



## CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

May 9, 2017

### **S. 346**

#### **National Volcano Early Warning and Monitoring System Act**

*As ordered reported by the Senate Committee on Energy and Natural Resources  
on March 30, 2017*

#### **SUMMARY**

S. 346 would authorize the appropriation of such sums as are necessary for the U.S. Geological Survey (USGS) to establish a system to improve monitoring of active volcanoes. The bill also would authorize USGS to enter into cooperative partnerships with universities and state agencies to implement the system.

Based on an analysis of information provided by USGS and assuming appropriation of the necessary amounts, CBO estimates that implementing S. 346 would cost \$55 million over the 2018-2022 period.

Enacting S. 346 would not affect direct spending or revenues; therefore, pay-as-you-go procedures do not apply. CBO estimates that enacting the legislation would not increase net direct spending or on-budget deficits in any of the four consecutive 10-year periods beginning in 2028.

S. 346 contains no intergovernmental or private-sector mandates as defined in the Unfunded Mandates Reform Act (UMRA) and would impose no costs on state, local, or tribal governments.

#### **ESTIMATED COST TO THE FEDERAL GOVERNMENT**

The estimated budgetary effect of S. 346 is shown in the following table. The costs of this legislation fall within budget function 300 (natural resources and environment).

	By Fiscal Year, in Millions of Dollars						2017- 2022
	2017	2018	2019	2020	2021	2022	
<b>INCREASES IN SPENDING SUBJECT TO APPROPRIATION</b>							
Estimated Authorization Level	0	12	12	12	12	7	55
Estimated Outlays	0	11	12	12	12	8	55

## **BASIS OF ESTIMATE**

For this estimate, CBO assumes that the legislation will be enacted near the end of fiscal year 2017 and that the necessary amounts will be appropriated for each fiscal year.

S. 346 would authorize such sums as are necessary for USGS to establish a system to streamline and update monitoring of active volcanoes. The bill would require USGS to:

- Replace 143 outdated seismometers (instruments that measure the ground motion) on active volcanoes,
- Create a volcano watch office that would be in operation 7 days a week and 24 hours a day to monitor active volcanoes,
- Create a national volcano data center to collect and analyze data on volcanic activity, and
- Implement a grant program to support research on volcano monitoring.

USGS also would be authorized to enter into cooperative agreements with states and universities to assist in running the system.

Based on an analysis of information from USGS, CBO estimates that creating the new volcano watch office, data center, and grant program would cost \$35 million over the 2018-2022 period. About 40 percent of those costs would be for 40 additional full-time employees, with the remaining amounts for planning, permitting, and equipment.

CBO estimates that the cost of replacing each seismometer would total about \$135,000—\$48,000 for the new equipment, \$55,000 to transport people and equipment to the volcanoes (most of which are located in remote areas of Alaska), and \$32,000 for other miscellaneous costs including pilot salaries—for a total of \$20 million over the 2018-2022 period.

**PAY-AS-YOU-GO CONSIDERATIONS:** None.

**INCREASE IN LONG-TERM DIRECT SPENDING AND DEFICITS**

CBO estimates that enacting S. 346 would not increase net direct spending or on-budget deficits in any of the four consecutive 10-year periods beginning in 2028.

**INTERGOVERNMENTAL AND PRIVATE-SECTOR IMPACT**

S. 346 contains no intergovernmental or private-sector mandates as defined in UMRA and would impose no costs on state, local, or tribal governments. State agencies and universities would benefit from grants and cooperative agreements in the bill for researching and monitoring volcanic activity. Any costs to those entities would be incurred voluntarily as a condition of receiving federal assistance.

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