

Statement of  
William A Werkheiser, Associate Director, Water  
U.S. Geological Survey  
Department of the Interior  
before the  
Committee on Natural Resources  
Subcommittee on Water and Power  
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Good afternoon, 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), and in particular for water resources.

As the primary Federal science agency for water information, the USGS monitors and assesses the quantity and quality of the Nation's freshwater resources, assesses sources and behavior of contaminants in the water environment, and develops tools to improve management and understanding of water resources.

This information is critical to allowing the public, water managers and planners, emergency responders and policy makers to minimize loss of life and property from natural hazards such as floods, droughts, and land-surface movement; manage freshwater for domestic, public, agricultural, commercial, industrial and recreational uses; and protect and enhance water resources for human and aquatic health.

Last year, USGS scientists and technicians responded to historic flooding on the Mississippi and Missouri Rivers, 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 and Tribal, State, and local governments manage dams, levees, and spillways and make crucial decisions that minimized 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, and floods and droughts are among the leading contributors. USGS science supports efforts to minimize losses to life and property associated with such hazards.

From 1889, when the first USGS streamgauge was installed on the Rio Grande, to the development of on-demand water information served through tools such as WaterAlert, for more than a century the USGS has provided an invaluable scientific foundation for informed decisionmaking - a foundation built by the creative intelligence of thousands of dedicated scientists. A number of USGS scientists were honored in 2011 for their contributions to the Nation. Three received the Presidential Early Career Award for Scientists and Engineers, including geophysicist Dr. Elizabeth Cochran, research ecologist Dr. Sasha Reed, and research

geophysicist Dr. David Shelly. Hydrologist Dr. Paul Hsieh was recognized as the 2011 Federal Employee of the Year.

This statement provides a few examples of USGS science at work to support the national economy, reduce risk from natural hazards, and provide a solid scientific foundation for decisions. 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. It represents the Administration's commitment to supporting these activities.

The 2013 overall 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. 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 and a strong and resilient Nation. Investments in research and development (R&D) within the USGS will not only promote greater understanding in managing the nation's water resources, but also promote U.S. economic growth and innovation. This budget proposal maintains a strong commitment to USGS core function. Through the best available geologic, hydrologic, and topographic information, this budget will allow the USGS to address key science issues and contribute to the wise management of the nation's natural resources and the health, safety, and well-being of its people.

### **USGS Water Resources Areas of Focus**

The 2013 budget request for USGS Water Resources is \$209,828,000, a net decrease of \$4.8 million from the 2012 budget. Recognizing constrained fiscal resources, the 2013 USGS budget reflects a careful prioritization of science investments to promote a robust and growing economy and a strong and resilient Nation.

As competition for water resources grows, so does the need for better information about water quality and quantity. WaterSMART, through the combined efforts of the USGS and the Bureau of Reclamation, provides information to address the Nation's water challenges. The USGS is proposing a total of \$21.0 million for WaterSMART priorities, which represents a \$13.0 million increase from 2012. WaterSMART supports the Department of the Interior's Water Challenges initiative and includes establishing a national groundwater monitoring network as called for by the SECURE Water Act (P.L. 111-11). Groundwater is one of the Nation's most important natural resources and is the primary source of drinking water for half of the nation. It provides about 40 percent of the irrigation water necessary for agriculture, sustains the flow of most streams and rivers, and helps maintain a variety of aquatic ecosystems. In 2013, the USGS will transition from a pilot-scale National Ground Water Monitoring Network data portal to a production scale portal. Additionally, the proposed budget for WaterSMART supports the development of a plan to study brackish water. The WaterSMART increase also supports analyses of the influence of water quality on water availability and water availability assessments in the Colorado River Basin, the Delaware River Basin, and the Apalachicola-*Chattahoochee-Flint* Basin.

Every year the United States faces natural and human disasters that threaten our national security and economic vitality, result in loss of life and property, and degrade human health and the environment. In domestic and global events, emergency managers and public officials look to the USGS for information about the risks hazards pose to human and natural systems and how to reduce losses and improve response. Faced with rising expectations for rapid, robust

information in response to these events, the 2013 budget request will allow the USGS to strengthen its capabilities before and after disasters strike.

Effective flood fighting requires timely river forecasts, highly reliable real-time awareness of river levels and flood flows, and geospatial understanding of the extent and timing of potential flood inundation, all of which the USGS can provide. The 2013 budget request for improving USGS Rapid Disaster Response through Preparedness and Robust Monitoring is \$10.9 million, or an increase of \$8.6 million.

As part of the hazards and disaster response focus in the 2013 budget proposal, the USGS requests a net increase of \$3.1 million for the National Streamflow Information Program (NSIP) which is proposed at \$32.5 million, of which \$5.5 million is proposed to advance innovative streamgaging and hydrologic modeling efforts. The USGS operates and maintains a nationwide network of over 7,800 streamgages that are funded primarily through two USGS programs, NSIP, and the Cooperative Water Program (CWP), which requires matching funds from partners. The increase to NSIP will help continue a demonstration effort to create flood inundation maps that show emergency managers and the general public the expected extent of a flood on a street by street basis. Also, there is a persistent need to provide temporary real-time awareness of flood levels to threatened communities that lack permanent USGS streamgages. Proposed funding supports an expansion of the recently developed, rapidly deployable streamgage, which can be installed at different locations to provide water-level information needed to monitor river heights during floods. The proposal will also aid in the development of a strategic science capability to rapidly deliver scientifically based information on the likely range of impacts from a given natural hazard or other environmental crisis, and expand development and delivery of disaster scenario products, such as the California Shakeout and ARkSTORM scenarios. These initiatives allow communities to understand hazard impacts and prepare before disaster strikes.

With appropriate safeguards, unconventional natural gas development through hydraulic fracturing will continue to play an important role in America's energy economy. The 2013 budget provides \$18.6 million, a \$13.0 million increase from 2012, to support USGS science as part of a larger \$45 million interagency research and development effort between USGS, the Department of Energy, and the U.S. Environmental Protection Agency. The goal of this effort is to address the highest priority challenges associated with safely and prudently developing unconventional natural gas resources, by better understanding and minimizing potential environmental, health, and safety impacts of hydraulic fracturing. Of this proposed increase, \$4.1 million is dedicated to water resource science efforts. This includes:

- the pilot of broad-scale research across a number of basins, such as the Marcellus and Williston Basins, including a study of the potential impact of hydraulic fracturing and gas production on water quality and the occurrence of natural gas in private water wells in the Marcellus Shale gas area;
- development of new groundwater tracer techniques to detect the movement of hydraulic fracturing fluids, develop water budgets, and characterize groundwater quality for aquifer systems of interest;
- the assembly of a geospatial data library for the aquifer systems in structural basins of interest and development a three-dimensional hydrogeologic framework for those basins; and

- the development of methods for “fingerprinting” water in areas where hydraulic fracturing is taking place to determine whether potential water contamination stems from hydraulic fracturing or associated activities.

The 2013 budget request includes \$65.5 million, a \$16.2 million increase from 2012, for monitoring, research, and development to support ecosystem management and restoration in priority ecosystems, including the Chesapeake Bay, the California Bay Delta, the Columbia River, the Everglades, the Klamath River, and the Upper Mississippi River. A funding increase of \$2.1 million for water resources efforts will enhance research for Chesapeake Bay water-quality restoration and expand efforts to identify endocrine-disrupting compounds and other contaminants entering the Bay through the Susquehanna and Potomac River basins.

The 2013 budget proposes \$62.2 million for the USGS National Water Quality Assessment Program, a \$731,000 decrease from the 2012 budget, and \$59.3 million for the Cooperative Water Program, a \$4.7 million decrease from the 2012 budget. In the current fiscally austere climate, the decreases in the NAWQA Program and Cooperative Water Program will allow the USGS to use scarce resources to address other Bureau priority issues such as those identified in WaterSMART. The 2013 budget reflects careful and tough decisions, made within a fiscally constrained environment, to prioritize science investments that address critical needs and support a resilient and robust economy, while also protecting the health and environment of the Nation. To do so, the 2013 budget builds on the core historical mission of the USGS, increases research and development funding by \$51.0 million to advance priorities in science-based resource management and protection of public health and safety from hazards, focuses existing resources on science priorities identified in the USGS Science Strategy, and makes difficult targeted program decreases.

## **Conclusion**

For more than 120 years, 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 2013 budget request reflects the Administration’s commitment to R&D and its support for USGS science as a foundation for resource management decisions, while recognizing constrained fiscal resources. This budget reflects careful and tough decisions and balances USGS research, assessment, and monitoring activities to ensure a continued ability to address a broad array of natural-resource and natural-science issues facing the Nation. 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 regarding the 2013 budget proposal for USGS water resources.