Calendar No. 691

115TH CONGRESS, *2d Session* | SENATE | REPORT 115–404

NATIONAL GEOLOGIC MAPPING ACT REAUTHORIZATION ACT

DECEMBER 4, 2018.—Ordered to be printed

Ms. MURKOWSKI, from the Committee on Energy and Natural Resources, submitted the following

R E P O R T

[To accompany S. 1787]

[Including cost estimate of the Congressional Budget Office]

The Committee on Energy and Natural Resources, to which was referred the bill (S. 1787) to reauthorize the National Geologic Mapping Act of 1992, having considered the same, reports favorably thereon without amendment and recommends that the bill do pass.

PURPOSE

The purpose of S. 1787 is to reauthorize the National Geologic Mapping Act of 1992 (Public Law 102–285).

BACKGROUND AND NEED

The National Geologic Mapping Act of 1992 established the National Cooperative Geologic Mapping Program (NCGMP or Program). The Program is run by the U.S. Geological Survey (USGS) and produces geologic maps for the United States. Geologic maps are a multipurpose, basic data set that are used by public and private entities for resource exploration and extraction; natural hazards identification and mitigation; ground and surface water management; infrastructure development; environmental protection; and Federal land management. For example, NCGMP funds have been used to examine the headwaters of the Missouri River in the Midwest, ecosystem health in Maryland, the San Andreas Fault in California, and mineral deposits in Nevada and Alaska.

The Program is comprised of the following three components: Federal geological mapping projects of high-priority Federal areas, known as FEDMAP; a matching-funds grant program with state geological surveys, known as STATEMAP; and a matching-funds grant program with universities to train students in geologic mapping, known as EDMAP. The maps produced under the NCGMP have been used to compile the National Geologic Map Database, which is a comprehensive collection of geologic maps at different scales. The NCGMP was most recently reauthorized in 2009 at $64 million a year for 10 years.

According to the USGS, only one-third of the United States has been geologically mapped at a scale that is suitable for mineral development. Reauthorizing this program will allow the USGS, state geological surveys, and universities to continue surveying and producing modern and digital geologic maps to inform land managers across the country about our nation's subsurface geology.

LEGISLATIVE HISTORY

S. 1787 was introduced by Senators Murkowski and King on September 11, 2017. The Subcommittee on Public Lands, Forests, and Mining held a hearing on S. 1787 on August 22, 2018.

Companion legislation, H.R. 4033, was introduced in the House of Representatives by Representatives Lamborn and Brown on October 12, 2017. The Natural Resources Committee's Subcommittee on Energy and Mineral Resources held a hearing on H.R. 4033 on November 30, 2017. The Natural Resources Committee ordered H.R. 4033 favorably reported by unanimous consent on December 13, 2017.

The Senate Committee on Energy and Natural Resources met in open business on October 2, 2018, and ordered S. 1787 favorably reported.

COMMITTEE RECOMMENDATION

The Senate Committee on Energy and Natural Resources, in open business session on October 2, 2018, by a majority voice vote of a quorum present, recommends that the Senate pass S. 1787.

SECTION-BY-SECTION ANALYSIS

Section 1. Short title

Section 1 provides a short title.

Section 2. Reauthorization of the National Geologic Mapping Act of 1992

Subsection (a) amends section 9(a) of the National Geologic Mapping Act of 1992 to reauthorize the Program through fiscal year 2023 and makes conforming changes.

Subsection (b) amends section 5(a)(3) of the National Geologic Mapping Act of 1992 to replace the term "Associate Director for Geology" with the term "Associate Director for Core Science Systems."

Subsection (c) amends section 3 of the National Geologic Mapping Act of 1992 to make technical corrections.

COST AND BUDGETARY CONSIDERATIONS

The following estimate of the costs of this measure has been provided by the Congressional Budget Office:

S. 1787 would authorize the annual appropriation of $64 million through 2023 to carry out the National Cooperative Geologic Mapping Program (NCGMP).

CBO estimates that implementing S. 1787 would cost $310 million over the 2019–2023 period, assuming appropriation of the authorized amounts. Enacting the bill would not affect direct spending or revenues; therefore, pay-as-you-go procedures do not apply.

CBO estimates that enacting S. 1787 would not increase net direct spending or on-budget deficits in any of the four consecutive 10-year periods beginning in 2029.

S. 1787 contains no intergovernmental or private-sector mandates as defined in the Unfunded Mandates Reform Act (UMRA).

Estimated cost to the Federal Government: The estimated budgetary effect of S. 1787 is shown in the following table. The costs of the legislation fall within budget function 300 (natural resources and environment).

	By fiscal year, in millions of dollars—					
	2019	2020	2021	2022	2023	2019–2023
INCREASES IN SPENDING SUBJECT TO APPROPRIATION						
Authorization Level	64	64	64	64	64	320
Estimated Outlays	58	61	63	64	64	310

Basis of estimate: For this estimate, CBO assumes that S. 1787 will be enacted near the end of 2018 and that the authorized amounts will be appropriated for each fiscal year beginning in 2019. Estimated outlays are based on historical spending patterns.

The NCGMP is carried out jointly by the U.S. Geological Survey and state geological authorities. Under this program, federal and state geologists are developing a comprehensive geological map of the United States and a related database of environmental and scientific information. Under current law, $64 million is authorized to be appropriated annually through 2018 to carry out the NCGMP; in 2018, $24 million was allocated for that program.

CBO estimates that implementing S. 1787 would cost $310 million over the 2019–2023 period and $10 million after 2023.

Pay-As-You-Go considerations: None.

Increase in long-term direct spending and deficits: CBO estimates that enacting S. 1787 would not increase net direct spending or on-budget deficits in any of the four consecutive 10-year periods beginning in 2029.

Mandates: S. 1787 contains no intergovernmental or private-sector mandates as defined in UMRA.

Previous CBO estimate: On January 11, 2018, CBO transmitted a cost estimate for H.R. 4033, the National Geologic Mapping Act Reauthorization Act, as ordered reported by the House Committee on Natural Resources on December 13, 2017. The pieces of legislation are similar. CBO's estimates of their costs differ because of the different time periods used for the estimates.

Estimate prepared by: Federal Costs: Robert Reese; Mandates: Jon Sperl.

Estimate reviewed by: Kim P. Cawley, Chief, Natural and Physical Resources Cost Estimates Unit; H. Samuel Papenfuss, Deputy Assistant Director for Budget Analysis.

REGULATORY IMPACT EVALUATION

In compliance with paragraph 11(b) of rule XXVI of the Standing Rules of the Senate, the Committee makes the following evaluation of the regulatory impact which would be incurred in carrying out S. 1787. The bill is not a regulatory measure in the sense of imposing Government-established standards or significant economic responsibilities on private individuals and businesses.

No personal information would be collected in administering the program. Therefore, there would be no impact on personal privacy.

Little, if any, additional paperwork would result from the enactment of S. 1787, as ordered reported.

CONGRESSIONALLY DIRECTED SPENDING

S. 1787, as ordered reported, does not contain any congressionally directed spending items, limited tax benefits, or limited tariff benefits as defined in rule XLIV of the Standing Rules of the Senate.

EXECUTIVE COMMUNICATIONS

The testimony provided by the U.S. Geological Survey at the August 22, 2018, hearing on S. 1787 follows:

STATEMENT FOR THE RECORD OF THE U.S. GEOLOGICAL SURVEY

The vision of the USGS National Cooperative Geologic Mapping Program (NCGMP), first authorized by Congress in 1992, is to create an integrated, three-dimensional, digital geologic framework of the United States and its territories to address the Nation's changing resource needs. The NCGMP's mission is to characterize, interpret, and disseminate the geologic framework model of the Nation through geologic mapping and derivative research, to support the responsible use of land, water, energy, and minerals, and to mitigate the impact of geologic hazards on society, thereby facilitating national security and economic growth through informed Earth resource management.

The partnership program between USGS and the Association of American State Geologists is composed of four parts. The first is FEDMAP, which funds new science that supports the mapping of geological and geophysical processes and structures, as well as topical mapping applications. Second is STATEMAP, which provides funds to the State geological surveys that are matched at least 1:1 with State funding to support the development of geologic maps across the country. Next is EDMAP, which has provided almost $10 million since 1992 to support over 1,200 students' STEM education, thereby training the next generation of geologic mappers. The National Geologic Map Database, brings together these mapping functions to provide

all geologic maps and related reports, data, and summaries to the public, for their use in economic development and decision making. For example, the information provided through the National Geologic Map Database is essential for understanding the potential for critical minerals throughout the national geologic framework. This Database is a mandated effort of the USGS and the Association of American State Geologists, and has for 22 years been a noteworthy example of successful State-Federal collaboration to improve efficiencies in managing information for public use.

NCGMP is the authoritative source for production of geologic maps in the Nation. Each of the four parts of NCGMP is essential to making geologic maps that are accessible and useful for scientists, decision-makers, and the public. The Department of the Interior believes the expiring authorization should be extended.

CHANGES IN EXISTING LAW

In compliance with paragraph 12 of rule XXVI of the Standing Rules of the Senate, changes in existing law made by S. 1787, as ordered reported, are shown as follows (existing law proposed to be omitted is enclosed in black brackets, new matter is printed in italic, existing law in which no change is proposed is shown in roman):

NATIONAL GEOLOGIC MAPPING ACT OF 1992

Public Law 102–285 (as amended)

* * * * * * *

SEC. 3. DEFINITIONS.

In this Act:

(1) ADVISORY COMMITTEE.—The term "ADVISORY COMMITTEE" means the advisory committee established under section 5.

(2) ASSOCIATION.—The term "Association" means the Association of American State Geologists.

(3) DIRECTOR.—The term "Director" means the Director of the United States Geological Survey.

(4) EDUCATION COMPONENT.—The term "education component" means the education component of the geologic mapping program described in [section 6(d)(3)] *section 4(d)(3)*.

(5) FEDERAL COMPONENT.—The term "Federal component" means the Federal component of the geologic mapping program described in [section 6(d)(1)] *section 4(d)(1)*.

(6) GEOLOGIC MAPPING PROGRAM.—The term "geologic mapping program" means the National Cooperative Geologic Mapping Program established by section 4(a).

(7) SECRETARY.—The term "Secretary" means the Secretary of the Interior.

(8) STATE.—The term "State" includes the District of Columbia, the Commonwealth of Puerto Rico, the Commonwealth of the Northern Mariana Islands, American Samoa, Guam, and the Virgin Islands.

(9) STATE COMPONENT.—The term "State component" means the State component of the geologic mapping program described in [section 6(d)(2)] *section 4(d)(2)*.

(10) SURVEY.—The term "Survey" means the United States Geological Survey.

* * * * * * *

SEC. 4. GEOLOGIC MAPPING PROGRAM.

(a) ESTABLISHMENT.—

(1) IN GENERAL.—There is established a national cooperative geologic mapping program between the United States Geological Survey and the State geological surveys, acting through the Association.

(2) DESIGN, DEVELOPMENT, AND ADMINISTRATION.—The cooperative geologic mapping program shall be—

(A) designed and administered to achieve the objectives set forth in subsection (c);

(B) developed in consultation with the advisory committee; and

(C) administered through the Survey.

(b) RESPONSIBILITIES OF THE SURVEY.—

(1) LEAD AGENCY.—The Survey shall be the lead Federal agency responsible for planning, developing national priorities and standards for, coordinating, and managing the geologic mapping program. In carrying out this paragraph, the Secretary, acting through the Director, shall—

(A) develop a 5-year strategic plan for the geologic mapping program in accordance with section 6, which plan shall be submitted to the Committee on Resources of the House of Representatives and the Committee on Energy and Natural Resources of the Senate not later than 1 year after the date of enactment of the [Omnibus Public Land Management Act of 2009] *National Geologic Mapping Act Reauthorization Act*;

(B) appoint, with the advice and consultation of the Association, the advisory committee not later than 1 year after the date of enactment of the [Omnibus Public Land Management Act of 2009] *National Geologic Mapping Act Reauthorization Act* in accordance with section 5; and

(C) submit biennially a report to the Committee on Energy and Natural Resources of the United States Senate and to the Committee on Resources of the House of Representatives identifying—

(i) how the Survey and the Association are coordinating the development and implementation of the geologic mapping program;

(ii) how the Survey and the Association establish goals, mapping priorities, and target dates for implementation of the geologic mapping program; and

(iii) how long-term staffing plans for the various components of the geologic mapping program affect successful implementation of the geologic mapping program.

* * * * * * *

SEC. 5. ADVISORY COMMITTEE.

(a) ESTABLISHMENT.—

(1) IN GENERAL.—There shall be established a 11-member geologic mapping advisory committee to advise the Director on planning and implementation of the geologic mapping program.

(2) MEMBERS EX OFFICIO.—Federal agency members shall include the Administrator of the Environmental Protection Agency or a designee, the Secretary of the Interior or a designee from a land management agency of the Department of the Interior, the Secretary of Energy or a designee, and the Secretary of Agriculture or a designee.

(3) APPOINTED MEMBERS.—In consultation with the Association, the Secretary shall appoint to the advisory committee two representatives from the Survey (including the [Associate Director for Geology] *Associate Director for Core Science Systems*, as Chair), two representatives from the State geological surveys, one representative from academia, and 2 representatives from the private sector.

* * * * * * *

SEC. 9. AUTHORIZATION OF APPROPRIATIONS.

(a) IN GENERAL.—There is authorized to be appropriated to carry out this Act $64,000,000 for each of fiscal years 2009 through [2018] *2023*.

* * * * * * *

○