

STATEMENT OF
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BEFORE THE
COMMITTEE ON NATURAL RESOURCES,
SUBCOMMITTEE ON ENERGY AND MINERALS
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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 2012 budget request for the U.S. Geological Survey (USGS).

Much about the USGS has changed in the year since we last sat together in this room to discuss funding for the important work the USGS does for the Nation. The USGS has realigned its management structure, moving from an organizational structure of single and separated disciplines to form interdisciplinary mission areas as outlined in the USGS Science Strategy: "*Facing Tomorrow's Challenges—U.S. Geological Survey Science in the Decade 2007-2017*" (U.S. Geological Survey, 2007). I appreciate the Subcommittee's support for the realignment. The 2012 USGS budget request formally aligns the USGS budget structure with the new mission area management structure. We are already seeing evidence that bringing expertise from several Earth science disciplines together through these mission areas to address issues of concern allows the USGS to better respond to customer and partner needs to provide the best value to the taxpayers.

While much has changed at USGS, some things have not. Natural resources managers, natural hazards responders, industry, and the public continue to rely on the important science, data, and information the USGS produces as part of its core mission to provide the scientific basis that contributes to the wise management of the Nation's natural resources and that promotes the health, safety, and well-being of people. Given the rapid pace required for management and policy decisions in comparison to the more deliberative time scale for authoritative, peer reviewed science, the USGS must always anticipate the Nation's needs and maintain a broad portfolio of research and researchers across the country. The last year has provided numerous examples of how USGS science is providing relevant and timely scientific results to address some of the most pressing natural resources challenges of our time.

In the last year, USGS science has been at the forefront in responding to many natural resource challenges. The USGS recently released the first ever detailed inventory of rare earth elements describing known deposits for the entire Nation. These elements are essential components for many current and emerging alternative energy technologies, such as electric vehicles, photo-voltaic cells, energy-efficient lighting, and wind power. The assessment will be very important

both to policy-makers and to industry, and it reinforces the value of our efforts to maintain accurate, independent information on our Nation's natural resources as only the USGS can do.

USGS hazards science made great strides as well. In the aftermath of the January 2010 Haiti earthquake, USGS scientists used geological field observations and interpretations of satellite imagery, aerial photography, and light detection and ranging (LiDAR) to discover the main strand of the Enriquillo-Plantain Garden Fault thought to be responsible for the January quake had not ruptured and the hazard associated with the fault still remains high. Information of this nature is critical as Haiti continues its struggle to recover from the impacts of the devastating earthquake and make important decisions on rebuilding its capital city.

The USGS continues its efforts to put science, data, and information into the hands of those who need it for decision making. In recent months, the USGS announced that estimated economic loss and casualty information will now be included in USGS earthquake alerts following significant earthquakes around the world. These earthquake alerts are widely recognized and used by emergency responders, government and aid officials, and the public to understand the scope of the potential disaster and to develop the best response. The USGS automated system, PAGER (Prompt Assessment of Global Earthquakes for Response), within minutes provides preliminary estimates of earthquake impacts, including the range of possible fatalities and economic losses, by assessing the shaking distribution, the number of people and settlements exposed to severe shaking and other factors. This information is critical in determining the human and economic toll so that emergency responders can act promptly and effectively.

The USGS recently made available instant, customized updates about water conditions through its "WaterAlert" system. This system allows users to receive updates about river flows, groundwater levels, water temperatures, rainfall and water quality at more than 9,500 sites where the USGS collects real-time water information. This information is crucial for managing water resources, including during floods, droughts and chemical spills. Real-time water data are essential to those making daily decisions about water-related activities, whether for resource management, business operations, flood response or recreation. WaterAlert furthers USGS efforts to make data immediately available and relevant to every user.

USGS long-term monitoring and robust ecosystem studies continue to pay dividends as our Nation seeks to discover whether investments in ecosystem restoration are working. One example is a recent study that determined the Potomac River in Washington, D.C., is showing multiple benefits from restoration efforts. According to direct measurements taken during the 18-year field study, reduced nutrients and improved water clarity have increased the abundance and diversity of submerged aquatic vegetation in the Potomac. The public deserves to know whether its investments are having tangible results. This study and others like it provide that information.

It is the hard-working scientific and professional staff at the USGS, powered by this Subcommittee's long-term investment in and commitment to science, that makes these advancements possible. The success of USGS efforts, such as those highlighted here, makes it all the more challenging to make tough decisions regarding the allocation of scarce fiscal resources.

To address the President's priority on fiscal responsibility, the USGS 2012 budget makes vital investments in research and development and ecosystem restoration, while also proposing reductions within programs such as regional assessments of groundwater quantity and quality; toxic substances research; mineral resource assessments; research and grants that address the Nation's resilience to natural hazards; the Water Resources Research Act program; the National Biological Information Infrastructure; the National Water Quality Assessment Program; the National Geological and Geophysical Data Preservation program; the National Cooperative Geological Mapping program; research to establish the limits of the extended Outer Continental Shelf; and the climate effects network. These changes reflect tough choices. We are repositioning core responsibilities to better address complex multidisciplinary issues within a reduced funding level.

The 2012 budget request for the USGS is \$1.1 billion, an increase of \$6.1 million from the 2010 enacted level. In 2012, the USGS is proposing to establish a new appropriations account, National Land Imaging (NLI), which comprises a base transfer from the Surveys, Investigations and Research (SIR) account of \$53.5 million coupled with an increase of \$48.0 million to begin work on Landsats 9 and 10. Excluding the NLI account, the SIR account is \$53.6 million below the 2010 enacted level. Decreases are proposed in scientific programs as well as for Interior-wide management efficiencies and administrative savings in travel, contracts, supplies, and information technology.

Major Changes

The USGS 2012 budget request includes establishment of a separate account for Landsat missions along with an increase of \$48.0 million to begin developing an operational Landsat program, starting with Landsats 9 and 10. Landsat furthers Interior's important role in land remote sensing under the President's National Space Policy and provides invaluable data for land use and climate change research. The new account will include funding for current satellites (Landsats 5 and 7), the Landsat Data Continuity Mission (Landsat 8), which is scheduled to launch in December 2012, and the development of Landsats 9 and 10, through a continuous Landsat program that will ensure data continuity in the future. Landsat has become vital to the Nation's agricultural, water management, disaster response, and scientific communities. Establishment of this account and the increase in funding will provide the stable budgetary foundation needed for a continuous capability. A permanent budgetary and managerial structure will ensure the continued collection and maintenance of the important data the Landsat satellite series provides.

The budget request also proposes an additional \$12.0 million for the restoration of some of the Nation's most iconic ecosystems. These efforts support America's Great Outdoors, the President's signature conservation initiative to protect and restore the health, heritage, natural resources and social and economic value of some of the Nation's most significant ecosystems. The USGS plays a vital role in the development and implementation of the America's Great Outdoors initiative, working in collaboration with other Interior bureaus and Federal agencies. Particular focus is given to important and iconic ecosystems, with targeted increases for Chesapeake Bay (+\$4.6 million), Columbia River (+\$1.4 million), Upper Mississippi River

(+\$1.0 million) and Puget Sound (+\$1.5 million). The budget includes \$3.5 million for the Great Lakes, including support for USGS' role in the Asian Carp Control Framework, to detect and understand this invasive fish and develop chemical control tools.

The 2012 budget provides \$10.9 million for USGS activities in the WaterSMART initiative, \$9.0 million above the 2010 Enacted/2011 CR level, to implement the WaterSMART Availability and Use Assessment. The USGS will conduct comprehensive water supply and demand inventories to provide the baseline information needed by public and private water managers to work toward sustainable water supplies. This effort will include estimating freshwater resources, how those supplies are distributed, and how they are changing over time; evaluating factors affecting water availability including energy development, changes in agricultural practices, increasing population, and competing priorities for limited water resources; and assessing water use and distribution for human, environmental, and wildlife needs.

Funding to complete the network of Interior Climate Science Centers, as called for in Secretarial Order 3289, is also included at \$11.0 million above the 2010 enacted level. The planned network of eight Interior Climate Science Centers will provide fundamental research and tools to the network of landscape conservation cooperatives and to natural and cultural resource managers. The Centers focus on understanding landscape stressors related to climate change and designing adaptation strategies at a regional level. In 2010, CSCs were established in the Northwest, Southeast and Alaska Regions. At the proposed funding level, the remaining CSCs will be established in the Northeast, South Central, North Central, Southwest and Pacific Islands regions.

To continue investment in science to support Interior's substantial coastal and ocean resource management responsibilities and its critical role in implementing the Administration's National Ocean Policy, the budget request includes an additional \$4.5 million for coastal and marine spatial planning. The USGS will continue leading the development of a national information management system for coastal, ocean and Great Lakes resources. This involves conducting a number of efforts important in managing resources with other Federal, State, tribal, and regional partners. Efforts include constructing a prototype Coastal and Marine Spatial Planning Internet portal for the Gulf of Mexico; developing modeling tools to forecast coastal vulnerability to projected sea level rise and predicted coastal storms; and establishing data standards and undertaking gap analysis to target future priority data collection activities.

Budget Summary by Budget Activity

The 2012 budget includes a total of \$166.4 million for the Ecosystems mission area. The request includes increases to the Terrestrial, Freshwater, and Marine Environments and Invasive species programs to support the President's signature conservation initiative, America's Great Outdoors.

The Climate and Land Use Change budget activity request totals \$106.4 million and includes new funding for completion of the Interior Climate Science Centers and funding for new efforts associated with carbon sequestration in the California Bay-Delta.

The 2012 total request for Energy, Minerals, and Environmental Health is \$88.5 million, which reflects a \$13.0 million reduction from the 2010 enacted level.

The total requested funding level for Natural Hazards in 2012 is \$133.9 million or \$5.1 million below the 2010 enacted level.

In 2012, the request level for Water Resources totals \$199.6 million. This represents a reduction of \$21.6 million from the 2010 enacted level.

The 2012 total budget request for Core Science Systems is \$105.9 million, a reduction of \$19.0 million below the 2010 enacted level.

The total funding level for Administration and Enterprise Information is requested at \$116.5 million and reflects a net program increase of \$1.4 million.

The 2012 total budget request for Facilities is \$100.8 million; a reduction of \$5.6 million below the 2010 enacted level.

Conclusion

The USGS 2012 budget request addresses issues long important to the Administration and Interior, and aligns the USGS budget structure with its management structure. This budget reflects our ability to address a broad array of natural-resource and natural-science issues facing the Nation. It also reflects tough choices and difficult decisions. The challenges ahead are great, but the USGS is committed to placing our science, data, and information into the hands of decision makers across the landscape when they need it and in formats they can readily use. The 2012 budget request aims to ensure our multidisciplinary science expertise is applied effectively, efficiently, and strategically to meet the Nation's most pressing needs today and to preserve our wealth of biologic, geologic, geographic, and hydrologic monitoring capabilities to meet the needs of tomorrow. The USGS will continue its legacy of providing the data, long-term scientific understanding, and scientific tools needed to sustain and improve the economic and environmental health and prosperity of people and communities across the Nation and around the world.

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.