

STATEMENT OF  
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BEFORE THE  
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SUBCOMMITTEE ON ENERGY AND MINERALS  
U.S. HOUSE OF REPRESENTATIVES  
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Good morning, Mr. Chairman and Members of the Subcommittee. Thank you for the opportunity to present the Administration's proposal for the budget of the U.S. Geological Survey (USGS) for fiscal year (FY) 2008. This budget preserves the Survey's scientific excellence in our core areas of biologic, geographic, geologic, and water resources research. The FY 2008 budget request for USGS is \$975 million in current appropriations.

With enactment of the FY 2007 Joint Resolution, we now have a full year appropriation of \$977.7 million, not including additional funds that will be provided for 50 percent of the January 2007 pay raise. Based on direction in the Joint Resolution we are preparing a detailed operating plan for FY 2007. We are not at liberty to disclose the details of the operating plans until they are approved and submitted to Congress on March 17. At that time we will be able to provide comparisons at the program level with the 2008 budget request.

The comparisons in our 2008 budget are with the third 2007 continuing resolution, which was in effect through February 15. Throughout this testimony the comparisons will be on that basis.

The FY 2008 Administration's budget proposal continues to focus USGS research on issues of societal relevance, while reflecting the President's commitment to reduce the deficit and balance the Federal budget by 2012. It ensures that USGS maintains the expertise to help address the scientific and societal challenges that will arise in the months and years ahead. The budget strengthens USGS efforts in support of key Administration priorities, such as the Healthy Lands Initiative and the Ocean Action Plan, and it maintains strong efforts to ensure continued availability of Earth observation data to government, academic, commercial, and international users, to reduce the human and environmental costs of natural disasters, and to provide the fundamental research and monitoring needed to address increasing concerns about climate change. The budget reflects \$16.3 million in program increases and \$24.0 million in increases for fixed costs, which are offset by \$10.1 million in reductions to lower priority programs.

The budget proposes an increase of \$5.0 million to fund an expanded role for USGS in the Green River Basin of Wyoming, a priority site for the Department's Healthy Lands Initiative. Through this Initiative, in partnership with the Bureau of Land Management and the Fish and Wildlife Service, USGS will provide the essential long-term science to help protect and restore the living resources of the basin while facilitating responsible development of the energy resources. The landscape and ecosystems of the Green River Basin include some of the highest quality wildlife habitat in the Intermountain West—but these landscapes are changing rapidly in response to

recent energy resource development and increasing population pressures. The sagebrush, mountain shrub, aspen, and riparian habitats of the basin support significant numbers of plants and animals, including species that are candidates for Federal listing under the Endangered Species Act or species that are already listed as threatened or endangered.

The budget increase for the Healthy Lands Initiative builds on past and present scientific studies and assessments, including the recently completed energy assessment of the basin, land use and land cover studies, vegetation mapping, and long-term baseline water monitoring, and will enable USGS to investigate the environmental impacts of natural events and land-use change in the basin. Working with partners, USGS will assess the health of habitats and resources; build the geospatial framework for sharing information; and monitor changes in landscapes to ensure the long-term health and sustainability of the living resources. Our research and monitoring will inform our partners as they develop habitat restoration strategies that benefit species of concern. For example, USGS will integrate landscape-scale species and habitat science with energy assessments for the ecoregional analysis of terrestrial and aquatic ecosystems within the basin, determine the distribution of key species such as sage grouse, assess landscape and habitat conditions, identify unique ecological and critical habitats in relation to energy resources, assess priority conservation targets, and test the response of species to human disturbance. USGS inventories and monitoring of species and habitats, water-resource monitoring, and syntheses of habitat and energy information are critical to inform land- and resource-management decisions and restoration plans that ensure the year-round vitality of the diversity of habitats on which wildlife depends.

The proposed budget includes increases in both geology and water to address priorities in the U.S. Ocean Action Plan. The Coastal and Marine Geology program will receive \$1.5 million for collaborative efforts with Federal, regional, State, and local partners to provide coastal resource managers, coastal zone planners, and emergency and public health officials with data and forecasts of changing coastal conditions, enabling them to anticipate and prepare for extreme weather events, natural disasters, and human influences on coastal environments and communities. The work will begin in pilot regions chosen to reflect a range of natural settings and human needs; candidate regions include the northern Gulf of Mexico, Southern California, and the Southeast/Mid-Atlantic. USGS will begin initial efforts in at least three pilot regions in FY 2008.

The budget also includes an increase of \$1.5 million in the Hydrologic Networks and Analysis program to implement one of the chief recommendations of the U.S. Commission on Ocean Policy and the President's Ocean Action Plan: the creation of an interagency National Water Quality Monitoring Network. The network will integrate monitoring of watersheds, coastal waters, and oceans to provide regional and national data on the quality of surface and ground water in tributaries, wetlands, coastal waters, the Great Lakes, and coastal beach areas. Although many monitoring networks already exist and will continue, data from different networks may not be comparable. The new network will be unique in its ability to combine multidisciplinary data on water quality from many sources, ranging from upland tributaries to estuarine and offshore waters, and the data will be accessible through a single Web-based portal. The plan for the network was developed cooperatively with 40 different organizations at the Federal, regional, State, and local levels to ensure that it meets the needs of a wide range of users, and it has been approved by members of the Advisory Committee on Water Information and by the Council on

Environmental Quality, National Science and Technology Council. In FY 2007, USGS is working with other agencies on pilot studies to inventory existing monitoring assets, identify gaps in data collection, refine the network's observational and data sharing requirements, and identify next steps for network implementation. FY 2008 activities supported by the proposed increase will build on pilot study results to establish demonstration projects that will show the feasibility of the network, refine observational parameters and temporal and geographic sampling frequencies and scales, and develop methods for sharing, summarizing, and reporting the data.

These linked activities will further the broad objectives of the Ocean Action Plan, supporting the development of integrated mapping, observations, visualization techniques, forecast models, and decision-support tools. Within 5 years, USGS and its partners will provide managers and officials in the pilot study areas with decision-support tools to help policy makers anticipate and prepare for coastal ecosystem and community responses to extreme weather events, natural disasters, and human influences.

Natural hazards continue to threaten lives and property across the United States. Each year, natural disasters in the United States result in hundreds of lives lost and cost billions of dollars in disaster aid, disrupted commerce, and the destruction of public and private property. It is the mission of USGS to provide scientific research and analysis to help citizens, emergency managers, and policy makers decide how to prepare for and react to the natural hazards we face. By collecting long-term data and information on past and present hazard events, by providing continuous monitoring and data collection, and by developing tools and products to aid communities in creating emergency preparedness and recovery plans, USGS can mitigate the potential impacts, saving lives and property.

The FY 2007 budget request reflected an increase of \$2.2 million to support USGS hazards research and monitoring, supported by an additional \$3.5 million from redirection of priorities within hazards-related programs. The FY 2008 budget request builds on last year's request and seeks an additional \$1.3 million for the Natural Hazards Initiative. Within the \$1.5 million increase for the Ocean Action Plan in the Coastal and Marine Geology program, \$1.0 million will address hazard related programs, as discussed above. In addition, the budget seeks an additional \$250,000 for two major activities as part of the Natural Hazards Initiative. An increase of \$100,000 will be used to fill critical gaps in coverage in Southern California, which has one of the Nation's highest potentials for extreme catastrophic losses due to natural hazards, by installing new streamgages with the ability to transmit data in real time via satellite telemetry. These data are used in flood, landslide, and debris-flow forecasting and warning. An increase of \$150,000 will enhance storm-surge monitoring in hurricane-prone areas to provide the National Weather Service and emergency managers with visualization of storm surge for use in conducting emergency response activities during a hurricane. The region bordering the Gulf of Mexico is particularly vulnerable to the impacts of hurricanes, and the Natural Hazards Initiative builds on current USGS activities to improve the ability to forecast and respond to hurricane impacts to this most vulnerable of coastal settings. These impacts include flooding from coastal storm surge and inland rivers; damage to physical features such as barrier islands, mainland beaches, wetlands and estuaries that provide the first line of defense when a hurricane strikes; and, as the hurricane moves inland, catastrophic landslides in mountainous areas. Scientific information and understanding are required to assess the physical, ecological, and socioeconomic

vulnerability of these coastal settings; predict the potential impacts of storm events; provide emergency responders with timely and accurate information needed to direct critical resources for activities such as evacuations, search and rescue missions, and damage assessments; assess the effectiveness of post-storm restoration and enhancement activities (including those in response to Hurricanes Katrina and Rita) in reducing future vulnerability; and provide coastal zone managers with rapid and reliable assessments of the impacts of future storms and the resulting changes in coastal vulnerability to future hurricanes.

The potential impacts of climate change are of great concern to the Department, the Congress, and the Nation. With our ability to conduct national, regional and local research across the Nation and our ability to provide necessary science information across multiple scientific disciplines, times, and scales, USGS has an important niche in the climate science community that no other public or private science agency can fill. The FY 2008 budget continues the FY 2007 base funding level of \$26 million for research and monitoring related to climate change. USGS will use this funding to monitor, model and understand ecological and physical responses to changing climate, such as

- Permafrost thawing in the sub-Arctic Yukon Basin and the Arctic regions of Alaska,
- Drought monitoring in arid parts of the western United States;
- Migration of plant communities and proliferation of invasive species in response to climate change;
- Changes in snowpack and stream runoff in mountainous areas;
- Retreat of alpine glaciers;
- Coastal wetlands loss related to subsidence and sea-level rise;
- The interplay between climate and changes in land use and land cover; and
- Wildland fire across landscapes.

These observations and related USGS research are essential components for climate models, especially those that deal with the physical causes of climate change and impacts to the terrestrial, freshwater, and marine ecosystems from changing climate.

The FY 2008 budget proposes \$222.1 million for USGS geology activities, which is \$4.7 million above the FY 2007 CR level. The proposal includes \$1.5 million of the requested \$3 million for the Ocean Action Plan initiative, described earlier. It also includes \$5.8 million in increases for fixed costs and continues funding for most assessments of geologic hazards, landscapes, and resources as proposed in FY 2007.

The FY 2008 budget proposes a decrease of \$2.6 million for the Mineral Resources Program. This program conducts basic research in ore deposits, geochemistry, and geophysics and applied research in national and international mineral assessments that are used by States, local governments, industry, and academia, in addition to many Federal agencies. The Administration is focusing its efforts in mineral resource assessments and research on projects that support the needs of Federal land management programs. The proposed budget will permit the program to conduct one site-specific mineral resource project for Federal land management agencies in the lower 48 States, provide regional-scale geologic data and mineral resource assessments in Alaska, complete collection of national-scale data characterizing earth materials, collect data on

production and utilization of 70 to 80 mineral commodities, and manage four national-scale long-term databases.

The FY 2008 budget requests \$181.1 million for biological research, which is \$8.5 million above the FY 2007 CR level. The proposal reflects \$4.5 million in increases for fixed costs and \$5 million for increases for the Healthy Lands Initiative in the Green River Basin of Wyoming, as described earlier. Also included in this funding level are decreases of \$950,000 for lower priority studies in two programs: the wildlife program (\$300,000) and contaminants program (\$650,000).

The FY 2008 budget includes \$75 million for Geography, demonstrating continued support for the USGS role in land remote sensing and geographic research. The request reflects a net decrease of \$1.7 million below the FY 2007 CR level but an increase of roughly \$15 million compared to FY 2006 enacted funding. The FY 2008 budget includes funds to ensure continued availability of Earth observation data to government, academic, commercial, and international users. The budget continues to provide for the operations and maintenance of Landsats 5 and 7. In addition, the FY 2008 budget provides \$24 million for the Landsat Data Continuity Mission (LDCM) to develop the ground data processing and flight operations systems in preparation for the next Landsat satellite, scheduled for launch in 2011. USGS and NASA are working in partnership to produce an integrated Landsat ground and space system. LDCM will ensure that the United States maintains its global technological and scientific leadership in land imaging operations and preserves the Nation's commitment to continuous observation and analysis of our dynamic planet. Decreases to the Geography budget include \$2.0 million in the Priority Ecosystem Science program and \$850,000 for further development of the Commercial Remote Sensing Space Policy Imagery-Derived Requirements.

The FY 2008 budget for the USGS water resources discipline proposes \$212.5 million to continue work on issues related to water availability, water quality, and flood and drought hazards. This budget proposal includes an increase of \$1.4 million for streamgaging activities through the National Streamflow Information Program (NSIP), allowing USGS to reactivate real-time streamgages and continue operating streamgages at high-priority sites that might otherwise be lost through lack of partner funding. The increase will also enable USGS to invest in technological improvements that will make the entire network more cost-efficient in the long term. USGS currently operates a network of about 7,400 streamgages nationwide. The network provides near-real-time data to other Federal agencies, States, and local communities for activities such as protecting life and property from floods; water resources assessment, planning, and management; habitat protection; recreation safety and enjoyment; and engineering design for planning our Nation's infrastructure. The FY 2008 budget also includes increases of \$1.5 million for the Ocean Action Plan and \$250,000 for the hazards initiative, as described earlier.

The FY 2008 budget proposes a decrease of \$2.2 million in cooperative water studies that will result in 13 fewer interpretive studies to be conducted in FY 2008 than in FY 2006. Like the FY 2007 CR level and FY 2007 budget request, the FY 2008 budget does not include \$6.4 million for the 54 State Water Resources Research Institutes.

The FY 2008 budget requests \$284.3 million for science support, enterprise information, and facilities, which is \$10.3 million above the FY 2007 request. This funding level includes an increase of \$4.7 million for critical health and safety repairs and rehabilitation of facilities at the

Patuxent Wildlife Research Center, a facility that is shared with the Fish and Wildlife Service (FWS) at the Patuxent Research Refuge. The USGS and FWS funds will, in combination, be used to replace and repair the water, sewer, and electrical utility infrastructure and associated systems at Patuxent. The facility is a nationally recognized center for research on endangered whooping cranes and other biological issues. The increase will enable USGS, working in cooperation with the Fish and Wildlife Service, to replace outdated utility systems. The budget request also reflects a decrease for enterprise information of \$1.5 million achieved through economies of IT centralization, consolidation of software and hardware purchases, and workforce planning.

In the years ahead, our Nation must deal with national and global trends that have major natural-science implications. USGS, with its worldwide reputation for excellent, objective, unbiased science, is uniquely suited to address the broad scope of natural-resource and natural-science issues facing the Nation, employing scientific tools at scales ranging from microscopic to global. The FY 2008 budget request will enable 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 help the economy remain strong, the environment remain healthy, and the quality of life in the United States remain high now and into the future.

This concludes my statement, Mr. Chairman. Thank you for the opportunity to testify.