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H. R. 8810

To establish a national program to identify and reduce losses from landslide hazards, to establish a national 3D Elevation Program, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

NOVEMBER 24, 2020

Ms. DELBENE (for herself, Mr. KILMER, Mr. HECK, Mr. SMITH of Washington, Mr. CARTWRIGHT, and Ms. BONAMICI) introduced the following bill; which was referred to the Committee on Natural Resources, and in addition to the Committee on Science, Space, and Technology, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

A BILL

To establish a national program to identify and reduce losses from landslide hazards, to establish a national 3D Elevation 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 “National Landslide
5 Preparedness Act”.

6 **SEC. 2. DEFINITIONS.**

7 In this Act:

1 (1) 3D.—The term “3D” means 3-dimensional.

2 (2) 3D ELEVATION DATA.—

3 (A) IN GENERAL.—The term “3D ele-
4 vation data” means 3D, high-resolution data
5 obtained using LiDAR, IfSAR, or other meth-
6 ods over the United States (including territories
7 and freely associated states).

8 (B) INCLUSIONS.—The term “3D elevation
9 data” includes terrestrial and bathymetric ele-
10 vation data.

11 (3) 3D ELEVATION PROGRAM.—The term “3D
12 Elevation Program” means the 3D Elevation Pro-
13 gram established under section 5(a).

14 (4) FREELY ASSOCIATED STATES.—The term
15 “freely associated states” means—

16 (A) the Federated States of Micronesia;
17 (B) the Republic of the Marshall Islands;
18 and
19 (C) the Republic of Palau.

20 (5) IFSAR.—The term “IfSAR” means
21 interferometric synthetic aperture radar.

22 (6) INDIAN TRIBE.—The term “Indian tribe”
23 has the meaning given the term in section 4 of the
24 Indian Self-Determination and Education Assistance
25 Act (25 U.S.C. 5304).

1 (7) LAHAR.—The term “lahar” means a large
2 debris flow of mostly volcanic material that is—

3 (A) often fast-moving; and
4 (B) a hazard in watersheds downstream of
5 volcanic peaks.

6 (8) LiDAR.—The term “LiDAR” means light
7 detection and ranging.

8 (9) SECRETARY.—The term “Secretary” means
9 the Secretary of the Interior, acting through the Di-
10 rector of the United States Geological Survey.

11 (10) STATE.—The term “State” means—

12 (A) a State; and
13 (B) the District of Columbia.

14 (11) STATE OFFICE.—The term “State office”
15 means any unit of State government that handles
16 the identification, mapping, assessment, and re-
17 search of landslide hazards or responding to land-
18 slide events, including—

19 (A) a State geological survey office;
20 (B) a State department of emergency re-
21 sponse; and

22 (C) a State department of transportation.

23 (12) TERRITORY.—The term “territory”
24 means—

25 (A) the Commonwealth of Puerto Rico;

- 1 (B) Guam;
- 2 (C) American Samoa;
- 3 (D) the Commonwealth of the Northern
- 4 Mariana Islands; and
- 5 (E) the United States Virgin Islands.

6 **SEC. 3. NATIONAL LANDSLIDE HAZARDS REDUCTION PRO-**

7 **GRAM.**

8 (a) ESTABLISHMENT.—The Secretary shall establish
9 a program, to be known as the “National Landslide Haz-
10 ards Reduction Program” (referred to in this section as
11 the “program”—

12 (1) to identify and understand landslide haz-
13 ards and risks;

14 (2) to reduce losses from landslides;

15 (3) to protect communities at risk of landslide
16 hazards; and

17 (4) to help improve communication and emer-
18 gency preparedness, including by coordinating with
19 communities and entities responsible for infrastruc-
20 ture that are at risk of landslide hazards.

21 (b) DESCRIPTION OF PROGRAM.—

22 (1) PROGRAM ACTIVITIES.—The Secretary, in
23 coordination with the Interagency Coordinating
24 Committee on Landslide Hazards established by
25 subsection (c)(1) (referred to in this section as the

1 “Committee”) and in coordination with existing ac-
2 tivities of the United States Geological Survey and
3 other Federal agencies, shall—

4 (A) identify, map, assess, and research
5 landslide hazards;

6 (B) respond to landslide events; and
7 (C) in coordination with State offices,
8 units of local government, territories, freely as-
9 sociated states, and Indian tribes—

10 (i) establish working groups with
11 State offices, units of local government,
12 territories, freely associated states, and In-
13 dian tribes to identify regional and local
14 priorities for researching, identifying, map-
15 ping, and assessing landslide hazards; and

16 (ii) develop and implement landslide
17 hazard guidelines for—

18 (I) geologists;

19 (II) geological and geotechnical
20 engineers;

21 (III) emergency management
22 personnel; and

23 (IV) land use and other decision-
24 makers.

1 (2) NATIONAL STRATEGY.—Not later than 1
2 year after the date of enactment of this Act, and
3 every 5 years thereafter, the Secretary, in coordina-
4 tion with the Committee, shall develop and publish
5 a national strategy for landslide hazards, risk reduc-
6 tion, and response in the United States (including
7 territories and freely associated states), which shall
8 include—

9 (A) goals and priorities for the program;
10 (B) priorities for data acquisition, re-
11 search, communications, and risk management
12 on landslides and landslide hazards across rel-
13 evant Federal agencies; and

14 (C) a detailed interagency plan, which shall
15 take into consideration national disaster pre-
16 paredness, response, and recovery frameworks,
17 to carry out the national strategy, including de-
18 tails about the programs, projects, and budgets
19 that will be used to implement the national
20 strategy.

21 (3) NATIONAL LANDSLIDE HAZARDS DATA-
22 BASE.—In carrying out the program, the Secretary,
23 in coordination with State offices, units of local gov-
24 ernment, territories, freely associated states, and In-
25 dian tribes, shall develop and maintain a publicly ac-

1 cessible national landslide hazard and risk inventory
2 database to compile, maintain, standardize, and
3 evaluate data regarding—

- 4 (A) landslide hazards and risks;
5 (B) the impact of landslides on—
6 (i) health and safety;
7 (ii) the economy and infrastructure;
8 and
9 (iii) the environment;
10 (C) landslide hazard stabilization; and
11 (D) reduction of losses from landslides.

12 (4) LANDSLIDE HAZARD AND RISK PREPARED-
13 NESS FOR COMMUNITIES.—In carrying out the pro-
14 gram, the Secretary, in coordination with the Sec-
15 retary of the Army, the Secretary of Commerce, the
16 Secretary of Homeland Security, the Secretary of
17 Transportation, and the heads of other relevant Fed-
18 eral agencies, and in consultation with State offices,
19 units of local government, territories, freely associ-
20 ated states, and Indian tribes, shall develop and dis-
21 seminate—

- 22 (A) landslide planning and risk reduction
23 guidance, guidelines, maps, tools, and training
24 materials to help inform State, territorial, freely

1 associated state, local, and Tribal governments
2 and decisionmakers with respect to—

3 (i) the use and implementation of
4 landslide hazard assessments;

5 (ii) the applied use of the database
6 developed under paragraph (3);

7 (iii) reducing losses from landslides;
8 and

9 (iv) resources available for commu-
10 nities working to improve landslide hazard
11 preparedness; and

12 (B) landslide preparedness curricula and
13 training modules for—

14 (i) State, territorial, freely associated
15 state, local, and Tribal officials;

16 (ii) Federal, State, territorial, freely
17 associated state, local, and Tribal emer-
18 gency managers; and

19 (iii) the National Guard.

20 (5) DEBRIS FLOW EARLY WARNING SYSTEM.—

21 In carrying out the program, the Secretary, in co-
22 ordination with the Secretary of Commerce and the
23 Secretary of Homeland Security, shall expand the
24 early warning system for debris flow by—

(A) expanding the early warning system for post-wildfire debris flow to include recently burned areas across the western United States;

(B) developing procedures with State, territorial, freely associated state, local, and Tribal governments to monitor stormwater drainage in areas with high debris flow risk; and

(C) identifying high-risk debris flow areas, such as recently burned land and potential lahar hazard areas.

(B) to improve data collection; and

1 (C) to conduct research to advance the un-
2 derstanding of the causes, impacts, and reduc-
3 tion of landslide hazards and risks.

4 (c) INTERAGENCY COORDINATING COMMITTEE ON
5 LANDSLIDE HAZARDS.—

6 (1) IN GENERAL.—There is established a com-
7 mittee, to be known as the “Interagency Coordi-
8 nating Committee on Landslide Hazards”.

9 (2) MEMBERSHIP.—The Committee shall be
10 composed of the following members (or their des-
11 ignees):

12 (A) The Secretary, who shall serve as
13 Chairperson of the Committee.

14 (B) The Secretary of Agriculture.

15 (C) The Secretary of the Army.

16 (D) The Secretary of Commerce.

17 (E) The Secretary of Homeland Security.

18 (F) The Secretary of Transportation.

19 (G) The Director of the National Science
20 Foundation.

21 (H) The Director of the Office of Science
22 and Technology Policy.

23 (I) The Director of the Office of Manage-
24 ment and Budget.

1 (3) MEETINGS.—The Committee shall meet at
2 the call of the Chairperson.

3 (4) PURPOSE AND DUTIES.—The Committee
4 shall—

5 (A) advise and oversee the program;
6 (B) facilitate communication and coordina-
7 tion across Federal agencies in the planning,
8 management, budgeting, and execution of land-
9 slide activities; and

10 (C) support the development and execution
11 of the national strategy under subsection (b)(2),
12 including by—

13 (i) supporting the development of na-
14 tional goals and priorities for the national
15 strategy;

16 (ii) articulating Federal agency roles,
17 responsibilities, and resources for carrying
18 out the national strategy; and

19 (iii) overseeing the implementation of
20 the national strategy.

21 (d) ADVISORY COMMITTEE.—

22 (1) IN GENERAL.—The Secretary shall establish
23 an advisory committee, to be known as the “Advi-
24 sory Committee on Landslides” (referred to in this
25 subsection as the “Advisory Committee”).

1 (2) MEMBERSHIP.—The Advisory Committee
2 shall be composed of not fewer than 11 members—

3 (A) of whom none may be an individual de-
4 scribed in any of subparagraphs (A) through
5 (F) of section 7342(a)(1) of title 5, United
6 States Code; and

7 (B) who shall be representatives of—

8 (i) States, including State geological
9 organizations;

10 (ii) territories and freely associated
11 states, including territorial and freely asso-
12 ciated state geological organizations;

13 (iii) Indian tribes, including Tribal ge-
14 ological organizations;

15 (iv) research institutions and institu-
16 tions of higher education that are qualifi-
17 fied—

18 (I) to provide advice regarding
19 landslide hazard and risk reduction;
20 and

21 (II) to represent related sci-
22 entific, architectural, engineering, and
23 planning disciplines;

24 (v) industry standards development
25 organizations; and

1 (vi) State, territorial, freely associated
 2 state, local, and Tribal emergency manage-
 3 ment agencies.

4 (3) RECOMMENDATIONS.—

5 (A) IN GENERAL.—The Advisory Com-
 6 mittee shall submit to the Committee rec-
 7 ommendations for the implementation of the
 8 program, including recommendations regard-
 9 ing—

- 10 (i) landslide hazard and risk reduction
 11 and planning;
 12 (ii) tools for communities;
 13 (iii) research; and
 14 (iv) such other topics as the Advisory
 15 Committee determines appropriate.

16 (B) CONSIDERATION.—The Secretary and
 17 the agency heads described in subparagraphs
 18 (B) through (I) of subsection (c)(2) shall take
 19 into consideration any recommendation of the
 20 Advisory Committee submitted under subpara-
 21 graph (A).

22 (e) GRANT PROGRAMS.—

23 (1) COOPERATIVE LANDSLIDE HAZARD MAP-
 24 PING AND ASSESSMENT PROGRAM.—

1 (A) IN GENERAL.—Subject to appropria-
2 tions, the Secretary may—

3 (i) provide grants, on a competitive
4 basis, to State, territorial, freely associated
5 state, local, and Tribal governments to re-
6 search, map, assess, and collect data on
7 landslide hazards within the jurisdictions
8 of those governments; and

9 (ii) accept and use funds received
10 from other Federal and non-Federal part-
11 ners to advance the purposes of the pro-
12 gram.

13 (B) PRIORITY.—

14 (i) IN GENERAL.—The Secretary shall
15 consult annually with the Committee,
16 States, units of local government, terri-
17 tories, freely associated states, and Indian
18 tribes to establish priorities for the grant
19 program under this paragraph.

20 (ii) FUNDING PRIORITIZATION.—In
21 providing grants under this paragraph, the
22 Secretary shall give priority to projects—

23 (I) that will achieve the greatest
24 landslide hazard and risk reduction;

(II) that reflect the goals and priorities of the national strategy established under subsection (b)(2)(A);

(III) not less than 50 percent of the total cost of which is matched by non-Federal sources; and

(IV) that include acquisition of enhanced elevation data consistent with the 3D Elevation Program.

10 (2) NATIONAL LANDSLIDE RESEARCH
11 GRANTS.—

20 (i) the causes, mechanisms, triggers,
21 hydrology, and geology of landslides;

22 (ii) ways to reduce landslide hazards
23 and risks to minimize loss of life and prop-
24 erty, including landslide hazard and risk

1 communication, perception, decisionmaking,
2 tools, and technologies; and

3 (iii) other goals and priorities of the
4 national strategy established under sub-
5 section (b)(2)(A).

6 (B) ELIGIBLE ENTITIES.—The Director
7 shall determine whether an entity is eligible to
8 receive a grant under this paragraph.

9 (C) REQUIREMENTS.—In providing grants
10 under this paragraph, the Director shall—

11 (i) ensure that the grants are pro-
12 vided on a competitive basis; and

13 (ii) consider grant applications sub-
14 mitted by eligible entities that have devel-
15 oped the application in partnership with
16 one or more State geological surveys.

17 (f) BIENNIAL REPORT.—The Secretary shall submit
18 to Congress and publish on a publicly available website,
19 a biennial report, including a description of, with respect
20 to the preceding 2 calendar years—

21 (1) the goals and accomplishments of the Sec-
22 retary and the agency heads described in subpara-
23 graphs (B) through (I) of subsection (c)(2) in car-
24 rying out the national strategy developed under sub-
25 section (b)(2), expressed—

(A) by agency, program, and budgetary re-
source; and

(2) the results of the activities of the Committee under this section;

16 (B) the results of those activities; and

17 (5) for each significant landslide event in the
18 United States (including territories and freely asso-
19 ciated states) during the preceding 2 calendar
20 years—

21 (A) a description of the landslide event and
22 the implications of the event on communities,
23 including life and property;

1 (B) recommendations on how the identi-
2 fication of the landslide risk could have been
3 improved prior to the event;

4 (C) a description of the effectiveness of
5 any warning and risk communication, including
6 the dissemination of warnings by State, terri-
7 torial, freely associated state, local, and Tribal
8 partners in the affected area;

9 (D) recommendations to improve risk iden-
10 tification, reduction, and communication to
11 landowners and units of local government;

12 (E) recommendations to improve landslide
13 hazard preparedness and emergency response
14 activities under this section; and

15 (F) such other findings as the Secretary
16 determines appropriate.

17 (g) DATA FOR SIGNIFICANT LANDSLIDE EVENTS.—

18 Not later than 1 year after a significant landslide event
19 in the United States (including territories and freely asso-
20 ciated states), the Secretary shall publish the data de-
21 scribed in subsection (f)(5) regarding that event on a pub-
22 licly available website.

23 (h) FUNDING.—There is authorized to be appro-
24 priated to carry out this section \$37,000,000 for each of
25 fiscal years 2021 through 2024, of which—

1 (1) \$25,000,000 each fiscal year shall be made
2 available to the United States Geological Survey;
3 (2) \$11,000,000 each fiscal year shall be made
4 available to the National Science Foundation; and
5 (3) \$1,000,000 each fiscal year shall be made
6 available to the National Oceanic and Atmospheric
7 Administration.

8 **SEC. 4. GROUND SUBLIMATION.**

9 As the Secretary determines to be appropriate and
10 subject to appropriations, the Secretary, through existing
11 programs, shall advance the identification, mapping, re-
12 search, monitoring, restoration, and mitigation of subsid-
13 ence and groundwater resource accounting, losses from
14 subsidence, including saltwater intrusion, particularly in
15 areas affected by drought and sea level rise.

16 **SEC. 5. 3D ELEVATION PROGRAM.**

17 (a) ESTABLISHMENT OF 3D ELEVATION PRO-
18 GRAM.—

19 (1) IN GENERAL.—The Secretary shall establish
20 a program, to be known as the “3D Elevation Pro-
21 gram”—

22 (A) to provide 3D elevation data coverage
23 for the United States;

24 (B) to coordinate and facilitate the collec-
25 tion, dissemination, and use of 3D elevation

1 data among Federal departments and agencies
2 and non-Federal entities;

3 (C) to produce standard, publicly acces-
4 sible 3D elevation data products for the United
5 States; and

6 (D) to promote the collection, dissemina-
7 tion, and use of 3D elevation data among Fed-
8 eral, State, local, and Tribal governments, com-
9 munities, institutions of higher education, and
10 the private sector through—

11 (i) cooperative agreements;

12 (ii) the development and maintenance
13 of spatial data infrastructure to provide
14 quality control and deliver to the public 3D
15 elevation data products;

16 (iii) in coordination with the 3D Ele-
17 vation Federal Interagency Coordinating
18 Committee established under subsection
19 (b), States, and industry and standards
20 bodies, the development of standards and
21 guidelines for 3D elevation data acquisition
22 to increase accessibility to 3D elevation
23 data in a standard, easy-to-use format; and

24 (iv) the identification, assessment, and
25 adoption of emerging technologies to im-

1 prove the accuracy and efficiency of the
2 3D Elevation Program.

3 (2) MANAGEMENT.—

4 (A) IN GENERAL.—The Secretary shall
5 manage the 3D Elevation Program—

6 (i) to ensure efficiency with respect to
7 related activities of the Department of the
8 Interior and other participating Federal
9 departments and agencies; and

10 (ii) to meet the needs of Department
11 of the Interior programs, stakeholders, and
12 the public.

13 (B) OTHER FEDERAL DEPARTMENTS AND
14 AGENCIES.—The head of each Federal depart-
15 ment and agency involved in the acquisition,
16 production, distribution, or application of 3D
17 elevation data shall—

18 (i) coordinate with the 3D Elevation
19 Federal Interagency Coordinating Com-
20 mittee established under subsection (b) to
21 acquire additional, enhanced 3D elevation
22 data;

23 (ii) submit to the Secretary a descrip-
24 tion of priority areas of interest for 3D ele-
25 vation data collection for use in providing

1 grants and cooperative agreements under
2 subsection (d);

3 (iii) implement policies and procedures
4 for data acquisition and sharing that are
5 consistent with standards and guidelines
6 developed under the 3D Elevation Pro-
7 gram;

8 (iv) participate in, and share the re-
9 sults and benefits of, the 3D Elevation
10 Program, in accordance with standards
11 and guidelines developed under the 3D
12 Elevation Program; and

13 (v) ensure that any 3D elevation data
14 acquired with Federal grant funding—

15 (I) meets 3D Elevation Program
16 standards; and

17 (II) is included in the national
18 holdings of those data.

19 (b) 3D ELEVATION FEDERAL INTERAGENCY CO-
20 ORDINATING COMMITTEE.—

21 (1) ESTABLISHMENT.—The Secretary, in co-
22 ordination with the Secretary of Commerce and the
23 Secretary of Homeland Security, shall establish an
24 interagency coordinating committee, to be known as
25 the “3D Elevation Federal Interagency Coordinating

1 Committee” (referred to in this subsection as the
2 “Committee”), to better coordinate 3D elevation
3 data management across the Federal Government.

4 (2) MEMBERSHIP.—The Committee shall be
5 composed of the following members (or their des-
6 ignees):

7 (A) The Secretary, who shall serve as
8 Chairperson of the Committee.

9 (B) The Secretary of Agriculture.

10 (C) The Secretary of Commerce.

11 (D) The Secretary of Homeland Security.

12 (E) The Director of the National Science
13 Foundation.

14 (F) The Director of the Office of Science
15 and Technology Policy.

16 (G) The Director of the Office of Manage-
17 ment and Budget.

18 (H) The head of any other Federal depart-
19 ment or agency, at the request of the Secretary.

20 (3) COORDINATION.—The Committee shall co-
21 ordinate, as appropriate, with the existing activities
22 of—

23 (A) the 3D Elevation Program Executive
24 Forum;

1 (B) the Alaska Mapping Executive Com-
2 mittee;
3 (C) the 3D Elevation Working Group;
4 (D) the 3D National Elevation Sub-
5 committee; and
6 (E) State offices.

7 (4) MEETINGS.—The Committee shall meet at
8 the call of the Chairperson.

9 (5) DUTIES.—The Committee shall—
10 (A) oversee the planning, management,
11 and coordination of the 3D Elevation Program;
12 and
13 (B) develop, by not later than 1 year after
14 the date of enactment of this Act, and update
15 periodically thereafter—
16 (i) a strategic plan that establishes
17 goals and priorities for activities carried
18 out under the 3D Elevation Program; and
19 (ii) a detailed management plan to
20 implement the strategic plan.

21 (c) SUBCOMMITTEE OF NATIONAL GEOSPATIAL AD-
22 VISORY COMMITTEE.—

23 (1) ESTABLISHMENT.—
24 (A) IN GENERAL.—The Secretary shall es-
25 tablish, within the National Geospatial Advisory

1 Committee, a subcommittee (referred to in this
2 subsection as the “Subcommittee”).

3 (B) MEMBERSHIP.—The Subcommittee
4 shall—

5 (i) consist of not fewer than 11 mem-
6 bers, of whom none may be a Federal offi-
7 cer or employee; and

8 (ii) include representatives of—
9 (I) research and academic insti-
10 tutions;

11 (II) industry standards develop-
12 ment organizations;

13 (III) units of State and local gov-
14 ernment; and

15 (IV) the private sector.

16 (2) DUTIES.—

17 (A) ASSESSMENT.—The Subcommittee
18 shall conduct an assessment of—

19 (i) trends and developments in—

20 (I) the collection, dissemination,
21 and use of 3D elevation data; and

22 (II) science and technology relat-
23 ing to 3D elevation data;

(ii) the effectiveness of the 3D Elevation Program in carrying out the activities described in subsection (a)(1);

(iv) the management, coordination, implementation, and activities of the 3D Elevation Program.

20 (d) GBANTS AND COOPERATIVE AGREEMENTS —

21 (1) IN GENERAL.—The Secretary may make
22 grants and enter into cooperative agreements with
23 other Federal departments and agencies, units of
24 State, local, or Tribal government, institutions of
25 higher education, nonprofit research institutions, or

1 other organizations to facilitate the improvement of
2 nationwide coverage of 3D elevation data.

3 (2) APPLICATIONS.—To be eligible to receive a
4 grant or enter into a cooperative agreement under
5 this subsection, an entity described in paragraph (1)
6 shall submit to the Secretary an application at such
7 time, in such manner, and containing such informa-
8 tion as the Secretary may require.

9 (3) TERMS AND CONDITIONS.—A grant or coop-
10 erative agreement under this subsection shall be sub-
11 ject to such terms and conditions as the Secretary
12 determines to be appropriate, including making data
13 publicly available and interoperable with other Fed-
14 eral datasets.

15 (e) AUTHORIZATION OF APPROPRIATIONS.—For each
16 of the fiscal years 2021 through 2024, there is authorized
17 out of funds appropriated to the Secretary \$40,000,000
18 to carry out this section.

