

117TH CONGRESS  
1ST SESSION

# S. 2633

To require the Administrator of the National Oceanic and Atmospheric Administration to award grants to certain entities for purposes of carrying out climate-resilient living shoreline projects that protect coastal communities, and for other purposes.

---

## IN THE SENATE OF THE UNITED STATES

AUGUST 5, 2021

Mr. MURPHY (for himself, Mr. BLUMENTHAL, and Mr. PADILLA) introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

---

## A BILL

To require the Administrator of the National Oceanic and Atmospheric Administration to award grants to certain entities for purposes of carrying out climate-resilient living shoreline projects that protect coastal communities, 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. DEFINITIONS.**

4 In this Act:

5 (1) ADMINISTRATOR.—The term “Adminis-  
6 trator” means the Administrator of the National  
7 Oceanic and Atmospheric Administration.

1           (2) INDIAN TRIBE.—The term “Indian Tribe”  
2           has the meaning given that term in section 4 of the  
3           Indian Self-Determination and Education Assistance  
4           Act (25 U.S.C. 5304).

5           (3) NATURE-BASED INFRASTRUCTURE.—The  
6           term “nature-based infrastructure” means a feature  
7           that is created by human design, engineering, and  
8           construction to provide risk reduction in coastal  
9           areas by acting in conjunction with natural proc-  
10          esses.

11          (4) STATE.—The term “State” means each of  
12          the several States, the District of Columbia, the  
13          Commonwealth of Puerto Rico, the United States  
14          Virgin Islands, Guam, American Samoa, and the  
15          Commonwealth of the Northern Mariana Islands.

16 **SEC. 2. LIVING SHORELINE GRANT PROGRAM.**

17          (a) ESTABLISHMENT.—The Administrator shall  
18          award grants to eligible entities for purposes of—

19                (1) designing and implementing large- and  
20                small-scale, climate-resilient living shoreline projects;  
21                and

22                (2) applying innovative uses of natural mate-  
23                rials and systems to protect coastal communities,  
24                habitats, and natural system functions.

1 (b) ELIGIBLE ENTITIES.—For purposes of this sec-  
2 tion, an eligible entity is any of the following:

3 (1) A unit of a State or local government.

4 (2) An organization described in section  
5 501(c)(3) of the Internal Revenue Code of 1986 that  
6 is exempt from taxation under section 501(a) of  
7 such Code.

8 (3) An Indian Tribe.

9 (c) LIVING SHORELINE PROJECTS.—

10 (1) IN GENERAL.—For purposes of this section,  
11 a living shoreline project is a coastal natural infra-  
12 structure project that—

13 (A) restores or stabilizes a shoreline using  
14 predominately natural materials to create buff-  
15 ers to attenuate the impact of coastal storms,  
16 currents, flooding, and wave energy and to pre-  
17 vent or minimize shoreline erosion while pro-  
18 viding a net ecological and climate benefit to  
19 ecosystems and habitats;

20 (B) to the extent possible, maintains or re-  
21 stores existing natural slopes and connections  
22 between uplands and adjacent wetlands or sur-  
23 face waters;

24 (C) as necessary, can retrofit hardened  
25 structures or surfaces to create blended projects

1 that combine living shoreline elements with  
2 hardened techniques; and

3 (D) meets such minimum standards as the  
4 Administrator shall develop.

5 (2) MINIMUM STANDARDS.—

6 (A) IN GENERAL.—In developing minimum  
7 standards applicable to living shoreline projects  
8 under paragraph (1)(D), the Administrator  
9 shall take into account—

10 (i) the considerations described in  
11 subsection (e)(2); and

12 (ii) the need for the standards to be  
13 general enough to accommodate concerns  
14 related to specific project sites.

15 (B) CONSULTATION; INPUT.—In devel-  
16 oping minimum standards applicable to living  
17 shoreline projects under (1)(D), the Adminis-  
18 trator may—

19 (i) consult with—

20 (I) State coastal management  
21 agencies;

22 (II) Indian Tribes and Tribal or-  
23 ganizations; and

1 (III) relevant interagency coun-  
2 cils, such as the Estuary Habitat Res-  
3 toration Council; and

4 (ii) seek input from relevant non-  
5 governmental organizations.

6 (d) PROJECT PROPOSALS.—To be eligible to receive  
7 a grant under this section, an eligible entity shall submit  
8 to the Administrator a proposal for a living shoreline  
9 project that includes—

10 (1) monitoring, data collection, and measurable  
11 performance criteria with respect to the project; and

12 (2) an engagement or education component that  
13 seeks and solicits feedback from the local or regional  
14 community most directly affected by the proposal.

15 (e) SELECTION.—

16 (1) IN GENERAL.—The Administrator shall se-  
17 lect eligible entities to receive grants under this sec-  
18 tion to carry out living shoreline projects based on  
19 criteria developed by the Administrator.

20 (2) CONSIDERATIONS.—In developing criteria  
21 under paragraph (1), the Administrator shall take  
22 into account—

23 (A) the potential of the project proposed  
24 by the eligible entity to protect the community  
25 and maintain the viability of the environment,

1 such as through protection of ecosystem func-  
2 tions, environmental benefits, or habitat types,  
3 in the area where the project is to be carried  
4 out;

5 (B) the historic and future environmental  
6 conditions of the project site, particularly those  
7 environmental conditions affected by climate  
8 change;

9 (C) the net ecological benefits of the  
10 project, including the potential of the project to  
11 contribute to carbon sequestration and storage;

12 (D) the ability of the entity proposing the  
13 project to demonstrate the potential of the  
14 project to protect the coastal community where  
15 the project is to be carried out, including  
16 through—

17 (i) mitigating the effects of erosion;

18 (ii) attenuating the impact of coastal  
19 storms and storm surge;

20 (iii) mitigating shoreline flooding;

21 (iv) mitigating the effects of sea level  
22 rise, accelerated land loss, and extreme  
23 tides;

1 (v) sustaining, protecting, or restoring  
2 the functions and habitats of coastal eco-  
3 systems;

4 (vi) protecting important cultural sites  
5 or values;

6 (vii) protecting low-income commu-  
7 nities, communities of color, Tribal com-  
8 munities, Indigenous communities, and  
9 rural communities;

10 (viii) sustaining, protecting, or restor-  
11 ing the functions and habitats of marine  
12 protected areas; or

13 (ix) such other forms of protection as  
14 the Administrator considers appropriate;  
15 and

16 (E) the potential of the project to support  
17 climate resiliency at a military installation or  
18 community infrastructure supportive of a mili-  
19 tary installation (as such terms are defined in  
20 section 2391 of title 10, United States Code).

21 (f) USE OF FUNDS.—A grant awarded under this  
22 section to an eligible entity to carry out a living shoreline  
23 project may be used by the eligible entity only—

1           (1) to carry out the project, including adminis-  
2           tration, design, permitting, entry into negotiated in-  
3           direct cost rate agreements, and construction;

4           (2) to monitor, collect, and report data on the  
5           performance (including performance over time) of  
6           the project, in accordance with the standards devel-  
7           oped by the Administration under subsection  
8           (c)(1)(D); or

9           (3) to incentivize landowners to engage in living  
10          shoreline projects.

11          (g) MONITORING AND REPORTING.—

12           (1) IN GENERAL.—The Administrator shall re-  
13           quire each eligible entity that receives a grant under  
14           this section to carry out a living shoreline project (or  
15           a representative of the entity)—

16                   (A) to monitor the project and to collect  
17                   data on—

18                           (i) the ecological, climate, and eco-  
19                           nomic benefits of the project; and

20                           (ii) the protection provided by the  
21                           project for the coastal community where  
22                           the project is carried out;

23                   (B) to transmit to the Administrator data  
24                   collected under the project;



1 (C) to make data collected under the  
2 project available on a publicly accessible inter-  
3 net website of the National Oceanic and Atmos-  
4 pheric Administration; and

5 (D) upon the completion of the project, to  
6 submit to the Administrator a report on—

7 (i) the monitoring and data collection  
8 activities carried out under subparagraph  
9 (A); and

10 (ii) the effectiveness of the project in  
11 increasing protection of the coastal com-  
12 munity where the project is carried out  
13 through living shorelines techniques, in-  
14 cluding—

15 (I) a description of—

16 (aa) the project;

17 (bb) the activities carried  
18 out under the project; and

19 (cc) the techniques and ma-  
20 terials used in carrying out the  
21 project; and

22 (II) data on the performance of  
23 the project in providing protection to  
24 that coastal community.

1 (h) AUTHORIZATION OF APPROPRIATIONS.—There is  
 2 authorized to be appropriated to the Administrator  
 3 \$50,000,000 for each of fiscal years 2022 through 2026  
 4 for purposes of carrying out this section.

5 **SEC. 3. LIVING SHORELINE AND NATURE-BASED INFRA-**  
 6 **STRUCTURE RESEARCH PROGRAM.**

7 (a) ESTABLISHMENT.—The Administrator shall  
 8 award, on a competitive basis, research grants to eligible  
 9 entities to carry out projects focused on developing and  
 10 assessing the effectiveness of innovative approaches to na-  
 11 ture-based infrastructure for the purposes of—

12 (1) preparing more climate-resilient, sustainable  
 13 cities and climate-resilient communities;

14 (2) reducing the costs associated with climate-  
 15 related disasters, the degradation of built infrastruc-  
 16 ture, and human relocation; and

17 (3) accomplishing improved climate resilience  
 18 while maintaining ecosystem functions and habitats  
 19 to the greatest extent possible.

20 (b) ELIGIBLE ENTITIES.—For purposes of this sec-  
 21 tion, an eligible entity is any of the following:

22 (1) An institution of higher education.

23 (2) A nonprofit organization.

24 (3) A State, local, or Tribal government.

25 (4) A for-profit organization.

1 (5) A United States territory.

2 (6) A Federal agency that is authorized by stat-  
3 ute to receive transfers of funds.

4 (c) RESEARCH PRIORITIES.—The Administrator  
5 shall award grants to eligible entities for projects that  
6 focus on one or more of the following:

7 (1) Assessing the effectiveness of installed na-  
8 ture-based infrastructure in addressing, as applica-  
9 ble, coastal resilience, shoreline erosion, storm dam-  
10 age, including windstorms, inland flooding, water  
11 quality, impact on local ecosystems, and such other  
12 criteria as the Administrator determines appro-  
13 priate.

14 (2) Novel approaches to nature-based infra-  
15 structure and living shorelines aimed at optimizing  
16 resilience to climate change, extreme weather, and  
17 ecosystem sustainability.

18 (3) Interdisciplinary research, including engi-  
19 neering, environmental and ecosystem sciences, biol-  
20 ogy, and social science.

21 (4) Regional, community, and industry partner-  
22 ships to create locally informed solutions.

23 (d) REPORTS FOR INFORMING GRANT SELECTION.—

24 (1) REPORT REQUIRED.—An eligible entity that  
25 receives a grant for a project under this section

1 shall, not later than the date on which such project  
2 concludes, submit to the Administrator a report  
3 summarizing the findings of the project.

4 (2) USE OF REPORTS.—The Administrator  
5 shall use each report submitted under paragraph (1)  
6 to inform the selection and prioritization of living  
7 shoreline projects under section 2 and other nature-  
8 based infrastructure projects.

9 (e) USE OF PROGRAMS.—In carrying out this section,  
10 the Administrator is encouraged to use—

11 (1) the National Oceanographic Partnership  
12 Program established under section 8931 of title 10,  
13 United States Code, as a means for collaboration  
14 and coordination to leverage partnerships between  
15 public institutions of higher education and Federal  
16 agencies;

17 (2) the Coastlines and People initiative of the  
18 National Science Foundation as a tool to use ongo-  
19 ing interdisciplinary research;

20 (3) the National Sea Grant College Program  
21 maintained under the National Sea Grant College  
22 Program Act (33 U.S.C. 1121 et seq.) as a resource  
23 to help foster collaboration between public institu-  
24 tions of higher education and Federal agencies; and

1           (4) the Community Resilience Center of Excel-  
2           lence of the National Institute of Standards and  
3           Technology.

4           (f) AUTHORIZATION OF APPROPRIATIONS.—There is  
5           authorized to be appropriated to the Administrator  
6           \$5,000,000 for each of fiscal years 2022 through 2026  
7           for purposes of carrying out this section.

○