Statement of Matthew C. Larsen, Associate Director for Water U.S. Geological Survey Department of the Interior Before the House Natural Resources Committee Subcommittee on Water and Power U.S. House of Representatives March 11, 2010

Good morning, Madam Chairwoman and Members of the Subcommittee. Thank you for the opportunity to appear before you in support of the Administration's fiscal year 2011 budget proposal for the U.S. Geological Survey (USGS).

The USGS is home to a breadth of multidisciplinary science expertise, an extensive, national, on-the-ground presence, and a wealth of biologic, geologic, geographic, and hydrologic monitoring capabilities and existing data, in scales ranging from microscopic to global. USGS science brings its brightest minds and best monitoring and modeling capabilities to bear on issues that present crucial natural resource management challenges, such as water availability and use issues associated with joint-use surface-and groundwater supplies in California's Central Valley in addition to its response during and after catastrophic natural hazard events such as the recent earthquakes that have struck Haiti and Chile. The 2011 budget request reflects our ability to address a vast array of natural-resource and natural-science issues facing the Nation.

This budget provides new funding to address several important Administration and Secretarial priorities including renewable energy, climate change, water resources, and treasured landscapes. It also includes expanded resources for USGS mission priorities such as natural hazards, Landsat Data Continuity Mission (LDCM), coastal and marine spatial planning, and science support that help other Interior bureaus achieve their respective missions. Efforts identified for increased funding in 2011 are well aligned with the science priorities defined by the USGS Science Strategy. The strategy was developed by USGS scientists and professional staff and firmly positions USGS science to respond to national priorities and global trends through scientific excellence and strong collaboration with partners at the Federal, State, and local level. The 2011 budget request for the USGS is \$1.1 billion, an increase of \$21.6 million from the 2010 enacted level.

Major Changes

The Administration's 2011 budget proposal for the USGS focuses on issues of national importance and ensures the USGS maintains the expertise necessary to address the scientific and societal challenges that face us today in addition to those that will arise in the months and years ahead. The budget enhances USGS efforts in support of key Administration and Secretarial priorities such as the New Energy Frontier, Climate Change Adaptation, the WaterSMART Program, and Treasured Landscapes and

continues ongoing efforts to ensure the availability of crucial data and research results to governmental, academic, commercial, and international users. The budget reflects \$52.0 million in program increases in addition to decreases totaling \$30.3 million. Fixed costs of \$13.5 million are to be absorbed by programs across the USGS.

Within the Department's New Energy Frontier initiative, the USGS is requesting \$3.0 million to support departmental efforts to develop renewable energy sources. The USGS will expand existing efforts to evaluate the impacts of wind development on ecosystems. This additional funding will increase the capacity of the USGS to study the ecological impacts of the development of large-scale wind farms and to identify solutions to minimize risk. This investment will improve data management, collaboration with land management agencies that rely on science to inform decision-making, and the viability of information products that contribute to the understanding of the effects of wind energy development. The USGS will initiate work in the Great Plains and offshore Cape Cod that will lead toward the development of an assessment methodology that can be applied nationwide.

The potential impacts of climate change are of great concern to the Nation and the Department of the Interior land managers have a critical need for this information to adapt management approaches to changes on the landscape. In 2011, the USGS is requesting an increase of \$11.0 million to support the accelerated assessment of biological carbon sequestration and to create and staff two new DOI Climate Science Centers (CSCs) as part of the National Climate Change and Wildlife Science Center, adding to the three CSCs established in 2010. The USGS will also develop decision-support tools that enable resource managers and policymakers to cope with and adapt to a changing climate. Increased performance associated with the funding includes testing and implementation of the biological carbon sequestration assessment methodology, establishment of additional climate science centers, and continuation of collaboration with a number of universities and establishment of new partnerships.

Funding requested as part of the Secretary's WaterSMART Program allows the USGS to begin to implement the requirements of the Omnibus Public Land Management Act of 2009 to determine the quantity, quality, and use of the Nation's water supply. The USGS is requesting \$9.0 million for this effort in 2011. Increased performance due to the additional funding includes establishment of a robust effort to assess the availability of freshwater in the United States. The USGS will develop critical information to characterize water flows, storage, use, water quality, and ecological needs. This focused effort will place tools and technical information into the hands of water resource managers and other stakeholders that will allow them to evaluate water availability to address serious questions they face each and every day.

A \$3.6 million investment is requested for the USGS as part of the Secretary's Treasured Landscapes initiative. This effort supports President Obama's Executive Order (E.O.) of May 12, 2009, to have the Federal government lead the restoration of the Chesapeake Bay, the Nation's largest estuary. The E.O. directs the U.S. Environmental Protection Agency and the Departments of the Interior, Commerce (NOAA), Agriculture, Defense,

and Homeland Security to use their expertise and resources, working with partners, to protect and restore the Chesapeake Bay and its watershed.

In addition to these high-priority initiatives, the budget requests an increase of \$4.0 million to enhance USGS natural hazards efforts focused on increasing community resilience to those hazards. In 2011, the USGS will extend existing work in California communities and expanding efforts in the Pacific Northwest, and Alaska coastal communities. Increased performance from the additional funding includes improved forecasting capabilities; better decision support tools and training for emergency responders; new studies to address urban and wildland fires; vulnerability assessments for volcanoes; and improved monitoring capabilities for earthquakes and volcanoes.

The USGS budget request also includes an additional \$13.4 million for the LDCM. Requested funding will allow the USGS to implement the new requirements at the ground stations for the December 2012 launch. These additional resources will help USGS to meet the long-term goal of providing continuous streams of high-quality land remote sensing data to users.

An increase of \$4.0 million is requested for USGS coastal and marine spatial planning efforts in support of the Administration's National Ocean Policy. The USGS will actively engage with other DOI bureaus and Federal agencies in implementing the soon-to-be finalized Framework for Effective Coastal and Marine Spatial Planning (CMSP). This framework for CMSP includes implementation guidance for phased and collaborative development, including Federal, State, tribal, and other partners to develop capacity, build on existing efforts, and leverage and gain efficiencies from lessons learned. Increased performance associated with this effort would include increasing the availability of relevant geospatial data; enhancing the availability and ability to integrate water-quantity and -quality information; and developing standards to provide integrated biological information. Of this increase, \$2.0 million will be used for a pilot project in the Gulf of Mexico.

The USGS requests an increase of \$4.0 million for FWS/NPS/BLM Science Support. Funding for this effort will increase the number of USGS scientists available to work collaboratively with managers and biologists in the FWS, the BLM and the NPS to develop and carry out research projects that address scientific questions to improve bureau resource management. Funding for the FWS effort will be increased by \$1.5 million and will include science support for adaptive management and strategic and tactical research to meet the priority information needs identified by the FWS. A total of \$1.5 million will be added to programs that support the NPS. Projects would include research on climate change adaptation and ecosystem change in parks and other biological research, monitoring, and technical assistance of high priority to the NPS. Support for the BLM will be increased by \$1.0 million and will include non-forest fire research and eco-regional assessments of western systems.

Decreases identified in the USGS 2011 budget request total \$30.3 million and include the USGS contribution to Department-wide efforts to reduce IT, travel, and acquisition costs.

A reduction of \$3.5 million for the National Map Partnerships is included in this total, in addition to \$3.3 million in cost savings as requested in OMB Memorandum 09-20, *Planning for the President's Fiscal Year 2011 Budget and Performance Plans*, dated June 11, 2009. In order to provide the maximum funding possible for priority program needs, the budget absorbs \$13.5 million in fixed costs.

Budget Summary by Budget Activity

The 2011 budget includes \$153.4 million for USGS geography programs, continuing support for the USGS role in land remote sensing and geographic research. The budget for Land Remote Sensing includes an increase of \$13.4 million to implement the new requirements to the LDCM ground system. The budget for Geographic Analysis and Monitoring includes an increase of \$500,000 in support of the Secretary's WaterSMART Program and an increase of \$250,000 to enhance our efforts to increase resiliency to natural hazards. Also included in the request is a reduction of \$3.5 million to the National Geospatial Program for the National Map Partnerships.

The budget proposes \$253.8 million for USGS geology activities. This request includes increases of \$1.8 million to the Earthquake Hazards Program, \$1.5 million to the Volcano Hazards Program, and \$250,000 to the Mineral Resources Program to enhance our efforts to increase resiliency to natural hazards. An increase of \$500,000 to the National Cooperative Geologic Mapping Program is provided in support of the Secretary's WaterSMART Program. This budget provides a \$4.0 million increase to the Coastal and Marine Geology Program for coastal and marine spatial planning in support of the Administration's National Ocean Policy. The Geology budget includes a \$3.0 million increase to the Energy Resources Program as part of the New Energy Frontier initiative.

The budget for USGS water resources programs proposes \$228.8 million to support water research and monitoring activities that address important national issues such as water availability, water quality, and flood and drought hazards. The request includes increases of \$6.4 million to the Hydrologic Networks and Analysis Program and \$1.1 million to the Groundwater Resources Program to establish the WaterSMART Availability and Use Assessment as part of the Secretary's WaterSMART Program initiative.

The 2011 budget requests \$201.3 million for biological research. This proposal reflects increases to the Biological Research and Monitoring function of \$4.0 million for FWS/NPS/BLM science support, \$500,000 in support of the Secretary's WaterSMART Program, and \$200,000 to enhance our efforts to increase resiliency to natural hazards.

A total of \$72.1 million is requested for USGS global change activities. This request includes an increase of \$11.0 million for a biological carbon sequestration assessment, development of science applications/decision-support tools, and establishment of three new DOI Climate Science Centers through a competitive request for proposals. An additional \$3.6 million is included as part of the Secretary's Treasured Landscapes initiative.

The budget requests \$223.8 million for science support, enterprise information, and facilities. A technical adjustment is included in the request that will establish a Construction subactivity with funds transferred from Deferred Maintenance (\$2.5 million); will realign the Regional Executives' staff from the science disciplines to Science Support (\$8.5 million); and will realign 5 Geography FTE to Science Support related to contract and administrative support provided to the Earth Resources and Observation Center (\$284,000).

Conclusion

The USGS 2011 budget request addresses issues important to the Administration and the Department and is well aligned with the USGS Science Strategy. This budget reflects our ability to address a broad array of natural-resource and natural-science issues facing the Nation. The challenges are great, the stakes are high, and the USGS is committed to providing science in the service of our great Nation. Like no other Federal agency, the USGS possesses broad multidisciplinary science expertise, an extensive, national, on-the-ground presence, and a wealth of biologic, geologic, geographic, and hydrologic monitoring capabilities and existing data, in scales ranging from microscopic to global. The 2011 budget request will enable the USGS to build on its breadth of expertise and its long tradition of service to provide the data, long-term scientific understanding, and scientific tools needed to improve the economic and environmental health and prosperity of people and communities across the Nation and around the world.

This concludes my statement, Madam Chairwoman. I will be happy to answer any questions you and other members may have. I appreciate this opportunity to testify before you and this Subcommittee.