USGS COALITION

Testimony of the USGS Coalition
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Regarding the U.S. Geological Survey FY 2018 Budget

To the
House Committee on Appropriations
Subcommittee on Interior, Environment, and Related Agencies
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The USGS Coalition appreciates the opportunity to provide testimony about fiscal year (FY) 2018 appropriations for the United States Geological Survey (USGS). **The USGS Coalition requests Congress to fund the USGS at $1.2 billion in FY 2018.** The requested funding would allow the agency to sustain current efforts in scientific discovery and innovation and to make strategic investments that will produce the impartial knowledge and decision support tools needed by decision-makers across the country.

Few modern problems can be addressed by a single scientific discipline. The USGS is uniquely positioned to provide information and inform responses to many of the nation's greatest challenges. The USGS is an agency that has a distinctive capacity to deploy truly interdisciplinary teams of experts to gather data, conduct research, and develop integrated decision support tools that improve ecosystem management, ensure accurate assessments of our water quality and quantity, reduce risks from natural and human-induced hazards, deliver timely assessments of mineral and energy resources, and provide emergency responders with accurate geospatial data and maps.

The USGS Coalition is an alliance of more than 75 organizations united by a commitment to the continued vitality of the United States Geological Survey to provide critical data and services. Coalition members include scientific organizations, universities, businesses, and natural resource managers.

Essential Services for the Nation

The USGS plays a unique role within the Department of the Interior, conducting research across a broad array of scientific disciplines and providing data that informs responses to many of the nation's greatest challenges. To highlight just a few examples, USGS scientists:

- Reduce risks from **natural hazards** – including earthquakes, landslides, volcanic eruptions, flooding, drought, and wildfires – that jeopardize human lives and result in billions of dollars in damages annually.

- Inform management of **freshwater resources** – both above and below the land surface – for drinking water, agriculture, and commercial, industrial, recreational, and ecological purposes.
- Inform sound management of **natural resources** on federal and state lands, including control of invasive species and wildlife diseases that cause billions of dollars in economic losses. This information is shared with other Interior bureaus and state agencies to allow for adequate monitoring and management.
- Help predict the impacts of **land use** and climatic conditions on the availability of water resources and the frequency of **wildfires**. The Landsat satellites have collected the largest archive of remotely sensed land data in the world, which informs **agriculture production** and our nation's response to and mitigation of natural hazards.
- Provide vital **geospatial and geologic mapping data** used in economic development, environmental management, infrastructure projects, and scientific applications by states, federal agencies, and the private sector.
- Help make decisions about the nation's energy future by assessing **mineral and energy resources** – including rare earth elements, coal, oil, unconventional natural gas, and geothermal. The USGS is the sole federal source of information on mineral potential, production, and consumption.

Funding

Over the years, Congress has worked in a bipartisan fashion to provide essential funding to the USGS. These efforts have paid dividends and helped the USGS provide answers to the challenging questions facing decision-makers across the country.

The USGS Coalition opposes the proposed cuts outlined in the FY 2018 President's budget request of 15 percent for the USGS.

The proposed funding level for USGS is very troubling, as the agency has made numerous economies in recent years. Any cuts in FY 2018 or beyond would come at the expense of scientific programs. As a science agency, much of the USGS budget is dedicated to staff as well as equipment and facilities that must be maintained and updated to ensure the continuity of data acquisition and that the data gathered are reliable and available for future scientific investigations. We believe that the leadership of the USGS is doing all they can, and has been for a number of years, to contain costs while continuing to deliver high quality science.

One strength of the USGS has been its partnerships with many other federal agencies, states, local governments, and private entities. These relationships, however, should not be mistaken as a means to transfer federal activities to other entities. The work of the USGS is uniquely tied to the agency, as shown in the following examples.

- A potash mineral deposit worth $65 billion was identified in Michigan as a result of the National Geological and Geophysical Data Preservation Program. The initiative catalogs and archives geological samples acquired during oil, gas, and mineral exploration. The program is run by the USGS and helps states to preserve and inventory their geological samples and data. The rock samples from Michigan were entered into a national

database, where mining companies discovered their existence and are now assessing the potential for mining potash in Michigan. Without USGS funding, these mineral samples and their potential for new revenue and jobs would likely not have been discovered.

- A major geomagnetic storm has the potential to cause a continent-wide loss of electricity and substantial damage to power-grid infrastructure. Although these events are rare, they do occur, such as the 1989 geomagnetic storm that disrupted power to the entire Canadian province of Québec. The USGS monitors Earth's magnetic field at 14 ground stations across the U.S. This information is critical for utility companies, who use the resulting geoelectric hazard maps to assess the vulnerability of their systems and to mitigate the predicted damages, thereby preventing costly power outages.
- Nearly half of America's drinking water comes from underground aquifers. The large size of some aquifers, which can span the boundaries of multiple states, puts them beyond the scope of local water authorities. The USGS is evaluating water quality in 20 principal aquifers as part of the National Water-Quality Assessment Project. The program is testing for contaminants, such as pesticides, pharmaceuticals, and other pollutants that threaten human health.
- Precise elevation data is needed for a variety of applications, including farming, infrastructure construction, flood mitigation, and aviation safety. The U.S., however, does not yet have national coverage of high-quality topographic data. Given its expertise in mapping, the USGS is the lead entity for the 3D Elevation Program, which will acquire precise national elevation data coverage within eight years. The program is estimated to provide benefits worth $1.1 billion a year to government and private entities.
- Recent research by the USGS identified the potential for avian flu to move between Europe and North America when migratory birds congregate in Iceland during their migration. Wildlife diseases threaten not only the ecosystem and economic values of wild animals, but can also jeopardize human health. The USGS has unique technical expertise for surveillance and diagnosis of wildlife disease, such as identifying a potential transmission route of a deadly disease.
- Expected losses from natural hazards in the U.S. exceed $3 billion per year. These losses can be significantly reduced through informed decisions guided by the most current and thoroughly-researched understanding of the hazards, risks, and cost of mitigation. The USGS Science Application for Risk Reduction Project was created to innovate the application of hazard science for the safety, security, and economic well-being of the nation by directing new and existing scientific research toward addressing gaps in vulnerability to help communities build resilience to natural hazards.

Many USGS programs are highly leveraged by outside funding sources. For instance, 69 percent of funding for the National Streamflow Network (aka streamgages) comes from states, localities, tribes, other federal agencies, private industry, and non-governmental organizations. For each federal dollar invested in the Cooperative Research Units Program, states and universities invest more than three dollars. Interior's Climate Science Centers have also seen investments from partner universities into education and research totaling more than $8.2 million since the program began in 2009. In total, more than $100 million in contributions were made in 2016 by USGS partners.

Conclusion

We recognize the financial challenges facing the nation, but losing irreplaceable data can increase costs to society today and in the future. Data not collected and analyzed today is data lost forever. This is particularly significant for environmental monitoring systems, where the loss of a year's data can limit the scope and reliability of long-term dataset analysis. Moreover, the United States Geological Survey has a national mission that extends beyond the boundaries of the nation's public lands to positively impact the lives of all Americans. For these reasons, the USGS Coalition requests that Congress work to provide $1.2 billion for USGS in FY 2018.

The USGS Coalition appreciates the subcommittee's past leadership in strengthening the United States Geological Survey. Thank you for your thoughtful consideration of this request.