the  
7 health or resilience of coastal, ocean, or Great  
8 Lakes areas of national significance, including  
9 biological, historical, and cultural measures;

10 (B) result in systematic improvements to  
11 the resilience and health of coastal and ocean  
12 ecosystems and resources;

13 (C) are sufficiently cooperative and broad  
14 in geographic scope to address the problem or  
15 need; and

16 (D) demonstrate cost-effectiveness based  
17 on ecosystems services provided per dollar of  
18 Federal expenditure, including consideration of  
19 the potential for a funding match.

20 (5) GUIDANCE.—The Secretary shall issue  
21 guidance regarding a process for—

22 (A) the approval or disapproval of applica-  
23 tions for grants under this subsection, including  
24 opportunities for public comment; and

1 (B) the establishment of annual and  
2 multiyear national funding priorities.

3 (6) EVALUATION.—

4 (A) IN GENERAL.—The Secretary shall es-  
5 tablish a system to provide for an annual exter-  
6 nal evaluation of each grant that measures the  
7 progress of implementation of the grant against  
8 the goals and objectives of the grant project.

9 (B) PUBLIC AVAILABILITY.—The Secretary  
10 shall make the results of the evaluations pub-  
11 licly available.

12 **SEC. 105. REPORTS.**

13 (a) NATIONAL ACADEMY OF SCIENCES.—The Sec-  
14 retary shall enter into an arrangement with the National  
15 Academy of Sciences under which the Academy shall re-  
16 port to Congress, not later than 2 years after the date  
17 of enactment of this Act, on the current and projected im-  
18 pact of global warming, including relative sea level rise,  
19 of ocean acidification, and on effective mitigation strate-  
20 gies for the ocean, coastal, and Great Lakes ecosystems  
21 and resources of the United States.

22 (b) REPORT TO CONGRESS.—The Secretary shall  
23 make available to Congress a copy of the strategy and im-  
24 plementation plan established under this title (including  
25 any updates to the strategy and plan).

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

2 There are authorized to be appropriated such sums  
3 as are necessary to carry out this title.

4 **TITLE II—PLANNING FOR CLI-**  
5 **MATE CHANGE IN COASTAL**  
6 **ZONE**

7 **SEC. 201. PLANNING FOR CLIMATE CHANGE IN COASTAL**  
8 **ZONE.**

9 (a) IN GENERAL.—The Coastal Zone Management  
10 Act of 1972 (16 U.S.C. 1451 et seq.) is amended by add-  
11 ing at the end the following:

12 **“SEC. 320. CLIMATE CHANGE RESILIENCY PLANNING.**

13 “(a) DEFINITIONS.—In this section, the terms ‘eco-  
14 logical processes’, ‘habitat’, and ‘wildlife’ have the mean-  
15 ings given those terms in section 3 of the Global Warming  
16 and Acidification Coastal and Ocean Resiliency Act.

17 “(b) PROGRAM.—The Secretary shall establish, con-  
18 sistent with the national policies established under section  
19 303, a coastal climate change resiliency planning and re-  
20 sponse program to—

21 “(1) provide assistance to coastal states to de-  
22 velop and implement coastal climate change resil-  
23 iency plans pursuant to approved management pro-  
24 grams approved under section 306, to prepare for  
25 and reduce, in an environmentally sensitive manner,  
26 the negative consequences to the coastal zone that

1 may result from global warming and ocean acidifica-  
2 tion; and

3 “(2) provide financial and technical assistance  
4 and training to enable coastal states to implement  
5 plans developed pursuant to this section through en-  
6 forceable policies of the coastal states.

7 “(c) GUIDELINES.—Not later than 180 days after the  
8 date of enactment of this section, the Secretary, in con-  
9 sultation with the coastal states, shall issue guidelines for  
10 the implementation of the grant program established  
11 under subsection (d).

12 “(d) CLIMATE CHANGE RESILIENCY PLANNING  
13 GRANTS.—

14 “(1) IN GENERAL.—Subject to the availability  
15 of appropriations, the Secretary may make a grant  
16 to any coastal state for the purpose of developing  
17 and implementing climate change resiliency plans  
18 pursuant to guidelines issued by the Secretary under  
19 subsection (c).

20 “(2) PLAN CONTENT.—

21 “(A) IN GENERAL.—A plan developed with  
22 a grant under this section shall include adapta-  
23 tion strategies for fish and wildlife, fish and  
24 wildlife habitat, and associated ecological proc-  
25 ess as are necessary to assist fish and wildlife,



1 fish and wildlife habitat, and associated ecologi-  
2 cal processes to adapt to, become resilient to,  
3 and mitigate the impact of, global warming and  
4 ocean acidification.

5 “(B) INCLUSIONS.—The plans shall spe-  
6 cifically include—

7 “(i) adaptive management strategies  
8 for land and water use to respond or adapt  
9 to changing environmental conditions, in-  
10 cluding strategies to protect biodiversity  
11 and establish habitat buffer zones, migra-  
12 tion corridors, and climate refugia; and

13 “(ii) requirements—

14 “(I) to initiate and maintain  
15 long-term monitoring of environ-  
16 mental change to assess coastal zone  
17 resiliency; and

18 “(II) if necessary, to adjust  
19 adaptive management strategies and  
20 new planning guidelines to attain the  
21 policies under section 303.

22 “(3) ALLOCATION.—Grants under this section  
23 shall be—

1           “(A) available only to coastal states with  
2 management programs approved by the Sec-  
3 retary under section 306; and

4           “(B) allocated among the coastal states in  
5 a manner consistent with regulations promul-  
6 gated pursuant to section 306(c).

7           “(4) PRIORITY.—In the awarding grants under  
8 this subsection, the Secretary may give priority to  
9 any coastal state that has received grant funding to  
10 develop program changes pursuant to paragraphs  
11 (1), (2), (3), (5), (6), (7), and (8) of section 309(a).

12           “(5) TECHNICAL ASSISTANCE.—The Secretary  
13 may provide technical assistance to a coastal state  
14 (consistent with section 310) to ensure the timely  
15 development of plans supported by grants awarded  
16 under this subsection.

17           “(6) FEDERAL APPROVAL.—In order to be eligi-  
18 ble for a grant under subsection (e), a coastal state  
19 shall have the plan of the coastal state developed  
20 under this section approved by the Secretary.

21           “(e) COASTAL RESILIENCY PROJECT GRANTS.—

22           “(1) IN GENERAL.—Subject to the availability  
23 of appropriations, the Secretary may make grants to  
24 any coastal state that has a climate change resil-

1        iency plan approved under subsection (d)(6) for im-  
2        plementation of the plan.

3            “(2) PROGRAM REQUIREMENTS.—

4            “(A) IN GENERAL.—Not later than 90  
5        days after the date of approval of the first plan  
6        approved under subsection (d)(6), the Secretary  
7        shall publish in the Federal Register require-  
8        ments regarding applications, allocations, eligi-  
9        ble activities, and all terms and conditions for  
10       grants awarded under this subsection.

11           “(B) MERIT-BASED AWARDS.—No less  
12        than 30 percent of the funds made available for  
13        any fiscal year for grants under this subsection  
14        shall be awarded through a merit-based com-  
15        petitive process.”.

16        (b) AUTHORIZATION OF APPROPRIATIONS.—Section  
17        318(a) of the Coastal Zone Management Act of 1972 (16  
18        U.S.C. 1464(a)) is amended—

19            (1) in paragraph (1), by striking “and” at the  
20        end;

21            (2) in paragraph (2), by striking the period at  
22        the end and inserting “; and”; and

23            (3) by adding by adding at the end the fol-  
24        lowing:

1           “(3) for grants under subsections (d) and (e) of  
2           section 320, such sums as are necessary for each fis-  
3           cal year.”.

○