



Landslide Hazards Legislation in the 116th Congress

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Authorizing a Landslide Hazards Program

The U.S. Geological Survey (USGS) estimates that landslides kill an average of **25-50** people each year in the United States and account for **\$1-\$2 billion** annually in damages. Two nearly identical bills, S. 529 and H.R. 1261, titled the National Landslide Preparedness Act, would authorize a national landslide hazards reduction program within **USGS**. USGS currently operates, under its Organic Act of 1879 and other authorities, such as the Disaster Relief Act of 1974 (P.L. 93-288), a **Landslide Hazards Program** (funding level of \$3.5 million in FY2018) within its **Natural Hazards Program**. Both bills would broaden USGS's current activities and require coordination with other federal agencies.

The legislation would direct the Secretary of the Interior (Secretary), acting through the Director of USGS, to establish a program to identify risks and hazards from landslides, reduce losses, protect communities at risk, and improve communication and emergency preparedness. The bills would require the program to map and assess landslide hazards; respond to landslide events; coordinate with states, Indian tribes, local governments, and territories to identify regional and local priorities; and develop and implement landslide hazard guidelines for geologists, engineers, emergency managers, and land-use decisionmakers.

Managing the Program

Section 3 of S. 529 and H.R. 1261 would structure the program with elements roughly parallel to the National Earthquake Hazards Reduction Program (**NEHRP**; P.L. 115-307). Similar to NEHRP, an interagency committee chaired by the Department of the Interior (DOI) would oversee and coordinate the landslide program and support the development and execution of a national strategy for landslide hazards and risk reduction. The national strategy would include an interagency plan for carrying out the national strategy.

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Advisory Committee

The bills would establish an advisory committee on landslides that would provide advice and recommendations to the interagency committee on implementing the program. It would include members from states, territories, Indian tribes, research and academic institutions, industry standards development organizations, and emergency management agencies.

Data, Early Warning, and Emergency Response

The program would develop a publicly accessible national landslide hazards database. It also would develop planning and risk-reduction guidance, maps, tools, and training materials for state, territorial, local, and tribal governments and decisionmakers to assist their efforts in reducing landslide risks. The legislation would direct the Secretary of the Interior, in coordination with the Secretaries of Commerce and of Homeland Security, to expand the early warning system for flash floods and debris flows, particularly for increased risk following wildfires. In addition, the bills call for the program to establish emergency response procedures for rapid deployment of federal assets to areas affected by a landslide event in coordination with the Secretaries of Commerce and of Homeland Security, and other groups.

Cooperative Grants

Section 3 of S. 529 and H.R. 1261 also would authorize landslide-related grant programs. DOI, acting through USGS, would administer a cooperative grant program, available to state, territorial, local, and tribal governments for landslide research, mapping, assessment, and data collection. The cooperative grant program would prioritize projects that S. 529 would achieve the greatest hazard and risk reduction, reflect goals of the national strategy, and have a minimum 50% cost share from nonfederal sources. The National Science Foundation would administer a separate research grant program to fund studies reflecting the goals and priorities of the national strategy.

3D Elevation Program

Both S. 529 and H.R. 1261 would authorize—in Section 5—a 3-dimensional (3D) elevation program that could be viewed as complementary to, and providing data that would be important for, the landslide hazards program authorized in Section 3. The bills define 3D elevation data as “3D, high-resolution data obtained using [LiDAR](#), [IfSAR](#), or other methods over the United States (including territories).” Section 5 would authorize what is currently an [initiative](#) at USGS “to respond to growing needs for high-quality topographic data and for a wide range of other 3D representations of the Nation’s natural and constructed features.” High-quality, precise, and accurate elevation data generally are considered important to better understand landslide hazards, flood hazards, and changes to the Earth’s land surface, such as land subsidence from groundwater pumping.

Both bills would establish a program with three broad goals:

1. Provide 3D elevation data coverage for the United States;
2. Coordinate and facilitate the collection, dissemination, and use of 3D elevation data among federal departments and agencies and nonfederal entities; and
3. Produce standard, publicly accessible 3D elevation products.

To achieve these goals, the legislation would enable the use of cooperative agreements and promote the development and maintenance of spatial data infrastructure; the development of standards and guidelines; and the identification, assessment, and adoption of emerging technology.

Managing and Advising the Program

Similar to the landslide program and NEHRP, the legislation would authorize an interagency coordinating committee, chaired by the Secretary of the Interior. The coordinating committee also would develop a strategic plan and a management plan to implement the strategic plan.

Section 5 would create a subcommittee of the [National Geospatial Advisory Committee](#), an entity authorized under the [National Geospatial Data Act of 2018](#) (P.L. 115-307), to advise the 3D elevation program interagency coordinating committee. The advisory committee would assess trends in 3D data collection and in science and technology, and it would assess effectiveness; the need to revise; and management, implementation, and activities of the 3D elevation program.

Grants and Cooperative Agreements

The 3D elevation program would be authorized to make grants and enter into cooperative agreements with other federal departments and agencies, as well as with tribal, state, and local governments; institutions of higher education; nonprofit research organizations; and other organizations. The objective would be to improve nationwide coverage of 3D elevation data, and the agreements would require making data publicly available and interoperable with other federal datasets, as determined by the Secretary of the Interior.

The bills would authorize \$37 million annually for the landslide hazards program and \$20 million annually for the 3D elevation program from FY2020 to FY2023.

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