116TH CONGRESS 2D SESSION

H.R. 8810

AN ACT

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,

SECTION 1. SHORT TITLE.

- This Act may be cited as the "National Landslide
- 3 Preparedness Act".
- 4 SEC. 2. DEFINITIONS.
- 5 In this Act:
- 6 (1) 3D.—The term "3D" means 3-dimensional.
- 7 (2) 3D ELEVATION DATA.—
- 8 (A) IN GENERAL.—The term "3D ele9 vation data" means 3D, high-resolution data
 10 obtained using LiDAR, IfSAR, or other meth11 ods over the United States (including terri12 tories).
- 13 (B) INCLUSIONS.—The term "3D elevation 14 data" includes terrestrial and bathymetric ele-15 vation data.
- 16 (3) 3D ELEVATION PROGRAM.—The term "3D Elevation Program" means the 3D Elevation Program established under section 5(a).
- (4) IfSAR.—The term "IfSAR" means
 interferometric synthetic aperture radar.
- 21 (5) Indian tribe.—The term "Indian tribe" 22 has the meaning given the term in section 4 of the 23 Indian Self-Determination and Education Assistance 24 Act (25 U.S.C. 5304).
- (6) Lahar.—The term "lahar" means a large
 debris flow of mostly volcanic material that is—

1	(A) often fast-moving; and
2	(B) a hazard in watersheds downstream of
3	volcanic peaks.
4	(7) Lidar.—The term "Lidar" means light
5	detection and ranging.
6	(8) Secretary.—The term "Secretary" means
7	the Secretary of the Interior, acting through the Di-
8	rector of the United States Geological Survey.
9	(9) State.—The term "State" means—
10	(A) a State; and
11	(B) the District of Columbia.
12	(10) State office.—The term "State office"
13	means any unit of State government that handles
14	the identification, mapping, assessment, and re-
15	search of landslide hazards or responding to land-
16	slide events, including—
17	(A) a State geological survey office;
18	(B) a State department of emergency re-
19	sponse; and
20	(C) a State department of transportation.
21	(11) Territory.—The term "territory"
22	means—
23	(A) the Commonwealth of Puerto Rico;
24	(B) Guam;
25	(C) American Samoa;

1	(D) the Commonwealth of the Northern
2	Mariana Islands;
3	(E) the Federated States of Micronesia;
4	(F) the Republic of the Marshall Islands;
5	(G) the Republic of Palau; and
6	(H) the United States Virgin Islands.
7	SEC. 3. NATIONAL LANDSLIDE HAZARDS REDUCTION PRO-
8	GRAM.
9	(a) Establishment.—The Secretary shall establish
10	a program, to be known as the "National Landslide Haz-
11	ards Reduction Program" (referred to in this section as
12	the "program")—
13	(1) to identify and understand landslide haz-
14	ards and risks;
15	(2) to reduce losses from landslides;
16	(3) to protect communities at risk of landslide
17	hazards; and
18	(4) to help improve communication and emer-
19	gency preparedness, including by coordinating with
20	communities and entities responsible for infrastruc-
21	ture that are at risk of landslide hazards.
22	(b) Description of Program.—
23	(1) Program activities.—The Secretary, in
24	coordination with the Interagency Coordinating
25	Committee on Landslide Hazards established by

1	subsection $(c)(1)$ (referred to in this section as the
2	"Committee") and in coordination with existing ac-
3	tivities of the United States Geological Survey and
4	other Federal agencies, shall—
5	(A) identify, map, assess, and research
6	landslide hazards;
7	(B) respond to landslide events; and
8	(C) in coordination with State offices,
9	units of local government, territories, and In-
10	dian tribes—
11	(i) establish working groups with
12	State offices, units of local government,
13	territories, and Indian tribes to identify re-
14	gional and local priorities for researching,
15	identifying, mapping, and assessing land-
16	slide hazards; and
17	(ii) develop and implement landslide
18	hazard guidelines for—
19	(I) geologists;
20	(II) geological and geotechnical
21	engineers;
22	(III) emergency management
23	personnel; and
24	(IV) land use and other decision-
25	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 coordina4 tion with the Committee, shall develop and publish
 5 a national strategy for landslide hazards, risk reduc6 tion, and response in the United States (including
 7 territories), which shall include—
 - (A) goals and priorities for the program;
 - (B) priorities for data acquisition, research, communications, and risk management on landslides and landslide hazards across relevant Federal agencies; and
 - (C) a detailed interagency plan, which shall take into consideration national disaster preparedness, response, and recovery frameworks, to carry out the national strategy, including details about the programs, projects, and budgets that will be used to implement the national strategy.
 - (3) National landslide Hazards data-Base.—In carrying out the program, the Secretary, in coordination with State offices, units of local government, territories, and Indian tribes, shall develop and maintain a publicly accessible national landslide hazard and risk inventory database to compile,

1	maintain, standardize, and evaluate data regard-
2	ing—
3	(A) landslide hazards and risks;
4	(B) the impact of landslides on—
5	(i) health and safety;
6	(ii) the economy and infrastructure;
7	and
8	(iii) the environment;
9	(C) landslide hazard stabilization; and
10	(D) reduction of losses from landslides.
11	(4) Landslide Hazard and Risk Prepared-
12	NESS FOR COMMUNITIES.—In carrying out the pro-
13	gram, the Secretary, in coordination with the Sec-
14	retary of the Army, the Secretary of Commerce, the
15	Secretary of Homeland Security, the Secretary of
16	Transportation, and the heads of other relevant Fed-
17	eral agencies, and in consultation with State offices,
18	units of local government, territories, and Indian
19	tribes, shall develop and disseminate—
20	(A) landslide planning and risk reduction
21	guidance, guidelines, maps, tools, and training
22	materials to help inform State, territorial, local,
23	and Tribal governments and decisionmakers
24	with respect to—

1	(i) the use and implementation of
2	landslide hazard assessments;
3	(ii) the applied use of the database
4	developed under paragraph (3);
5	(iii) reducing losses from landslides;
6	and
7	(iv) resources available for commu-
8	nities working to improve landslide hazard
9	preparedness; and
10	(B) landslide preparedness curricula and
11	training modules for—
12	(i) State, territorial, local, and Tribal
13	officials;
14	(ii) Federal, State, territorial, local,
15	and Tribal emergency managers; and
16	(iii) the National Guard.
17	(5) Debris flow early warning system.—
18	In carrying out the program, the Secretary, in co-
19	ordination with the Secretary of Commerce and the
20	Secretary of Homeland Security, shall expand the
21	early warning system for debris flow by—
22	(A) expanding the early warning system
23	for post-wildfire debris flow to include recently
24	burned areas across the western United States;

1	(B) developing procedures with State, ter-
2	ritorial, local, and Tribal governments to mon-
3	itor stormwater drainage in areas with high de-
4	bris flow risk; and
5	(C) identifying high-risk debris flow areas,
6	such as recently burned land and potential
7	lahar hazard areas.
8	(6) Emergency response activities.—In
9	carrying out the program, the Secretary, in coordi-
10	nation with the Secretary of Commerce, the Sec-
11	retary of Homeland Security, the heads of other rel-
12	evant Federal agencies, States offices, units of local
13	government, territories, and Indian tribes, shall es-
14	tablish and support emergency response procedures
15	for the rapid deployment of Federal scientists,
16	equipment, and services to areas impacted by a sig-
17	nificant landslide event—
18	(A) to support emergency response efforts
19	and improve the safety of emergency respond-
20	ers;
21	(B) to improve data collection; and
22	(C) to conduct research to advance the un-
23	derstanding of the causes, impacts, and reduc-
24	tion of landslide hazards and risks.

1	(c) Interagency Coordinating Committee on
2	Landslide Hazards.—
3	(1) IN GENERAL.—There is established a com-
4	mittee, to be known as the "Interagency Coordi-
5	nating Committee on Landslide Hazards".
6	(2) Membership.—The Committee shall be
7	composed of the following members (or their des-
8	ignees):
9	(A) The Secretary, who shall serve as
10	Chairperson of the Committee.
11	(B) The Secretary of Agriculture.
12	(C) The Secretary of the Army.
13	(D) The Secretary of Commerce.
14	(E) The Secretary of Homeland Security.
15	(F) The Secretary of Transportation.
16	(G) The Director of the National Science
17	Foundation.
18	(H) The Director of the Office of Science
19	and Technology Policy.
20	(I) The Director of the Office of Manage-
21	ment and Budget.
22	(3) Meetings.—The Committee shall meet at
23	the call of the Chairperson.
24	(4) Purpose and duties.—The Committee
25	shall—

1	(A) advise and oversee the program;
2	(B) facilitate communication and coordina-
3	tion across Federal agencies in the planning,
4	management, budgeting, and execution of land-
5	slide activities; and
6	(C) support the development and execution
7	of the national strategy under subsection (b)(2),
8	including by—
9	(i) supporting the development of na-
10	tional goals and priorities for the national
11	strategy;
12	(ii) articulating Federal agency roles,
13	responsibilities, and resources for carrying
14	out the national strategy; and
15	(iii) overseeing the implementation of
16	the national strategy.
17	(d) Advisory Committee.—
18	(1) In general.—The Secretary shall establish
19	an advisory committee, to be known as the "Advi-
20	sory Committee on Landslides" (referred to in this
21	subsection as the "Advisory Committee").
22	(2) Membership.—The Advisory Committee
23	shall be composed of not fewer than 11 members—
24	(A) of whom none may be an individual de-
25	scribed in any of subparagraphs (A) through

1	(F) of section $7342(a)(1)$ of title 5, United
2	States Code; and
3	(B) who shall be representatives of—
4	(i) States, including State geological
5	organizations;
6	(ii) territories, including territorial ge-
7	ological organizations;
8	(iii) Indian tribes, including Tribal ge-
9	ological organizations;
10	(iv) research institutions and institu-
11	tions of higher education that are quali-
12	fied—
13	(I) to provide advice regarding
14	landslide hazard and risk reduction;
15	and
16	(II) to represent related sci-
17	entific, architectural, engineering, and
18	planning disciplines;
19	(v) industry standards development
20	organizations; and
21	(vi) State, territorial, local, and Tribal
22	emergency management agencies.
23	(3) Recommendations.—
24	(A) In General.—The Advisory Com-
25	mittee shall submit to the Committee rec-

1	ommendations for the implementation of the
2	program, including recommendations regard-
3	ing—
4	(i) landslide hazard and risk reduction
5	and planning;
6	(ii) tools for communities;
7	(iii) research; and
8	(iv) such other topics as the Advisory
9	Committee determines appropriate.
10	(B) Consideration.—The Secretary and
11	the agency heads described in subparagraphs
12	(B) through (I) of subsection (c)(2) shall take
13	into consideration any recommendation of the
14	Advisory Committee submitted under subpara-
15	graph (A).
16	(e) Grant Programs.—
17	(1) Cooperative Landslide Hazard Map-
18	PING AND ASSESSMENT PROGRAM.—
19	(A) In general.—Subject to appropria-
20	tions, the Secretary may—
21	(i) provide grants, on a competitive
22	basis, to State, territorial, local, and Tribal
23	governments to research, map, assess, and
24	collect data on landslide hazards within the
25	jurisdictions of those governments; and

1	(ii) accept and use funds received
2	from other Federal and non-Federal part-
3	ners to advance the purposes of the pro-
4	gram.
5	(B) Priority.—
6	(i) IN GENERAL.—The Secretary shall
7	consult annually with the Committee,
8	States, units of local government, terri-
9	tories, and Indian tribes to establish prior-
10	ities for the grant program under this
11	paragraph.
12	(ii) Funding prioritization.—In
13	providing grants under this paragraph, the
14	Secretary shall give priority to projects—
15	(I) that will achieve the greatest
16	landslide hazard and risk reduction;
17	(II) that reflect the goals and
18	priorities of the national strategy es-
19	tablished under subsection (b)(2)(A);
20	(III) not less than 50 percent of
21	the total cost of which is matched by
22	non-Federal sources; and
23	(IV) that include acquisition of
24	enhanced elevation data consistent
25	with the 3D Elevation Program.

1	(C) REQUIREMENT.—If the Secretary
2	elects to provide grants under subparagraph
3	(A)(i), the Secretary shall publish on a publicly
4	available website a description of—
5	(i) the grants; and
6	(ii) the findings made from those
7	grants.
8	(2) National Landslide Research
9	GRANTS.—
10	(A) In general.—To advance the goals
11	and priorities of the national strategy estab-
12	lished under subsection (b)(2)(A), subject to ap-
13	propriations, the Director of the National
14	Science Foundation (referred to in this para-
15	graph as the "Director") may provide grants to
16	eligible entities for landslide research, including
17	research on—
18	(i) the causes, mechanisms, triggers,
19	hydrology, and geology of landslides;
20	(ii) ways to reduce landslide hazards
21	and risks to minimize loss of life and prop-
22	erty, including landslide hazard and risk
23	communication, perception, decision-
24	making, tools, and technologies; and

1	(iii) other goals and priorities of the
2	national strategy established under sub-
3	section $(b)(2)(A)$.
4	(B) ELIGIBLE ENTITIES.—The Director
5	shall determine whether an entity is eligible to
6	receive a grant under this paragraph.
7	(C) REQUIREMENTS.—In providing grants
8	under this paragraph, the Director shall—
9	(i) ensure that the grants are pro-
10	vided on a competitive basis;
11	(ii) consider grant applications sub-
12	mitted by eligible entities that have devel-
13	oped the application in partnership with 1
14	or more State geological surveys; and
15	(iii) publish on a publicly available
16	website a description of—
17	(I) the grants; and
18	(II) the findings made from those
19	grants.
20	(f) BIENNIAL REPORT.—Through calendar year
21	2030, the Secretary shall submit to Congress a biennial
22	report, including a description of, with respect to the 2-
23	calendar-year period preceding the date of the report—

1	(1) the goals and accomplishments of the Com-
2	mittee in carrying out the national strategy devel-
3	oped under subsection (b)(2);
4	(2) the results of the activities of the Com-
5	mittee under this section; and
6	(3) the extent to which any recommendations of
7	the Advisory Committee under subsection (d)(3)(A)
8	have been implemented.
9	(g) Significant Events.—Not later than 1 year
10	after a significant landslide event in the United States (in-
11	cluding territories) occurs, the Secretary shall publish on
12	a publicly available website—
13	(1) a description of the landslide event and the
14	implications of the event on communities, including
15	life and property;
16	(2) recommendations on how the identification
17	of the landslide risk could have been improved prior
18	to the event;
19	(3) a description of the effectiveness of any
20	warning and risk communication, including the dis-
21	semination of warnings by State, territorial, local,
22	and Tribal partners in the affected area;
23	(4) recommendations to improve risk identifica-
24	tion, reduction, and communication to landowners
25	and units of local government;

1	(5) recommendations to improve landslide haz-
2	ard preparedness and emergency response activities
3	under this section; and
4	(6) such other findings as the Secretary deter-
5	mines appropriate.
6	(h) Funding.—For each of fiscal years 2021
7	through 2024—
8	(1) there is authorized to be appropriated to the
9	United States Geological Survey, \$25,000,000 to
10	carry out this section;
11	(2) there is authorized to be appropriated to the
12	National Science Foundation, \$11,000,000 to carry
13	out this section; and
14	(3) there is authorized to be appropriated to the
15	National Oceanic and Atmospheric Administration
16	\$1,000,000 to carry out this section.
17	(i) DERIVATION OF FUNDS.—Funds to carry out the
18	activities under this section shall be derived from amounts
19	authorized to be appropriated that are enacted after the
20	date of the enactment of this section.
21	SEC. 4. GROUND SUBSIDENCE.
22	As the Secretary determines to be appropriate and
23	subject to appropriations, the Secretary, through existing
24	programs, shall advance the identification, mapping, re-
25	search and monitoring of subsidence and groundwater re-

1	source accounting, particularly in areas affected by
2	drought.
3	SEC. 5. 3D ELEVATION PROGRAM.
4	(a) Establishment of 3D Elevation Pro-
5	GRAM.—
6	(1) In general.—The Secretary shall establish
7	a program, to be known as the "3D Elevation Pro-
8	gram''—
9	(A) to provide 3D elevation data coverage
10	for the United States;
11	(B) to coordinate and facilitate the collec-
12	tion, dissemination, and use of 3D elevation
13	data among Federal departments and agencies
14	and non-Federal entities;
15	(C) to produce standard, publicly acces-
16	sible 3D elevation data products for the United
17	States; and
18	(D) to promote the collection, dissemina-
19	tion, and use of 3D elevation data among Fed-
20	eral, State, local, and Tribal governments, com-
21	munities, institutions of higher education, and
22	the private sector through—
23	(i) cooperative agreements;
24	(ii) the development and maintenance
25	of spatial data infrastructure to provide

1	quality control and deliver to the public 3D
2	elevation data products;
3	(iii) in coordination with the 3D Ele-
4	vation Federal Interagency Coordinating
5	Committee established under subsection
6	(b), States, and industry and standards
7	bodies, the development of standards and
8	guidelines for 3D elevation data acquisition
9	to increase accessibility to 3D elevation
10	data in a standard, easy-to-use format; and
11	(iv) the identification, assessment, and
12	adoption of emerging technologies to im-
13	prove the accuracy and efficiency of the
14	3D Elevation Program.
15	(2) Management.—
16	(A) In General.—The Secretary shall
17	manage the 3D Elevation Program—
18	(i) to ensure efficiency with respect to
19	related activities of the Department of the
20	Interior and other participating Federal
21	departments and agencies; and
22	(ii) to meet the needs of Department
23	of the Interior programs, stakeholders, and
24	the public.

1	(B) Other federal departments and
2	AGENCIES.—The head of each Federal depart-
3	ment and agency involved in the acquisition,
4	production, distribution, or application of 3D
5	elevation data shall—
6	(i) coordinate with the 3D Elevation
7	Federal Interagency Coordinating Com-
8	mittee established under subsection (b) to
9	acquire additional, enhanced 3D elevation
10	data;
11	(ii) submit to the Secretary a descrip-
12	tion of priority areas of interest for 3D ele-
13	vation data collection for use in providing
14	grants and cooperative agreements under
15	subsection (d);
16	(iii) implement policies and procedures
17	for data acquisition and sharing that are
18	consistent with standards and guidelines
19	developed under the 3D Elevation Pro-
20	gram;
21	(iv) participate in, and share the re-
22	sults and benefits of, the 3D Elevation
23	Program, in accordance with standards
24	and guidelines developed under the 3D
25	Elevation Program; and

1	(v) ensure that any 3D elevation data
2	acquired with Federal grant funding—
3	(I) meets 3D Elevation Program
4	standards; and
5	(II) is included in the national
6	holdings of those data.
7	(b) 3D Elevation Federal Interagency Co-
8	ORDINATING COMMITTEE.—
9	(1) Establishment.—The Secretary, in co-
10	ordination with the Secretary of Commerce and the
11	Secretary of Homeland Security, shall establish an
12	interagency coordinating committee, to be known as
13	the "3D Elevation Federal Interagency Coordinating
14	Committee" (referred to in this subsection as the
15	"Committee"), to better coordinate 3D elevation
16	data management across the Federal Government.
17	(2) Membership.—The Committee shall be
18	composed of the following members (or their des-
19	ignees):
20	(A) The Secretary, who shall serve as
21	Chairperson of the Committee.
22	(B) The Secretary of Agriculture.
23	(C) The Secretary of Commerce.
24	(D) The Secretary of Homeland Security.

1	(E) The Director of the National Science
2	Foundation.
3	(F) The Director of the Office of Science
4	and Technology Policy.
5	(G) The Director of the Office of Manage-
6	ment and Budget.
7	(H) The head of any other Federal depart-
8	ment or agency, at the request of the Secretary.
9	(3) COORDINATION.—The Committee shall co-
10	ordinate, as appropriate, with the existing activities
11	of—
12	(A) the 3D Elevation Program Executive
13	Forum;
14	(B) the Alaska Mapping Executive Com-
15	mittee;
16	(C) the 3D Elevation Working Group;
17	(D) the 3D National Elevation Sub-
18	committee; and
19	(E) State offices.
20	(4) Meetings.—The Committee shall meet at
21	the call of the Chairperson.
22	(5) Duties.—The Committee shall—
23	(A) oversee the planning, management,
24	and coordination of the 3D Elevation Program;
25	and

1	(B) develop, by not later than 1 year after
2	the date of enactment of this Act, and update
3	periodically thereafter—
4	(i) a strategic plan that establishes
5	goals and priorities for activities carried
6	out under the 3D Elevation Program; and
7	(ii) a detailed management plan to
8	implement the strategic plan.
9	(c) Subcommittee of National Geospatial Ad-
10	VISORY COMMITTEE.—
11	(1) Establishment.—
12	(A) IN GENERAL.—The Secretary shall es-
13	tablish, within the National Geospatial Advisory
14	Committee, a subcommittee (referred to in this
15	subsection as the "Subcommittee").
16	(B) Membership.—The Subcommittee
17	shall—
18	(i) consist of not fewer than 11 mem-
19	bers, of whom none may be a Federal offi-
20	cer or employee; and
21	(ii) include representatives of—
22	(I) research and academic insti-
23	tutions;
24	(II) industry standards develop-
25	ment organizations;

1	(III) units of State and local gov-
2	ernment; and
3	(IV) the private sector.
4	(2) Duties.—
5	(A) Assessment.—The Subcommittee
6	shall conduct an assessment of—
7	(i) trends and developments in—
8	(I) the collection, dissemination,
9	and use of 3D elevation data; and
10	(II) science and technology relat-
11	ing to 3D elevation data;
12	(ii) the effectiveness of the 3D Ele-
13	vation Program in carrying out the activi-
14	ties described in subsection (a)(1);
15	(iii) the need to revise or reorganize
16	the 3D Elevation Program; and
17	(iv) the management, coordination,
18	implementation, and activities of the 3D
19	Elevation Program.
20	(B) Report.—Not later than 1 year after
21	the date of enactment of this Act, and every 2
22	years thereafter, the Subcommittee shall submit
23	to the Secretary and the 3D Elevation Federal
24	Interagency Coordinating Committee estab-

1	lished under subsection (b) a report that in-
2	cludes—
3	(i) the findings of the assessment
4	under subparagraph (A); and
5	(ii) recommendations of the Sub-
6	committee based on those findings, if any.
7	(d) Grants and Cooperative Agreements.—
8	(1) IN GENERAL.—The Secretary may make
9	grants and enter into cooperative agreements with
10	other Federal departments and agencies, units of
11	State, local, or Tribal government, institutions of
12	higher education, nonprofit research institutions, or
13	other organizations to facilitate the improvement of
14	nationwide coverage of 3D elevation data.
15	(2) APPLICATIONS.—To be eligible to receive a
16	grant or enter into a cooperative agreement under
17	this subsection, an entity described in paragraph (1)
18	shall submit to the Secretary an application at such
19	time, in such manner, and containing such informa-
20	tion as the Secretary may require.
21	(3) Terms and conditions.—A grant or coop-
22	erative agreement under this subsection shall be sub-
23	ject to such terms and conditions as the Secretary
24	determines to be appropriate, including making data

- 1 publically available and interoperable with other
- 2 Federal datasets.
- 3 (e) Funding.—For each of fiscal years 2021 through
- 4 2024, there is authorized to be appropriated to the Sec-
- 5 retary \$40,000,000 to carry out this section.
- 6 (f) Derivation of Funds.—Funds to carry out the
- 7 activities under this section shall be derived from amounts
- 8 authorized to be appropriated to the Secretary that are
- 9 enacted after the date of the enactment of this section.

Passed the House of Representatives December 3, 2020.

Attest:

Clerk.

116TH CONGRESS H.R. 8810

AN ACT

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