

117TH CONGRESS  
2D SESSION

**S.** \_\_\_\_\_

To require the Secretary of the Interior, in coordination with the Secretary of Agriculture, to establish a joint natural infrastructure science program, and for other purposes.

---

IN THE SENATE OF THE UNITED STATES

---

Ms. HIRONO introduced the following bill; which was read twice and referred to the Committee on \_\_\_\_\_

---

**A BILL**

To require the Secretary of the Interior, in coordination with the Secretary of Agriculture, to establish a joint natural infrastructure science program, 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 Infrastructure  
5 Act of 2022”.

6 **SEC. 2. FINDINGS.**

7 Congress finds that—

1 (1) the American Society of Civil Engineers has  
2 estimated that the direct, cumulative repair needs  
3 for public infrastructure in the United States is  
4 \$4,600,000,000,000; and

5 (2) installing natural infrastructure is often  
6 lower-cost, more resilient, and more beneficial to the  
7 public than repairing or replacing gray infrastruc-  
8 ture.

9 **SEC. 3. DEFINITIONS.**

10 In this Act:

11 (1) **NATURAL INFRASTRUCTURE.**—The term  
12 “natural infrastructure” means constructed land-  
13 scape features and systems that employ nature-  
14 based solutions that promote, use, restore, or emu-  
15 late natural ecological processes.

16 (2) **PROGRAM.**—The term “Program” means  
17 the joint natural infrastructure science program es-  
18 tablished under section 4(a).

19 (3) **SECRETARY.**—The term “Secretary” means  
20 the Secretary of the Interior, acting through the Di-  
21 rector of the United States Geological Survey.

22 **SEC. 4. JOINT NATURAL INFRASTRUCTURE SCIENCE PRO-**  
23 **GRAM.**

24 (a) **ESTABLISHMENT.**—The Secretary, in coordina-  
25 tion with the Secretary of Agriculture, acting through the

1 Chief of the Forest Service, shall establish a joint natural  
2 infrastructure science program to respond to the emerging  
3 research needs of civil engineers, local governments, devel-  
4 opers, and the construction industry.

5 (b) COORDINATION.—In administering the Program,  
6 the Secretary shall work closely with research programs  
7 at institutions of higher education to supplement the cur-  
8 rent research efforts undertaken by those institutions of  
9 higher education.

10 (c) PURPOSES.—The principal purposes of the Pro-  
11 gram shall be—

12 (1) to provide, with respect to natural infra-  
13 structure, practical research that—

14 (A) is responsive to the needs of civil engi-  
15 neers, local governments, developers, and the  
16 construction industry; and

17 (B) takes into account, to the maximum  
18 extent practicable, local cultural considerations;

19 (2) to engage with and listen to clients of the  
20 Program, including civil engineers, local govern-  
21 ments, developers, and the members of the construc-  
22 tion industry—

23 (A) to learn the needs of those clients; and

24 (B) to develop focused, strategic lines of  
25 new research responsive to those needs;

1           (3)(A) to solicit proposals from scientists for  
2           funding provided under the Program; and

3           (B) to award funding to those scientists  
4           through a competitive, rigorous peer-review process  
5           that is designed to ensure that the best projects are  
6           funded; and

7           (4) to disseminate research findings, including  
8           associated environmental valuations, using a suite of  
9           communication tools to ensure that civil engineers,  
10          local governments, developers, and members of the  
11          construction industry are aware of, understand, and  
12          can use the information to make sound decisions  
13          and implement projects.

14          (d) PROGRAM PLAN.—Not later than September 30,  
15          2023, the Secretary shall submit to the Committee on En-  
16          ergy and Natural Resources of the Senate and the Com-  
17          mittee on Natural Resources of the House of Representa-  
18          tives a Program plan that includes—

19               (1) an assessment of the current state of knowl-  
20               edge about natural infrastructure;

21               (2) an integrated approach to improve knowl-  
22               edge sharing;

23               (3) an approach for project monitoring and  
24               evaluation; and

25               (4) an approach for setting research priorities.

1 (e) STAKEHOLDER ADVISORY GROUP.—

2 (1) MEMBERSHIP.—The Secretary shall estab-  
3 lish a stakeholder advisory group consisting of tech-  
4 nical experts, including, at a minimum, 5 individuals  
5 selected from among the following potential mem-  
6 bers:

7 (A) A representative of a local government.

8 (B) A developer.

9 (C) A representative of a construction in-  
10 dustry association or construction company.

11 (D) A civil engineer or environmental engi-  
12 neer.

13 (E) A researcher from an institution of  
14 higher education.

15 (F) A member of an Alaska Native organi-  
16 zation, a Native Hawaiian organization, or an  
17 Indian Tribe (as those terms are defined in sec-  
18 tion 2 of the Native American Graves Protec-  
19 tion and Repatriation Act (25 U.S.C. 3001))  
20 with experience with natural infrastructure.

21 (G) An environmental scientist.

22 (2) DUTIES.—The stakeholder advisory group  
23 established under paragraph (1) shall meet not less  
24 frequently than annually—

1 (A) to consider both immediate and long-  
2 term scientific needs with respect to research  
3 relating to natural infrastructure;

4 (B) to suggest to the Secretary appropriate  
5 topic areas for research relating to natural in-  
6 frastructure, specific issues to be researched  
7 within those topic areas, and information trans-  
8 fer needs for which the Secretary shall solicit  
9 proposals in accordance with subsection (c)(3);  
10 and

11 (C) to assist the Secretary in drafting the  
12 Program plan described in subsection (d).

13 (f) AUTHORIZATION OF APPROPRIATIONS.—For each  
14 of fiscal years 2023 through 2033, there is authorized to  
15 be appropriated to carry out this section \$4,000,000, in-  
16 cluding for activities to be carried out by the Secretary  
17 and the Secretary of Agriculture under this section.

18 **SEC. 5. ASSESSMENT OF NATURAL INFRASTRUCTURE**  
19 **PROJECTS.**

20 (a) EVALUATION.—Subject to the availability of ap-  
21 propriations, beginning in fiscal year 2023, the Secretary  
22 shall annually—

23 (1) select not fewer than 30 natural infrastruc-  
24 ture projects completed under the Program or by

1 any other entity or individual in the United States;  
2 and

3 (2) assess the costs and effectiveness of those  
4 natural infrastructure projects.

5 (b) GEOGRAPHIC AND PROJECT DIVERSITY.—The  
6 Secretary, to the maximum extent practicable, shall select  
7 natural infrastructure projects under subsection (a)(1)  
8 that, taken together, reflect a diversity of—

9 (1) geographic locations; and

10 (2) types of natural infrastructure.

11 (c) REPORT.—Beginning in fiscal year 2024, and an-  
12 nually thereafter, the Secretary shall publish a report  
13 that—

14 (1) lists the natural infrastructure projects se-  
15 lected under subsection (a)(1);

16 (2) discloses—

17 (A) the costs of those natural infrastruc-  
18 ture projects; and

19 (B) the results of the assessment of the ef-  
20 fectiveness of those natural infrastructure  
21 projects carried out under subsection (a)(2);

22 and

23 (3) if applicable, includes recommendations to  
24 improve the construction, costs, and effectiveness of  
25 future natural infrastructure projects.