

Statement of  
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Department of the Interior  
before the  
Committee on Appropriations,  
Subcommittee on Interior, Environment and Related Agencies  
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Good morning, Mr. Chairman and Members of the Subcommittee. Thank you for the opportunity to appear before you today to discuss the Administration's 2013 budget request for the U.S. Geological Survey (USGS).

In the year since we last sat together in this room to discuss funding for the important science the USGS does for this great Nation, USGS science and its scientists have been at the forefront of a variety of issues. As the Nation's largest water, Earth, and biological science and civilian mapping agency, the USGS collects, monitors, analyzes, and provides scientific understanding about natural resource conditions, issues, and challenges. For more than a century, its diversity of scientific expertise has enabled the USGS to carry out large-scale, multi-disciplinary investigations and provide impartial scientific information to resource managers, policymakers, and the public. The last year is filled with examples of the relevance and timeliness of USGS science.

In the last year, USGS scientists and their partners discovered the cause of the deadly White-Nose Syndrome (WNS) in bats. This discovery is important because it enables decisionmakers to develop management strategies to preserve vulnerable bat populations. Bats play an important role in the functioning of ecosystems, providing pest control services to the agricultural industry in the United States that save the U.S. agricultural industry at least \$3 billion a year.

USGS scientists and technicians responded to a number of natural hazard events over the last year, including the magnitude 5.8 earthquake that struck the National Capital Area on August 23, 2011. Timely information from the USGS helped other Federal, State and local government agencies immediately assess the impact of the earthquake to both people and infrastructure. USGS hydrologists responded to historic flooding on the Mississippi River as well as devastating floods in the Northeast caused by Hurricane Irene. As new record levels were set on rivers and streams from Maine to Puerto Rico, USGS information helped other Federal agencies manage dams, levees, and spillways to minimize flood damage to communities across much of the United States. In the United States, losses due to natural disasters are in the billions of dollars each year. USGS science supports efforts to minimize losses to life and property associated with such hazards.

Another example of the relevance and timeliness of USGS science is the USGS assessment of gas resources in the Marcellus Shale in the Appalachian Basin released in August 2011, which revealed the

occurrence of about 84 trillion cubic feet of undiscovered, technically recoverable natural gas and 3.4 billion barrels of undiscovered, technically recoverable natural gas liquids. These estimates are significantly greater than the estimates of the last assessment released in 2002 due to the availability of new geologic information and engineering data. Technological improvements have led to growth in commercial gas production, particularly in the rapid development of natural gas in the oldest producing petroleum province in the United States, the Appalachian Basin. The USGS assessments are important because they provide impartial, robust scientific information about energy resources and support the U.S. Department of the Interior's (Interior) mission of protecting and responsibly managing the Nation's natural resources.

From G.K. Gilbert's sentinel climate research to the development of on-demand water information served through tools such as WaterAlert, the USGS has provided an invaluable scientific foundation that has informed decisions for more than a century. This point is well-illustrated by USGS scientist Paul Hsieh's work in the aftermath of the Deepwater Horizon oil spill. He used a 25-year-old groundwater flow program as a tool to simulate the results of the well integrity test when the Macondo well was capped in order to resolve the controversy of whether intermediate pressures indicated a leaking well or a depleted reservoir. Based on his conclusion that the well was not leaking, the decision was made to leave the well cap in place. Dr. Hsieh's efforts helped put an end to the national catastrophe and he was honored as the 2011 Federal Employee of the Year.

Investments in research and development (R&D) promote economic growth and innovation to ensure U.S. competitiveness in a global market. Research and development is at the core of the USGS mission and fuels advancement in areas such as natural disasters and understanding the U.S. energy and mineral resource endowment. This testimony provides but a few of the many examples of USGS science at work to support the national economy, reduce risk from natural hazards, and provide a solid scientific foundation for decisions. To address the President's priority on fiscal responsibility, the USGS 2013 budget request balances investments in monitoring, research, and assessments with targeted program reductions while maintaining the diverse expertise necessary to respond to evolving science needs. The 2013 budget request for the USGS represents the Administration's commitment to supporting these activities as a means to providing the very best science available to support decisionmaking.

The 2013 budget request for the USGS is \$1.1 billion, an increase of \$34.5 million from the 2012 enacted level. The budget includes \$73.2 million in targeted increases that are offset by \$49.5 million in targeted decreases. Fixed costs to address the 0.5 percent pay raise, GSA rent increases, and IT transformation are funded collectively at \$10.8 million. This request represents a 3.2 percent increase above the 2012 enacted level and supports a balanced science investment portfolio that is essential to a healthy science agency.

### **Budget Highlights**

The 2013 budget request for the USGS includes increases in a number of priority areas. The funding request to address issues associated with hydraulic fracturing is \$18.6 million, which is a \$13.0 million increase over the 2012 budget. The USGS, the Department of Energy, and the Environmental Protection Agency are engaged in developing a collaborative interagency R&D effort to address the highest priority challenges associated with safely and prudently developing unconventional natural gas resources. The goal of this effort is to understand and minimize potential environmental, health, and safety impacts associated with hydraulic fracturing. Through this effort, the three agencies will build on current work and collaboratively identify and coordinate priority R&D activities to provide policy-relevant science to support resource management and development decisions.

Funding for WaterSMART totals \$21.0 million and represents a \$13.0 million increase from 2012. WaterSMART is a multi-disciplinary effort designed to further understand the complex linkage among water quantity, quality, and the environment, and improve management of this finite resource. Among efforts identified for implementation in 2013 is establishment of a National Groundwater Monitoring Network as called for by the SECURE Water Act (P.L. 111-11). Water quality enhancement is key to the WaterSMART effort in 2013 and will result in a national synthesis of knowledge on the degree to which water quantity and quality intersect to influence water resource availability for both human and ecosystem uses.

The 2013 budget request includes an increase of \$16.2 million that will expand science in priority ecosystems including Chesapeake Bay, California Bay-Delta, Columbia River, Everglades, Klamath River Basin, and Puget Sound. The increase also includes funding to address ecosystem science needs related to Asian Carp control and prevention in the Great Lakes and the Upper Mississippi River Basin and provides funding to apply land use science, build data and information access and decision tools, engage Tribes in their ecosystem challenges related to climate change and advance efforts to sustain environmental capital. Another \$2.0 million is requested to expand research efforts on brown tree snakes, White-Nose Syndrome in bats, and coral reef health.

In 2013, the USGS proposes to expand and enhance its science efforts for rapid response to natural disasters, such as earthquakes and floods. An increase of \$8.6 million over 2012 is requested to expand science and monitoring efforts required by the Nation's emergency managers and public officials for understanding the risks hazards pose to human and natural systems and how to reduce losses and improve response. The USGS is faced with rising expectations for rapid, robust information in response to hazard events. This funding will allow the USGS to better meet those expectations.

The 2013 budget includes an increase of \$6.8 million over 2012 that will allow the USGS to expand its efforts in support of coastal and ocean stewardship and the National Ocean Policy. Accordingly, the USGS will expand efforts in those regions where coastal and marine science and management objectives intersect with Interior's responsibilities for energy resource development, adaptation to climate change, ecosystem sustainability, and resilience of vulnerable native and indigenous communities.

### **Summary by Budget Activity**

The 2013 budget includes a total of \$177.9 million for the Ecosystems Mission Area. The request includes increases across all mission area programs to support research and development efforts focused on ecosystem priorities such as California Bay-Delta, Chesapeake Bay, Columbia River, Everglades, Klamath River Basin, and Puget Sound.

The Climate and Land Use Change budget activity request totals \$153.7 million and includes increases in funding for Science Support for DOI Bureaus, research and development that enhances resource management, and funding to support the Northwest and Northeast DOI Climate Science Centers, which work closely with tribal partners to identify key resource management science needs in the Columbia River and Great Lakes ecosystems, respectively. Funding is also provided that will allow the USGS to better assess the causes and consequences of land cover change.

In 2013, the total request for Energy, Minerals, and Environmental Health is \$97.1 million, to support programs that conduct research and assessments on the location, quantity, and quality of the Nation and world's mineral and energy resources. Programs within this activity also conduct research on environmental impacts of human activities that introduce chemical and pathogenic contaminants into the environment and threaten human, animal (fish and wildlife), and ecological health.

The total requested funding level for Natural Hazards in 2013 is \$144.8 million, or \$10.3 million above the 2012 enacted level, which will allow the USGS to strengthen its natural hazards research and assessment capabilities both before and after disasters strike.

The 2013 budget request includes \$209.8 million for Water Resources which reflects a reduction of \$4.8 million from the 2012 enacted level. The budget request for Water Resources reflects difficult choices that had to be made in order to advance hydrologic science priorities. The request includes enhanced funding for WaterSMART and the resources necessary to establish the National Groundwater Monitoring Network, as well as a substantial investment (\$5.5 million) in the National Streamflow Information Program that will advance USGS streamgages and hydrologic modeling to reduce flood damages.

In 2013, the total budget request for Core Science Systems is \$120.4 million. This includes increases in each of the Core Science Systems programs to support Administration priorities such as science for coastal and ocean stewardship, hydraulic fracturing, and ecosystem priorities. Increases are focused on research, synthesis, and analysis of information and data, development of information access and decision tools, the creation of geologic maps and a synthesis of available science on hydraulic fracturing through the John Wesley Powell Center. This also reflects an internal transfer of funds from Administration and Enterprise Information, which aligns programs and activities to best reflect the mission of the Science Synthesis, Analysis, and Research program.

The funding requested for Administration and Enterprise Information in 2013 is \$99.1 million and reflects a net program reduction of \$3.7 million in addition to the internal transfer mentioned previously.

The 2013 budget request for Facilities is \$99.7 million to provide a safe, functional workspace for accomplishing the bureau's scientific mission. Resources support basic facility operations, security costs, and facility maintenance in compliance with Federal, State, and local standards.

## **Conclusion**

The 2013 USGS budget request addresses issues that are important to the Administration and Interior. This budget reflects the Administration's commitment to R&D and its support for USGS science as a foundation for resources management decisions, while recognizing constrained fiscal resources. This budget reflects careful and tough decisions while balancing USGS research, assessment, and monitoring activities to ensure its continued ability to address a broad array of natural resource and natural science issues facing the Nation.

The author of the first USGS monograph, G.K. Gilbert, is quoted, "Knowledge of Nature is an account at bank, where each dividend is added to the principal and the interest is ever compounded; and hence it is that human progress, founded on natural knowledge, advances with ever increasing speed." The science and information provided by USGS scientists and professionals, past and present, provides the foundation for what we now know and what we will learn in the future. The 2013 budget request for the USGS supports this continued legacy of world class science to support decisionmaking.

This concludes my statement, Mr. Chairman. I will be happy to answer the questions you and other Members have. I appreciate this opportunity to testify before you and this Subcommittee and look forward to our continued collaboration.