

Testimony Submitted by
American Geosciences Institute

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To the United States House of Representatives
Committee on Appropriations
Subcommittee on Interior, Environment, and Related Agencies

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Thank you for this opportunity to provide the American Geosciences Institute's perspective on fiscal year (FY) 2018 appropriations for geoscience programs within the Subcommittee's jurisdiction. We ask the Subcommittee to support and sustain critical geoscience functions at the United States Geological Survey (USGS), and related work at other agencies and bureaus.

Specifically, we ask that you support funding of \$1.2 billion for USGS. AGI also suggests \$175 million for Energy and Minerals Management at the Bureau of Land Management; \$75 million for the Bureau of Ocean Energy Management; \$83 million for the Bureau of Safety and Environmental Enforcement; \$8.1 billion for the Environmental Protection Agency; \$863 million for the Smithsonian Institution; and \$2.95 billion for the National Park Service.

The Earth provides the energy, mineral, water, and soil resources that are essential for a thriving, innovative economy, national security, and a healthy population and environment. We must understand the Earth system, and particularly the geological characteristics of Earth's surface and subsurface, in order to sustain human health and safety, maintain energy and water supplies, and improve the quality of the environment while reducing risks from natural hazards.

AGI is a nonprofit federation of 51 geoscientific and professional associations that represent approximately 250,000 geologists, geophysicists, and other Earth scientists who work in industry, academia, and government. Founded in 1948, AGI provides information services to geoscientists, serves as a voice of shared interests in our profession, plays a major role in strengthening geoscience education, and strives to increase public awareness of the vital role the geosciences play in society's use of resources, resilience to natural hazards, and the health of the environment.

Importance of understanding Earth's subsurface

The next great frontier lies under our feet. We know relatively little about the 2 miles of the Earth's crust immediately below the surface even though we rely on it for many of our energy, mineral, and water supplies; we use it as a disposal site for a variety of waste products; and it is the source of damaging earthquake and volcanic hazards. Scientific and technological

innovations now equip us to identify the wealth that may lie in the shallow subsurface and to avoid destabilizing or contaminating the Earth's crust. By collaborating together, federal agencies with expertise in the subsurface can help usher in a new era of understanding and wise development of the Earth and its resources.

The U.S. Geological Survey has primary responsibility for examining the geological structure of the national domain. The Geoscience Directorate at the National Science Foundation funds basic geoscience research. State geological surveys play a vital role in geological mapping. NASA and NOAA provide important remote sensing and Earth monitoring data. The Department of Energy is already coordinating its own subsurface activities through the SubTER cross-cut.

We respectfully suggest that the time has come for a coordinated national effort to examine and characterize the shallow subsurface of the country. Federal agencies should work together to combine fundamental science with advanced technologies to create a publicly available, national-scale, characterization of the shallow subsurface that would be the basis for private-sector investment and informed decision making in both the private and public sectors. This budget can lay the scientific, technological, and administrative foundations to explore the next frontier.

U.S. Geological Survey

AGI supports \$1.2 billion for USGS to support the agency's scientific mission. We recommend a balanced portfolio of research, monitoring, and assessment, including geologic mapping and geophysical surveys, that supports smart use of the nation's energy, mineral, water, and land resources.

Importance of Geoscience Functions at USGS: The need for geological information has not diminished since USGS was established in 1879. On the contrary, as we place increasing demands on Earth's system, many critical decisions rely upon geoscience information. The USGS has a wide-ranging mission to provide objective maps, data, observations, analyses, assessments, and scientific solutions to support decision making. While there is merit to USGS's broad remit, its unique geological mission should be paramount.

Optimizing USGS facilities: Some USGS facilities are in extremely bad condition, others do not meet current requirements. AGI supports additional FY 2018 funding for USGS Facilities to maintain essential monitoring, observation, and analytical instrumentation, and to consolidate facilities to best serve the agency's mission. **Investing in USGS infrastructure now will increase efficiency and yield considerable savings in the coming years.**

Core Science Systems:

- ***National Cooperative Geologic Mapping Program (NCGMP):*** This important, decades-long partnership between the USGS, state geological surveys, and universities has a proven track record of delivering cost-effective geological maps. **AGI asks that Congress increase funding for the National Cooperative Geologic Mapping Program to \$30 million in FY 2018 to meet growing demand from many sectors for geologic maps.**
- ***National Geospatial Program:*** Topographic mapping has been a core activity at USGS since its inception. AGI strongly supports the 3D Nation interagency partnership to build

a modern elevation map of the nation's territories and urges Congress to support USGS's contribution, the 3DEP (3D Elevation) program. **AGI strongly supports investment in lidar and ifsar mapping, and requests \$69 million for the National Geospatial Program.**

- **Data Preservation:** The National Geological and Geophysical Data Preservation Program (NGGDPP) produces more value in terms of economic, environmental, hazard mitigation, and regulatory efficiency than it costs to run. **AGI urges Congress to reauthorize NGGDPP and to fund it at the previously authorized level of \$3 million.**

Energy and Mineral Resources:

- **Mineral Resources Program:** We are concerned at the dearth of investment in identifying and characterizing domestic mineral resources, which can play a vital role in the security of our national supply chains. USGS minerals and mapping programs provide the baseline geologic information needed to stimulate and target renewed interest in domestic mineral resources. Funding these programs will support national defense and economic priorities.

The National Minerals Information Center (NMIC) continues to provide financially and strategically vital information on the global supply of, demand for, and flow of minerals and mineral materials. We are impressed by the increase in timely analyses, in addition to the regular collection and dissemination of accurate data, generated by NMIC. **AGI supports increased funding of \$60 million for the Mineral Resources Program.**

- **Energy Resources Program:** AGI supports increased funding for the Energy Resources Program. We note the importance of research on gas hydrates, which may play a significant role in future energy and climate scenarios. **AGI supports funding of \$25 million for the Energy Resources Program.**

Land Use Change:

- **Land Remote Sensing Program:** One of the most fundamental concepts in the geosciences is that the Earth changes through time. It is impossible to overstate the importance of long-term, consistent monitoring of the Earth to provide a sound basis for decision making. **AGI supports \$97 million for Land Use Change, which includes Landsat and other Earth observing systems.**

Water Resources:

- Drought and challenges in water supplies and water quality highlight the importance of understanding the quality, quantity, and distribution of our groundwater and surface water resources. **AGI urges Congress to ensure the continuity and expansion of nationwide, long-term data collection and research programs that support water planning and decision making across all states, and to fund Water Resources at \$215 million for FY 2018.**

Natural Hazards:

- Natural hazards can cause substantial damage throughout the nation but, with the right information, communities can take action to avoid and mitigate potential harm. USGS landslide, earthquake, volcano programs, plus the agency's work on geomagnetism and coastal and marine geology, strengthen our national resilience and save our

communities and citizens from harm. **AGI supports robust funding of the Natural Hazards Program and urges Congress to appropriate \$145 million to this Mission Area.**

Bureau of Land Management

AGI supports efforts by the Energy and Minerals Management program to modernize its data systems and administrative processes. **BLM needs staff with appropriate skills to carry out energy and minerals inspections, data collection and analysis, and administration. AGI supports funding BLM's Energy and Minerals activities at \$175 million and we urge investment in BLM's workforce to ensure efficient technical and administrative service.**

Bureau of Ocean Energy Management and Bureau of Safety and Environmental Enforcement

In order to administer and oversee offshore energy development effectively and efficiently, BOEM and BSEE need sufficient, skilled staff. AGI recommends continued investment in workforce development to avoid delays in the functions of both bureaus. **AGI supports \$75 million in federal funds for BOEM, and \$83 million for BSEE.**

Environmental Protection Agency

We respectfully request Congress to consider the value of many EPA science programs, especially their value to States, tribes, extramural partners, and grant recipients, when making budget decisions. **EPA provides many benefits to the nation, we request funding of \$8.1 billion for the agency.**

Smithsonian Institution

The Smithsonian's National Museum of Natural History (NMNH) plays a dual role in communicating the excitement of the geosciences to the public and enhancing knowledge through research and the preservation and sharing of geoscience collections. **AGI supports funding of \$863 million for the Smithsonian Institution, with \$49.2 million for the NMNH.**

National Park Service

National parks are unique national treasures that showcase the geologic splendor of our country and offer unparalleled opportunities for research, education, and outdoor activities. **AGI supports \$2.95 billion for the National Park Service and we note its important role in educating students and the public about all aspects of Earth and human history.**

Thank you for the opportunity to present testimony to the Subcommittee. If you would like additional information for the record, please contact Maeve Boland at 703-379-2480, ext. 228, 703-379-7563 fax, mboland@agiweb.org, or 4220 King Street, Alexandria VA 22302-1502.