USGS
science for a changing world

Performance and Accountability Report
Fiscal Year 2008

U.S. Department of the Interior
U.S. Geological Survey

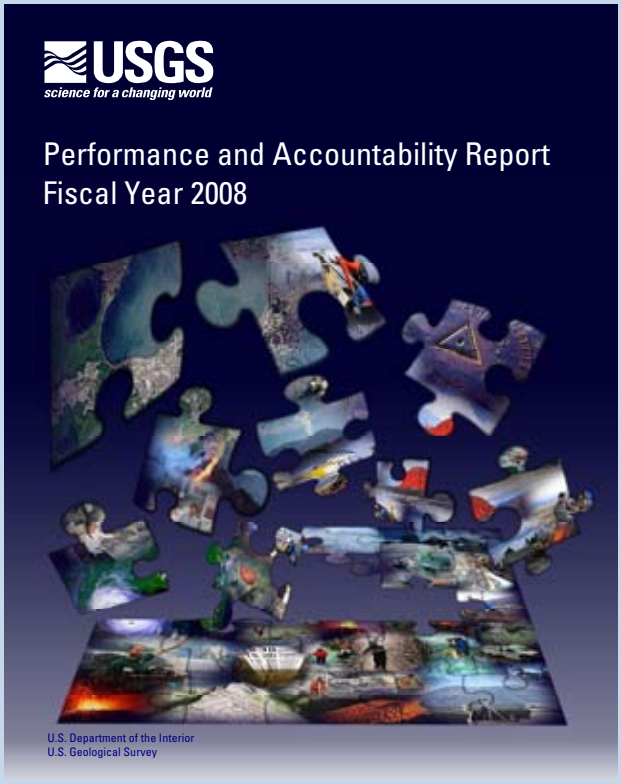
On the Cover

The front cover portrays the USGS at work on current science topics and national issues in the form of puzzle pieces, with the pieces falling into place to form an image of the USGS delivering mission -- the"finished picture" with all puzzle pieces in place is on the back cover.

The USGS provides sound science that matters to America, whether:

- **working with rescue and recovery efforts or investigating the coastal impacts after Hurricanes Gustav and Ike;**
- **monitoring the melting of sea ice and glaciers and the subsequent effects on the population of Arctic wildlife;**
- **creating a geologic map of the Circum-Polar region;**
- **monitoring for avian influenza;**
- **planning the "Great Southern California Shakeout" which will highlight the importance of emergency preparedness and response in southern California;**
- **conducting ground-water measurements to assess national and regional trends in groundwater quality;**
- **assessing 26 years of wildland fire impacts;**
- **making 35-years of Landsat satellite image data available over the Internet for free to support planning, research, and assessment activities to inform decisionmaking.**

As an unbiased, multi-disciplinary science organization that focuses on biology, geography, geology, geospatial information, and water, we are dedicated to the timely, relevant, and impartial study of the landscape, our natural resources, and natural hazards.



Performance and Accountability Report

Limited copies of the FY2008 Performance and Accountability Report were printed in black and white.

The FY2008 Performance and Accountability Report is available at: http://www.doi.gov/pfm/bur_annual_rpt/index.html.

How to Read This Report: From Mission to Measurement

The U.S. Geological Survey (USGS) FY2008 Performance and Accountability Report (PAR) will reach many people who have specific needs for the information it contains. We have designed our presentation to serve multiple audiences, with varied approaches, points of view, and levels of interest.

Our PAR contains an introduction, three sections, and an appendix. Combined, these elements provide an accurate and thorough accounting of the USGS stewardship of critical resources and services to the American people.

The Introduction contains a letter from our Director highlighting our mission, accomplishments, reliability of financial and performance data, and Federal Manager's Financial Integrity Act (FMFIA) assurances, followed by a depiction of the bureau at a glance.

Section I: Management's Discussion and Analysis is a high-level overview of the USGS' performance in FY2008. It is designed for the public, legislators, officials from Federal, State, and local governments, and other interested parties.

After a brief discussion of our mission and organizational structure, Section I summarizes our performance for the year by highlighting results of our most important performance measures and discusses our procedures to ensure their relevance and reliability, along with a description of difficulties experienced in measuring performance.

Section I includes a brief discussion of our financial statements, key financial related measures, and stewardship information.

In addition, Section I presents the USGS' compliance with legal and regulatory requirements, such as the FMFIA, Federal Financial Management Improvement Act, and the President's Management Agenda.

At the end of Section I, we share forward-looking information on the current and future challenges facing the USGS.

Section II: Performance Data and Analysis presents an evaluation of our performance budget, the USGS' performance results in detail, and program evaluation and procedures undertaken to validate and verify our performance results.

This will be most useful to Congressional members and staff, program examiners with the Office of Management and Budget, analysts with the Office of the Inspector General, the Government Accountability Office, and interested citizens and customers.

Section III: Financial Information will interest anyone who is concerned with tracking the bureau's financial performance.

This section presents financial statements, footnotes, required supplemental information, and required supplemental stewardship information. It also contains an assessment of our consolidated financial statements by an independent certified public accounting firm.

The objective of a financial statement audit is to determine whether the consolidated financial statements are free of material misstatement. It examines, on a test basis, evidence supporting the amounts and disclosures in the consolidated financial statements. An audit also includes an assessment of the accounting principles used and significant estimates made by management, as well as an evaluation of the overall consolidated financial statement presentation.

The Appendix contains a list of acronyms.

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SECTION III – Financial Information

Appendix

Message from the Director

As a planet and a Nation, we face unprecedented challenges related to: increasing loss of critical and unique ecosystems, increasing effects of climate change, increasing demand for limited energy and mineral resources, increasing vulnerability to natural hazards, increasing effects of emerging diseases on wildlife and human health and growing needs for clean water, all of which impact our health and safety, national security, economy, and quality of life.

At the USGS, our goal is to provide scientific information and tools to help decisionmakers at all levels anticipate and address these challenges. Our diversity of scientific expertise enables us to work at national, regional, and local scales and provide timely, unbiased science information needed to build and maintain a sustainable society.

In 2007, the USGS issued a new science strategy, "Facing Tomorrow's Challenges—U.S. Geological Survey Science in the Decade 2007–2017." This strategy is helping us to better target our science toward some of the Nation's most pressing natural-science issues. Under the guidance of this report, we are focusing on six strategic science directions:

- understanding ecosystems and predicting ecosystem change;
- climate variability and change;
- energy and minerals for America's future;
- a national hazards risk and resilience assessment program;
- the role of environment and wildlife in human health; and
- a water census in the United States.

This Performance and Accountability Report for fiscal year (FY) 2008 highlights examples of USGS science that fulfill our science strategy and mission and demonstrate the extent and value of USGS science to the Nation. The following are just a few of our many accomplishments.

Understanding Impacts of a Changing Climate
Climate change and its impacts are a key concern for the world. For many of our external partners at Federal, State and local levels, there is an urgent need for a better understanding of the effects of current and future climate changes on the landscape in order to develop effective strategies for adapting to and mitigating them. During FY 2008, the USGS began to build a comprehensive National Climate Effects Science and Monitoring Network that will track environmental indicators linked to climate change causes and effects and facilitate adaptation and mitigation by resource managers. Additionally, the USGS began efforts to establish a "virtual center" on National Climate Change and Wildlife to better understand the impacts of climate change on wildlife. Also in 2008, the USGS began to establish methodologies for a geologic assessment of our national capacity to store and sequester carbon dioxide in geologic structures.

Energy and Minerals for American's Future
As demand for natural resources has continued to grow, so too has demand for USGS' natural resource assessments. In 2008, the USGS delivered several new assessments on potential energy sources, including the first ever publically available circum-Arctic oil and gas assessment, a new oil assessment of the Bakken Formation in North Dakota and Montana, the first assessment of the Nation's geothermal resources in more than 30 years, and a geophysical and photographic survey to locate potential sources of natural resources in Afghanistan. These and other assessments are helping us to build a better understanding not only of the United States' but of the world's energy portfolio.

Understanding Ecosystem Changes
The USGS worked with several Department of the Interior (DOI) bureaus for the 2008 Colorado River high-flow experiment. The goal of the experiment was to better understand whether higher flows can be used to rebuild eroded beaches downstream of Glen Canyon Dam by moving sand accumulated in the riverbed onto sandbars. Grand Canyon sandbars provide habitat for wildlife, serve as beaches for campers, and help to protect archaeological sites. High flows also create backwaters used by young native fishes, particularly endangered humpback chub. For about 60 hours, the DOI released up to 41,500 cubic feet of water per second from the Glen Canyon Dam, a rate that would fill the Empire State Building within twenty minutes. The USGS monitored the effects not only during and immediately after the flow, but for months following the release. The new data is helping us to learn more about whether high flows can be used to boost the ecosystems and improve important natural, cultural, and recreational resources in Glen and Grand canyons.

Monitoring and Preparing for Natural Hazards
As the United States weathered hurricanes, floods, fires, earthquakes, and volcanoes, the USGS provided critical information to help protect lives and property and to guide recovery and conservation efforts. As Hurricanes bore down on the Gulf Coast, the USGS had gauges and monitoring efforts in place to help us to better understand the full impact that these storms have on our landscape. When Kasatochi volcano in Alaska's Aleutian Islands went from quiet to explosive within a 24-hour period, USGS seismic networks installed on nearby volcanoes provided early warning of the imminent eruption which helped our colleagues from the U.S. Fish and Wildlife Service safely evacuate the area. Building on our multi-hazards efforts, the USGS has been a key player in the planning and development of the Great Southern California "ShakeOut"—the largest earthquake drill in U.S. history. In preparing for this event, the USGS helped to develop the most comprehensive analysis ever of the potential effects of a major Southern California earthquake.

Environmental and Wildlife Impacts on Human Health
In 2008, the USGS continued to monitor and provide science needed to develop solutions for diseases transmitted to humans by wildlife and vectors such as mosquitoes, as well as health concerns related to water contamination, airborne contaminants, and contaminants that accumulate in the food chain, such as mercury. The USGS has continued monitoring birds for avian influenza and strengthened partnerships around the world to improve the tracking of this disease. A study of the Great Lakes revealed that beach sand contains high concentrations of E. coli and other bacteria, often greatly exceeding the concentration in beach water. The USGS and the University of Wisconsin at Madison created the Global Wildlife Disease News Map, which uses digital pushpins to show the location of news stories of wildlife diseases such as West Nile virus, avian influenza, chronic wasting disease, and monkeypox, allowing users to browse the latest reports of nearly 50 diseases and other health conditions by geographic location.

Competing Demands for Water
Decisionmakers working on water disputes in the Southeast sought out USGS science to guide their negotiations. In two water basins in the Southeast, many demands are competing for limited water resources, including demands for public drinking water, power generation, recreation, and aquatic ecological needs. Using streamgaging and biological information in the Flint River basin, the USGS is developing linked watershed and ecological models to help water resource managers understand the resources available, balance the demands of users, and sustain a healthy aquatic ecosystem.

In this report, you will find that the USGS also had many successes in the areas of leadership and business management. To better integrate our science to address the complex challenges we face, in 2008 the USGS reorganized its regional leadership. This new leadership structure helps us to bring all of our scientific expertise together to address challenging issues. In 2008, the USGS used the results of a survey taken in 2007 to improve our leadership training. A more comprehensive supervisory development program was designed, and a major component

on “transitioning into a leadership role” was added. The USGS also developed standardized financial training that will be offered on an annual basis to all parts of the Bureau.

To improve our energy efficiency and reduce our environmental impact, the USGS conducted an assessment to increase the sharing of vehicles and the use of alternative fuels. At the USGS headquarters, measures to reduce energy consumption included the installation of a high-efficiency air compressor system, reflective white roofing, energy-efficient cafeteria equipment, and photovoltaic low-flow faucets.

As you read this report, you will see the bigger picture of our accomplishments from the perspective of our customers. This year, the USGS met all three of the representative measures that the Department of the Interior identified for the USGS. For example, regarding our End Outcome Goal of improving the understanding of national ecosystems and resources through integrated interdisciplinary assessment, surveys showed that more than 90 percent of our targeted science products were used by partners for making land or resource management decisions.

The accomplishments in this report show the many ways that we fulfilled our mission in 2008. In 2009, the USGS will continue to provide our leaders with the scientific data, tools, and expertise they need to address the natural-science challenges we face not only as a Nation, but as a planet.

Mark D. Myers
Director

The Bureau

History and Enabling Legislation

The USGS, a bureau within the Department of the Interior (Interior), was created by federal legislation (43 U.S.C. 31 (a)) for the "classification of the public lands, and examination of the geological structure, mineral resources, and products of the national domain."

Mission

The USGS serves the Nation by providing reliable scientific information to describe and understand the Earth; minimize loss of life and property from natural disasters; manage water, biological, energy, and mineral resources; and enhance and protect our quality of life.

Strategic Goals

Resource Protection:	Protect the Nation's natural, cultural, and heritage resources
Resource Use:	Manage resources to promote responsible use and sustain a dynamic economy
Serving Communities:	Safeguard lives, property and assets, advance scientific knowledge, and improve the quality of life for communities we serve

Organization

Regions:	Eastern, Central, and Western
Scientific Disciplines:	Biology, Geology, Geography, and Water
Support Entities:	Geospatial Information, Facilities, and Science Support

Employees

The USGS has scientists, technicians, and support staff in every State and several foreign countries with a total of approximately 8,800 employees.

Budget

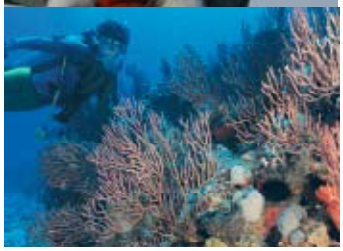
The Bureau's FY2008 budget, including transferred and supplemental appropriations, was $1 billion.

Internet

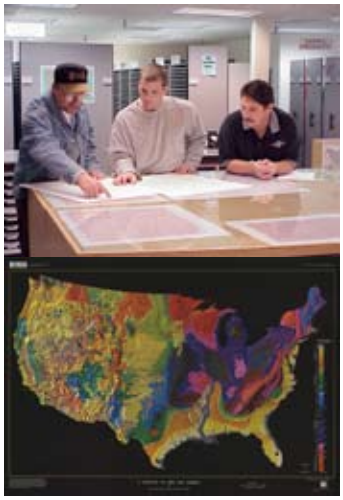
The Bureau's Internet address is http://www.usgs.gov.

at a Glance

Biology



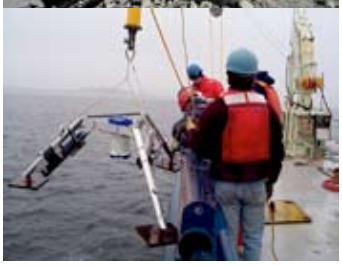
Geography



Programs

- Biological Informatics
- Coastal and Marine Geology
- Contaminant Biology
- Cooperative Research Units - Biology
- Cooperative Water
- Earth Surface Dynamics
- Earthquake Hazards
- Energy Resources
- Enterprise Information
- Facilities
- Fisheries: Aquatic and Endangered Resources
- Geographic Analysis and Monitoring
- Geomagnetism
- Global Seismographic Network
- Global Change
- Ground Water Resources
- Hydrologic Networks and Analysis
- Hydrologic Research and Development
- Invasive Species
- Land Remote Sensing
- Landslide Hazards
- Mineral Resources
- National Cooperative Geologic Mapping
- National Geospatial
- National Streamflow Information
- National Water-Quality Assessment
- Priority Ecosystems Science
- Science Support
- Status and Trends of Biological Resources
- Terrestrial, Freshwater, and Marine Ecosystems
- Toxic Substances Hydrology
- Volcano Hazards
- Water Resources Research Act
- Wildlife and Terrestrial Resources

Geology



Water

USGS seismic site.

Section I

Management's Discussion and Analysis

Contents

Who We Are and What We Do

The USGS serves the Nation as an independent fact-finding agency that collects and analyzes natural resource data and provides scientific understanding about conditions, issues, and problems. The USGS is the science provider of choice for information and understanding to help resolve complex natural resource problems across the Nation and around the world.

The USGS was created by an act of Congress in 1879. When the USGS was established, the Federal government held title to more than 1.2 billion acres of land, nearly all of it west of the Mississippi River, and only 200 million acres of this land had been surveyed. John Wesley Powell, who led one of the great western surveys that preceded the creation of the USGS and who later served as the second USGS Director, suggested that very little of the remaining public land was suitable for conventional farming and that only a small fraction of the arid land was irrigable using known resources. Powell proposed radical changes in the land system, including organization of irrigation and pasturage districts, to improve management of water and natural resources by sociopolitical institutions, based on natural science. One hundred and twenty-eight years later, the USGS continues to provide the scientific foundation to ensure the best planning and the best decisionmaking.

Today, the USGS is sought out by thousands of partners and customers for its natural science expertise and its vast earth and biological data holdings, and is the only integrated natural resources research bureau in the Federal government. The value of the USGS to the Nation rests on its ability to carry out studies on a national scale and to sustain long-term monitoring and assessment of natural resources. Because it has no regulatory or managerial mandate, the USGS provides impartial science that serves the needs of our changing world. Its diversity of scientific expertise enables the USGS to carry out large-scale, multi-disciplinary investigations that build the base of knowledge about the Earth. In turn, decisionmakers at all levels of government and citizens in all walks of life have information available to them for their needs to address pressing societal issues.

The thousands of scientists, technicians, and support staff of the USGS are located in nearly 400 offices in every State and in several foreign countries. With an annual budget of approximately $1 billion, the USGS leverages its resources and expertise in partnership with more than 2,000 agencies of Federal, State, local, and Tribal governments; the academic community; non-governmental organizations; and the private sector. Field investigations, direct observations of natural science processes and phenomena, and monitoring and data collection are the scientific hallmarks of the USGS.

Vision

USGS has become a world leader in the natural sciences thanks to our scientific excellence and responsiveness to society's needs.

The USGS is proud of its outstanding history of public service and staying at the forefront of advances in understanding the Earth, its processes, and its resources. USGS scientists pioneered hydrologic techniques for gaging the discharge in rivers and streams and modeling the flow of complex ground-water systems. Innovative ventures with the private sector have given the world access to digital images of neighborhoods and communities in one of the largest data sets ever made available online.

Modern-day understanding of the formation and location of energy and mineral resource deposits is rooted in fundamental scientific breakthroughs by USGS scientists. USGS biologists revolutionized thinking about managing wildlife resources, providing a sound scientific basis for waterfowl conservation and recreational hunting to work in tandem as adaptive management, not as conflicting interests. Advances in seismology are making early warnings of earthquakes a reality that will give the needed alert time to save lives. The future of the global community presents unprecedented opportunities for the science of the USGS to continue to make substantive and life-enhancing contributions to the betterment of the Nation and the world.

The USGS addresses both national program priorities and local science needs on the landscape through a matrix-management approach. (See organizational chart below.)

Regional Directors, Regional Executives, and Regional Science Coordinators are deployed across the Nation, bringing bureau leadership and programs closer to customers and their issues. Together, they ensure the quality of our science and its relevance to the needs of land and resource management decisionmakers. National programs are overseen by Associate Directors for each discipline and administered by Program Coordinators at Headquarters in Reston, Virginia.

Together, they offer holistic science solutions by bringing to bear the expertise of scientists from multiple disciplines, integrating science to confront the complexity of a continually changing world.

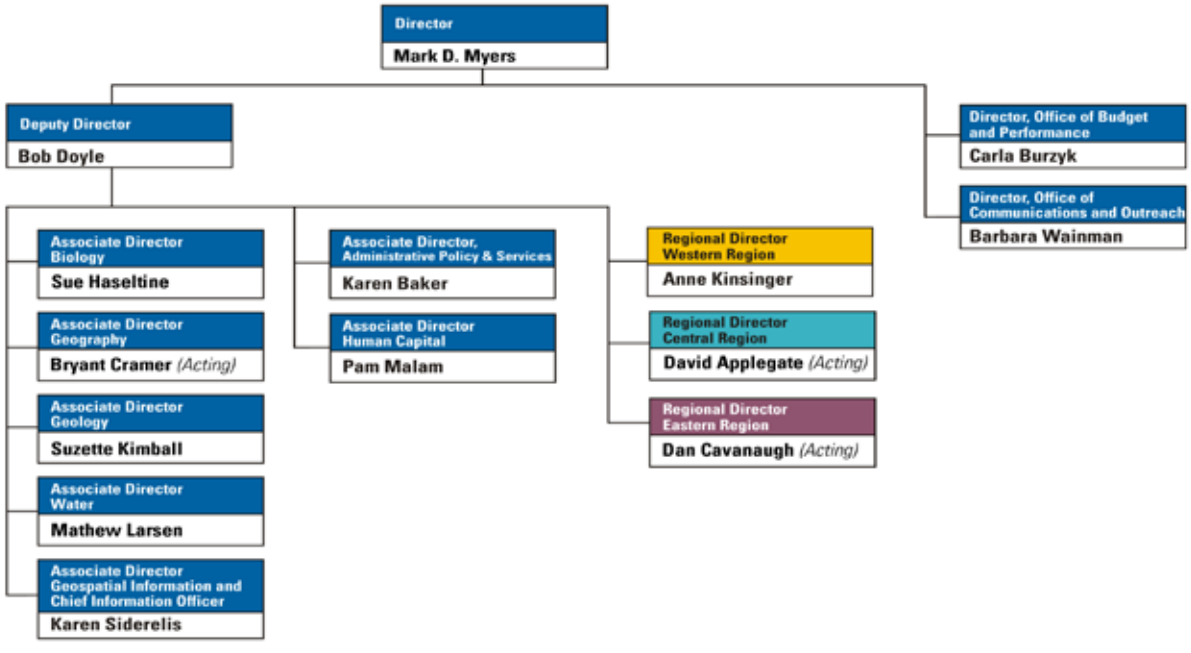
USGS resources and science benefit not only the immediate needs of partners and customers but also the Nation as a whole through application of the results to similar issues across the country and into the future.

Strategic Direction

The USGS will combine and enhance our diverse programs, capabilities, and talents and increase customer involvement to strengthen our science leadership and contribution to the resolution of complex issues.

USGS
science for a changing world

U.S. Geological Survey



September 2008

How We Are Organized

The USGS has major field centers for the three regions in Reston, Virginia (Eastern), Denver, Colorado (Central), and Menlo Park, California (Western). The USGS rents 4.2 million square feet of space in about 181 GSA buildings nationwide and owns 34 installations with 1.2 million square feet of space in 263 owned buildings. The USGS operations include:

- a global earthquake monitoring network consisting of 150 stations distributed worldwide, contributing data in real-time to the USGS National Earthquake Information Center in Golden, Colorado, to support rapid earthquake assessments, impact and loss estimates, and scientific research supporting earthquake hazard reduction;
- 14 geomagnetic observatories;
- a landslide network and the National Landslide Information Center;
- a volcano hazards network and volcano observatories in five States to monitor 52 U.S. volcanoes;
- approximately 7,000 streamgages and water quality monitors, the National Water Quality Laboratory, and the Hydrologic Instrumentation Facility;
- affiliation with 40 Cooperative Research Units and 54 State Water Resources Research Institutes.
- Map products and services that provide 24/7 online accessibility (when DOI's ESN is operational) to over 187 gigabytes of geospatial data in The National Map, over 55,000 unique hard-copy topographic maps that cover all 50 States, U.S. territories and Federated states, more than 25,000 electronically accessible scientific and technical publications, and an average of over 20 million SPAM and virus-infected messages blocked monthly by USGS IT security operations.

The USGS also owns 8 research vessels, all of which are at least 45 feet in length, have accommodations for overnight use by more than one person, and are manned by licensed Captains. Many of these vessels also contain operating laboratories.

The Eastern Region is situated east of the Mississippi River and is composed of 175 sites in 26 States, the District of Columbia, the Commonwealth of Puerto Rico, and the U.S. Virgin Islands and has a combined workforce of approximately 2,549 individuals (to include students, volunteers, and contractors) distributed across duty stations throughout the region.

The Central Region is composed of 15 States between the Mississippi River and the western slope of the Rocky Mountains. Approximately 2,050 employees and 900 onsite contractors are distributed in 76 cities and 21 field offices across the Central region.

The Western Region is composed of 9 Western States, Guam, American Samoa, and the Commonwealth of the Mariana Islands. Approximately 2,281 employees are distributed in 33 cities and 64 field offices across the Western region.

The Headquarters location in Reston, Virginia, is within the District of Columbia metropolitan area and has approximately 1,908 employees stationed in Reston and 41 employees in several foreign countries.

Realignment

The USGS Science Strategy identifies needs for structural change in implementation strategies — an examination of the best organizational structure both to continue to meet our science responsibilities and to more effectively conduct the ecosystem-based science required to meet the challenges of the 21st Century. A long-term evaluation had been underway to assess our traditional organizational structure, which is primarily discipline-based. After careful evaluation, in 2008 the USGS regional structure consisting of regional directors and discipline-specific regional executives was modified, and functions and responsibilities reallocated in order to facilitate cross-discipline science, allow closer collaboration with our customers, and provide a simplified coordination process via a single USGS point of contact for all science disciplines. The three existing regions — Central, Eastern, and Western — were maintained and geographic areas within each region were created to enhance the multidiscipline science.

The Focus of Our Science

The USGS vision, mission, and strategic direction focus on responsiveness and customer service, underscoring the application of science to customer, partner, and other stakeholder needs; directing the combined expertise of the bureau's scientific disciplines; and

defining its commitment to pursuing an integrated approach to providing science for a changing world.

Information— about natural hazards, resources, and the environment— is the key to understanding the Earth. USGS science provides comprehensive, high-quality, and timely scientific information to decisionmakers and the public. The information holdings of the USGS offer an amazing gateway to rich data bases, manipulatable maps, newly acquired satellite images, real-time information, and a wealth of reports spanning more than a century of science. The growing global population lives in an information age that is becoming incredibly complex. Scientific information is increasingly essential to an ever-widening— and demanding— customer base.

The challenges associated with observing, understanding, interpreting, and managing natural resources require broad thinking and concerted action. In response to this need, in 2007, the USGS developed a Science Strategy USGS Circular 1309, Facing Tomorrow's Challenges: U.S. Geological Survey Science in the Decade 2007-2017, outlining the major natural science issues facing the Nation in the next decade. The Science Strategy is based on input from diverse stakeholders regarding their science needs and on the results of a bureau-level National Research Council review of USGS roles and responsibilities. Six strategic science directions were identified to be of critical importance, unified by a focus on technology and data integration, and recognition of where we can make a substantial contribution to the well-being of the Nation and the world:

- Understanding Ecosystems and Predicting Ecosystem Change: Ensuring the Nation's Economic and Environmental Future,
- The Role of the Environment and Wildlife in Human Health: A System that Identifies Environmental Risk to Public Health in America,
- A Water Census of the United States: Quantifying, Forecasting, and Securing Freshwater for America's Future,
- A National Hazards, Risk, and Resilience Assessment Program: Ensuring the Long-Term Health and Wealth of the Nation,
- Climate Variability and Change: Clarifying the Record and Assessing the Consequences, and
- Energy and Minerals for America's Future: Providing a Scientific Foundation for Resource Security, Environmental Health, Economic Vitality, and Land Management.

The six strategic science directions are themselves interrelated. Their interaction, correlation, and interplay reveal the complexity of the Earth's natural, physical, and life systems. Developing new understanding therefore requires a "systems" approach that calls upon the full range of USGS capabilities. The USGS, with its breadth of scientific expertise, can provide an important perspective on the entire web of interrelated natural processes that affect national and global well-being. Each strategic direction contains an associated set of recommended strategic actions that are designed to achieve this systems approach and enhance the USGS tradition of science in service to the Department of the Interior and the Nation. The bureau is using the Science Strategy to help identify the most significant opportunities for advancement and benefit to society to help the USGS establish its science priorities for the next decade.

A key aspect of implementing our Science Strategy is creating and sustaining a work environment and culture that is more conducive to collaborative, interdisciplinary scientific research. The realignment of the Regional Executives was one step toward building our capacity for interdisciplinary science. Another part of our commitment toward achieving the goals of our Science Strategy is to implement a common bureau science planning process. The Regional Executives and the discipline Chief Scientists have been charged with developing and refining a bureau science planning model that takes advantage of our new regional management structure and enhances our ability to achieve the Science Strategy goals.

The Focus of Our Strategic Plan

The Department of the Interior's GPRA Strategic Plan 2007-2012 can be found at http://www.doi.gov/ppp/Strategic%20Plan%20FY07-12/strat_plan_fy2007_2012.pdf.

Science lies at the foundation of Interior programs. The USGS programmatic outcomes directly contribute to the Resource Protection, Resource Use, and Serving Communities mission areas and indirectly, as a

byproduct, support Recreation goals. The USGS goals are designed "to improve understanding of" —

- National ecosystems and resources (Resource Protection)
- Energy and mineral resources (Resource Use)
- Natural hazards (Serving Communities)

The USGS also supports Management Excellence goals through two budget activities (Science Support and Facilities), as well as infrastructure functions of Enterprise Information. Interior's science mission has clearly defined goals and performance measures to gage progress in achieving this mission. Several of these performance measures derived their origin from the PART evaluation process, making a close linkage of the plan to the programs and performance budget. In the construct of the strategies to achieve the end outcome goals for science, the Administration's Research and Development criteria are the accountability premise for science investments. These criteria are performance, quality and relevance. Therefore, the first strategy for each science goal focuses on performance and the second strategy on quality and relevance with standardized language as follows:

Performance:	1. Ensure availability of ... scientific data and information...
Quality and Relevance:	2. Ensure the quality and relevance of science information and data to support decisionmaking.

Standard Customer Satisfaction and Usage/Outcome Surveys

To ensure quality and relevance of USGS products and services the Office of Budget and Performance conducts Standard Customer Satisfaction/Outcome Surveys. Since first begun in 2001, more than 3600 customers – mostly scientists and resource managers – have described their usage and satisfaction with various aspects of more than 100 different science products. In response to the expressed needs of customers, the USGS has made many enhancements to these products. The surveys all follow the same format, although each is modified to meet a specific program's customer information needs. As a result, the final outcome of each survey is immediately useful to the program manager, yet can be aggregated to support Bureau level performance reporting. The Office follows up with the managers to ascertain how survey results were applied.

The following pages describe how our performance measures support tracking of progress toward achieving Interior goals. After describing the three mission areas and goals applicable to the USGS, the performance data verification and validation process is noted. The Department has identified representative measures for each bureau to encapsulate their contribution to achieving Interior's goals. These select performance measures were chosen on the basis of their relatively broad scope, compared to other more specifically defined performance measures, and their potential to represent the Department's overall performance. As such, they are not meant to capture the detail available in the Part II performance tables. Interior's intent is to routinely use these representative measures to readily track yearly progress with each subsequent PAR performance assessment overview. For the USGS, three end outcome measures were selected as **representative** measures, one for each goal. In this section the results for these three measures will be presented for each end outcome goal by Mission Area. Tables and graphs present the performance status with related funding for the representative Strategic Plan measures. Each performance table will be followed by a brief illustration of the performance captured by the measure. Results and a more comprehensive and detailed presentation for all of the measures that appear in the USGS performance budget are included in Section II: Performance Data and Analysis.

To demonstrate the integration of performance and financial information, our financial results, discussed later in the Management Discussion and Analysis (MD&A), are reported and directly correlated to the strategic plan and outcome goals.

GPRA Goals

Mission Area of Resource Protection:

Protect the Nation's Natural, Cultural, and Heritage Resources

DOI is the Nation's principal conservation agency, conserving Federally managed lands and waters, protecting fish and wildlife, and preserving public lands for future generations to enjoy. Science is key to

making decisions on how to best conserve the Nation's natural resources. The USGS plays an important role in accomplishing DOI's mission to administer programs on thousands of upland, wetland, and aquatic parcels, and protecting native plant and animal species.

The USGS produces scientific assessments and information on the quality and quantity of our Nation's water resources; collects, processes, integrates, archives, and provides access to geographic, geospatial and natural resource data; and conducts multi-purpose natural science research to promote understanding of earth processes. The USGS' multiple scientific disciplines combine their expertise in interagency ecosystem initiatives across the United States, from South Florida to the Puget Sound, where scientists are working together to understand, evaluate, and provide options for better resource management decisions.

USGS science programs work collaboratively with many organizations across the country to provide critical information to assist land and resource management agencies, partners, stakeholders, customers, and the general public with timely information to inform their decisionmaking.

Resource Protection End Outcome Goal: Improve the understanding of National ecosystems and resources through integrated interdisciplinary assessment.

The USGS met the representative performance measure monitored during FY2008 related to this end outcome goal.

Mission Area of Resource Use:

Improve Resource Management to Assure Responsible Use and Sustain a Dynamic Economy

Managing the vast resources of America's public lands has been a core DOI responsibility since the Department was founded in 1849. Lands and water managed by DOI produce resources critical to the Nation's economic health. Science is a key foundation upon which DOI bases management decisions that promote natural resource use to sustain a dynamic economy while maintaining healthy lands and waters.

The USGS plays an important role in accomplishing DOI's mission to administer programs providing information on millions of square miles of land across all of the United States.

The USGS is the primary provider of earth science energy resource information and assessments for a variety of stakeholders in addition to Interior, including Federal agencies such as the U.S. Department of Agriculture Forest Service, the Department of Energy, local and State agencies and coal and electric power producers. The USGS Energy Resources Program conducts national and global energy research on and assessments of oil, natural gas, coalbed methane, gas hydrates, coal, geothermal resources, oil shale, and uranium; evaluates environmental and human health impacts associated with production, use, and occurrence of energy resources; and provides information for the Nation to make sound decisions regarding increases or changes in domestic energy production or mix with an understanding of potential impacts on the environment. The USGS Mineral Resources Program is the sole Federal provider of scientific information for objective resources assessments and unbiased research results on mineral potential, production, consumption, and environmental effects. Land managers and policymakers use this information to support resource use decisions to enhance public benefit, promote responsible use, and ensure optimal value.

USGS research on and assessments of undiscovered non-fuel mineral and energy resources assist Interior's land management bureaus in their goal of providing responsible management of resources on Federal lands.

Resource Use End Outcome Goal: Improve the understanding of energy and mineral resources to promote responsible use and sustain the Nation's dynamic economy.

The USGS met the representative performance measure monitored during FY2008 related to this end outcome goal.

Mission Area of Serving Communities:

Improve protection of Lives, Property, and Assets; Advance the Use Scientific Knowledge; and Improve the Quality of Life for the Communities We Serve

DOI's responsibility to serve communities extends well beyond the lands and resources it manages. Interior is responsible for protecting lives, resources, and property, and providing scientific information for better decisionmaking. Science is at the heart of performing these tasks. The USGS plays a critical role in accomplishing DOI's mission to protect communities by providing scientific information to reduce risks from earthquakes, landslides, and volcanic eruptions.

USGS geologic hazards programs conduct targeted research, gather long-term data, operate monitoring networks, perform assessments and modeling, and disseminate findings to the public, enabling the Nation's emergency management capabilities to warn of impending disasters, better define risk, encourage appropriate response, and mitigate damage and loss. When earthquakes strike, the USGS delivers real-time information, providing situational awareness for emergency-response personnel. For volcanoes, the USGS has made steady annual progress on both monitoring and hazard-assessment efforts. Hazard research on landslides concentrates on understanding landslide processes, developing and deploying instruments that monitor threatening landslides, and forecasting the onset of catastrophic movement of future landslides. These programs are designed to produce information and understanding that will lead to a reduced impact of natural hazards and disasters on human life and the economy.

Serving Communities End Outcome Goal: Improve understanding, prediction, and monitoring of natural hazards to inform decisions by civil authorities and the public to plan for, manage, and mitigate the effects of hazard events on people and property.

The USGS met the representative performance measure monitored during FY2008 related to this end outcome goal.

GPRA Performance Data Validation and Verification

In keeping with Departmental and Office of Management and Budget (OMB) policy for performance data validation and verification (V&V), the USGS complies with requirements for performance data credibility.

Our approach to achieving performance data credibility includes providing Budget and Performance Integration and Activity Based Cost (ABC) Management training, tying organizational performance measures to individual performance plans, and implementing the Department Data V&V Assessment Matrix. During FY2008, the USGS continued to include USGS-specific measures, outputs, Management Excellence, and all Program Assessment Rating Tool performance measures in the Data V&V process. This extends the assurance credibility to more performance data, ensuring usability for management decisionmaking and oversight. A more detailed discussion of Data V&V is in Section II: Performance Data and Analysis.

Performance Measurement Challenges

Measuring performance of science is inherently difficult, and the USGS has customized the methods of measurement in order to make the results meaningful. Any performance data limitations are documented in the following pages and no corrective actions were needed.

How We Performed in FY2008

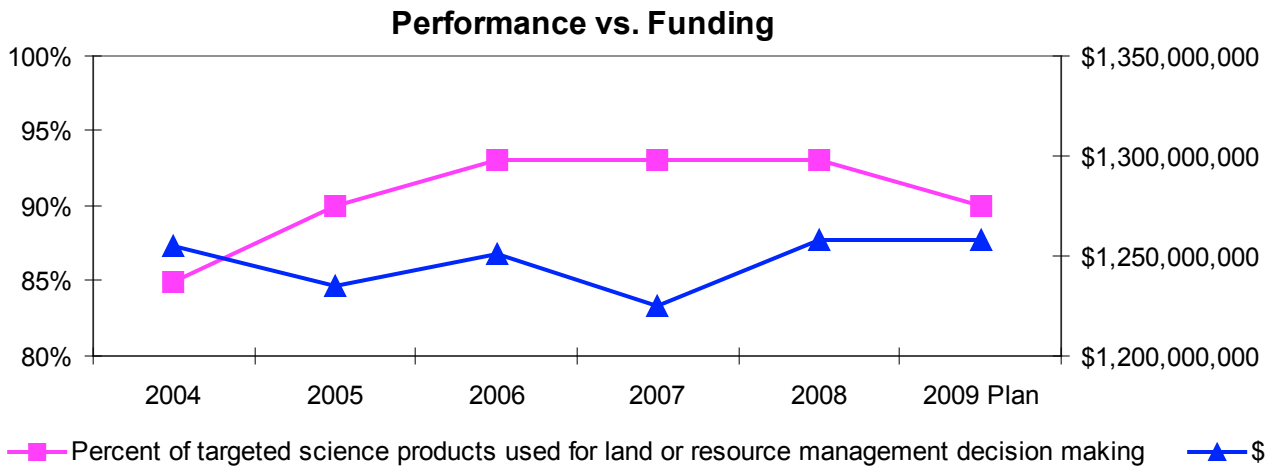
The USGS met all three of the representative measures that were identified by the Department of Interior for the USGS. The following sections will describe progress in each Mission Area. Each representative Strategic Plan performance measure is plotted for 2008 with a projection into 2009 along with the trend from the past several years. Each measure is also accompanied by the corresponding trend in cost that contributes toward performance. In this manner, the reader can see the performance and cost realized thus far, along with planning proposed in the 2009 Continuing Resolution. The annual cost devoted to the program or activity is calculated based on the ABC/M methodology and is also listed in the table. For a full report of all USGS performance measures, see Section II: Performance Data and Analysis.

Resource Protection

End Outcome Goal:

Improve the understanding of National ecosystems and resources through integrated interdisciplinary assessment.

Percent of targeted science products that are used by partners or customers for land or resource management decisionmaking



	2004	2005	2006	2007	2008	2009 Plan
Target		≥80%	≥90%	≥90%	≥90%	≥90%
Performance	80%	90%	93%	93%	93%	NA
Total Cost *	$1,255,351,787	$1,235,042,130	$1,251,015,129	$1,224,776,955	$1,258,289,675	$1,258,289,675

* Costs correspond to the End Outcome Goal

The ultimate outcome of USGS research, monitoring, and assessment is its use by a partner or customer in land and resource decisionmaking. Usage as measured by customer surveys has been holding steady and slightly improving in some areas while the USGS has maintained costs at a fairly constant level. Program managers have achieved cost efficiencies in many areas in 2008 including:

- a decrease in the average cost for selected, high priority environmentally available chemical analyses as a result of installing new instruments, reducing steps needed for analysis, and eliminating interferences which would have required additional analysis. The decrease realized was tempered by Increased costs for chemicals used in the analyses due to increases in manufacture of all petrochemical products and shipping costs;
- a decrease in the number of hours for fieldwork, compilation and publication of a typical geologic map as a result of deploying recent advances in handheld computers and mobile-computing technology which also minimizes errors and time in processing while protecting data from loss by ensuring data backup throughout the process;
- an increase in data acquisition cost for The National Map being funded by partners through increased liaison, one of the benefits of regionalization efforts; and

- a decrease in the cost of collection and processing of airborne remote sensing data for coastal characterization and impact assessments. A greater efficiency was targeted but may fall slightly short as of third quarter as a result of delays in deploying a hyperspectral scanner.

The USGS' strategy to "Improve Understanding," is to "ensure availability of scientific data and information." While holding costs down, USGS programs have made many major improvements in availability, accessibility, and usability of our science in 2008 and have implemented improvements aligned with PART evaluations to ensure that underlying programs are optimized for customer service and value. Included among these positive changes for Resource Protection, the USGS:

- made the 35 year Landsat satellite image archive available over the Internet for free, as of September 30, 2008;
- released an online user-friendly map that tracks flood conditions, ensuring timely and uninterrupted water information for forecasters, emergency managers, scientists and the general public;
- released a new online Wildlife Disease News Map to track news about disease outbreaks that threaten the health of wildlife, domestic animals, and people around the world, a collaborative effort with the University of Wisconsin-Madison;
- assembled an international team of scientists to conduct a series of analyses to help inform the Secretary's decision on whether to list polar bears under the Endangered Species Act. The USGS is continuing long-term studies to evaluate and test models that were developed;
- completed an outline of study by the Ground-Water Resources Program to improve estimates of regional ground-water availability across the Nation;
- incorporated recently available land use/land cover and USDA nutrient (fertilizer) data in model and analyses supporting the Mississippi River Basin/Gulf of Mexico Hypoxia Task Force and EPA plans to target resources to reduce nitrogen and phosphorous in 100 Mississippi River Basin watersheds;
- completed first ever 30-meter cell land cover data for Alaska accessible for download from the National Land Cover Database;
- redesigned the National Biological Information Infrastructure (NBII) Clearinghouse to make searching metadata records more efficient;
- improved alignment between State and USGS geologic mapping projects in support of Federal initiatives, and
- developed an interagency strategic plan for Extended Continental Shelf Mapping which led to NOAA/USGS effort this summer to map the Arctic in cooperation with the Canadians.

In 2009, the USGS will continue to search for more efficient methods to evaluate ground water resources, assess status and trends of surface water quality within 8 major river basins in the US, continue updating land cover and species distribution in the Northwest and Northeast US, inventory species and habitat, monitor and assess water resources and monitor change as energy resources are developed in southwest Wyoming, and improve hazard models for US territories in the Caribbean that have experienced and will experience tsunamis.

The USGS also commissions external evaluations to improve program efficiency and effectiveness. In response to the National Research Council's recommendation for The National Map to advance integration of highly diverse data from State and local agencies in a consistent, national framework. The USGS has begun to engage data-contributing partners to the National Hydrography Dataset into data maintenance activities in their areas while the USGS facilitates the overall process, providing national coordination, standards, training, quality assurance, archival and data distribution. This

will accelerate availability and timeliness of downstream flow data that are critical to pollution control analysis by EPA and others.

The USGS continuously surveys customer satisfaction with programs, and products. Surveys include questions regarding different types of usage. Data are compiled for program, project, and organization managers to help guide program and product improvement. The annual target is a threshold below which performance would indicate a problem and would mean that some sort of corrective action is needed. As long as the actual result is above the target level, the process is under control and no corrective action is needed, although enhancements could be implemented as a result of feedback. Two examples of the types of information obtained through this process (for Landsat Search and Discovery Systems and for the Cooperative Research Units Program) demonstrate the utility of our products and programs for a wide variety of decisionmaking and outcomes.

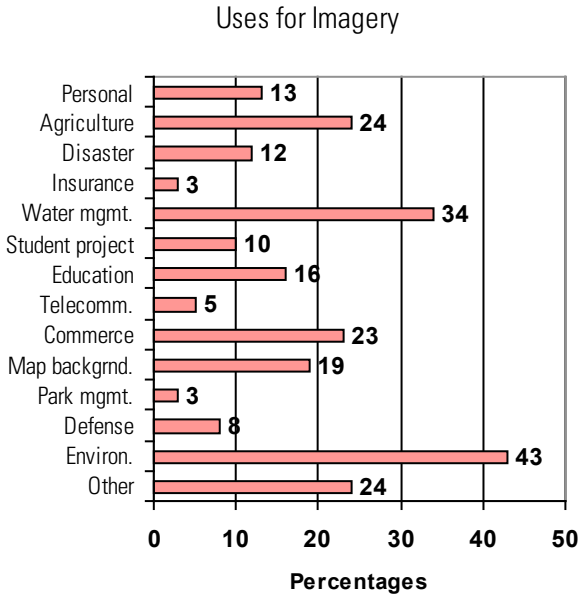
The USGS asked 238 recent users of the search and discovery systems [Earth Explorer and USGS Global Visualization (GloVis) Viewer of the Earth Resources Observation and Sciences Center (EROS)] about their satisfaction with and use of these systems. Reported uses for the imagery and data obtained from EROS follow:

- visual simulation for aircraft simulators;
- accessing and planning for petroleum exploration;
- defining and visualizing sites or regions that are impacted by environmental contaminants in relation to human populations;
- assessing environmental quality of a river basin (vegetation, soils, and land use), and
- assessing plant health (for example, change detection on 23,000-acre tree farm).

127 partners in Cooperative Research Units Program projects, with an end completion date of September 2007, were asked about their satisfaction with and use of the delivered science products.

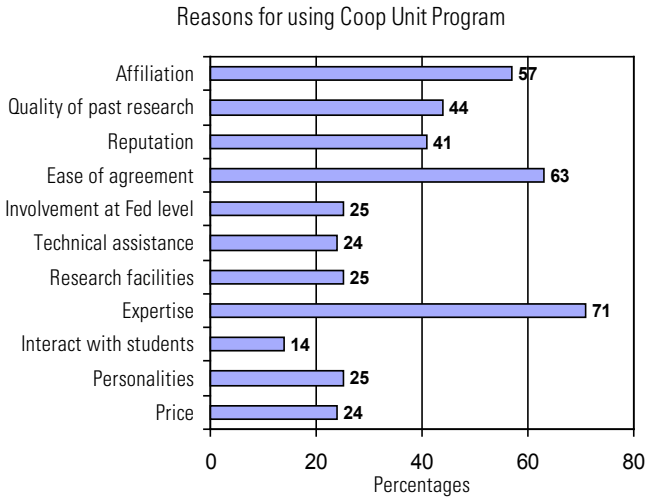
Examples of uses reported by partners follow:

- "In addition to contributing to a breeding population estimate for golden eagles and long-term trends in that part of its breeding range, the work will be important in dealing with wind energy companies in that area, evaluation of depredation permit requests, and assessment of impacts of the disappearance of eagles due to human interference ;"
- "Research results have been and will continue to serve as the primary basis for decisions on whether and how to manage hatchery operations and angler use in a manner that does not spread an invasive pathogen;"
- "We have already used the results of this study during our annual review of this candidate species; we expect to use the results to prioritize habitat restoration and protection efforts."



The USGS continues to:

- seek customer and stakeholder requirements in science product development;
- proactively engage customers in product application through technical assistance workshops; and
- seek customer and stakeholder feedback through surveys and listening sessions to continue improvement in usability and usefulness of products and services.

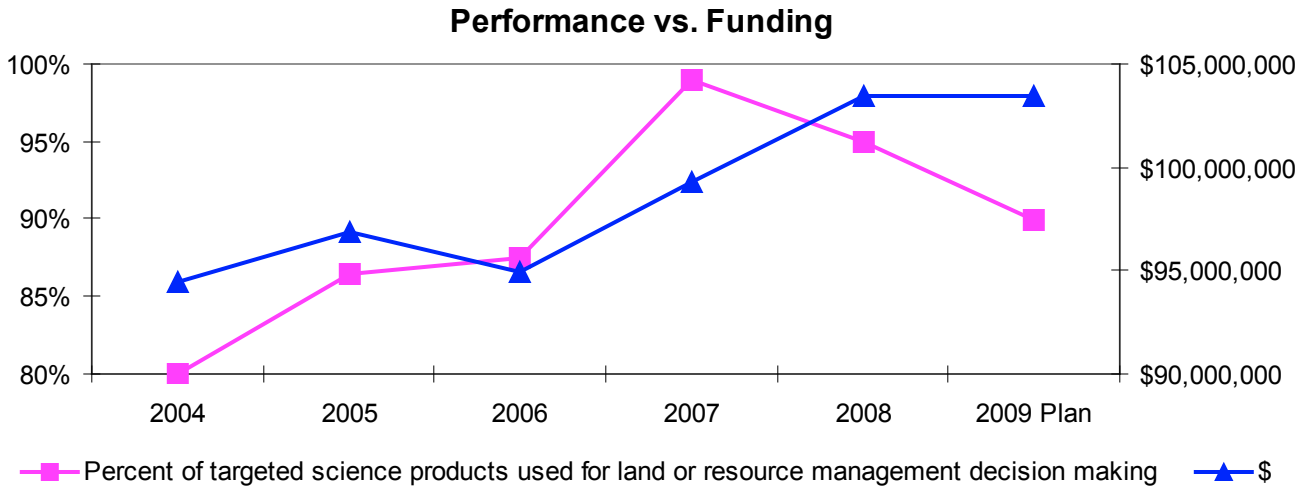


Resource Use

End Outcome Goal:

Improve the understanding of energy and mineral resources to promote responsible use and sustain the Nation's dynamic economy.

Percent of targeted science products that are used by partners or customers for land or resource management decisionmaking



	2004	2005	2006	2007	2008	2009 Plan
Target		≥80%	≥80%	≥80%	≥90%	≥90%
Performance	80%	86.5%	87.5%	99%	95%	NA
Total Cost *	$94,429,073	$96,883,040	$94,898,465	$99,256,515	$103,482,332	$103,482,332

* Costs correspond to the End Outcome Goal

The ultimate outcome of USGS research, monitoring, and assessment is its use by a partner or customer in land and resource decisionmaking. Usage as measured by survey has been increasing and costs fairly constant. In 2008, the Mineral Resources Program (MRP) decrease proposed in the President's Budget request was restored so the projected performance impact was not realized. Average costs of Energy and Minerals systematic analyses and investigations increased this year with an Arctic assessment requiring additional resources for extreme conditions. However, program managers have achieved cost efficiencies in performing their research. An example is demonstrated in the Mineral Resources Program which as a result of the PART evaluation developed improvement plans to "target program funds on activities that support long term land use and economic policy decisions and improve accessibility and application of mineral resource information." Based on their experience with USGS soil geochemical data, USGS stakeholders (Bureau of Land Management, National Park Service, Fish and Wildlife Service, U.S. Environmental Protection Agency, U.S. Forest Service, National Resource Conservation Service, Department of Defense, Center for Disease Control, State, and local departments of environmental protection and health departments) have requested consistent, comprehensive, National-scale geochemical data that are easily available to any interested user and permit comparison between sites anywhere in the country. They use these data to establish or evaluate background in environmental impact statements and for remediation of sites contaminated by natural events (hurricanes, wildfires) or man-made causes (industrial activities, agricultural practices, urban run-off). The most expensive component of such a project is the labor cost to physically go to the designated spot and collect representative samples following established protocols. The program manager analyzed three strategies for collecting samples:

- permanent full-time USGS staff,
- geology students hired on short term appointments, or
- State agency partnerships in each State.

The USGS determined that the savings achieved by using student samplers with USGS training and QA/QC covers the cost of analyses, making a National-scale program for geochemical data feasible. The Minerals Program established milestones to complete the conterminous 48 states by the end of 2011 pending continuous funding.

The USGS' strategy to "Improve Understanding," is to "ensure availability of scientific data and information." While holding costs down, USGS programs have made many major improvements in availability, accessibility, and usability of our energy and mineral resource data and science in 2008 and have implemented improvements aligned with PART evaluations to ensure that underlying programs are optimized for customer service and value. Included among these positive changes for Resource Use, the USGS:

- streamlined release of mineral production data;
- improved analytical methods to make it possible to routinely detect low levels of cyanide-cobalt complexes to improve water treatment and site remediation at active and abandoned mine sites;
- released the first publicly available petroleum resource estimate of the entire area north of the Arctic Circle accounting for about 22% of the undiscovered, technically recoverable resources in the world;
- released the results of the most comprehensive gas hydrate field venture in the world. Conducted in cooperation with India's Ministry of Petroleum and Natural Gas, this research is a huge step in realizing gas hydrates as a viable alternative energy source;
- released an inventory of oil and natural gas resources on Federal lands and extent and

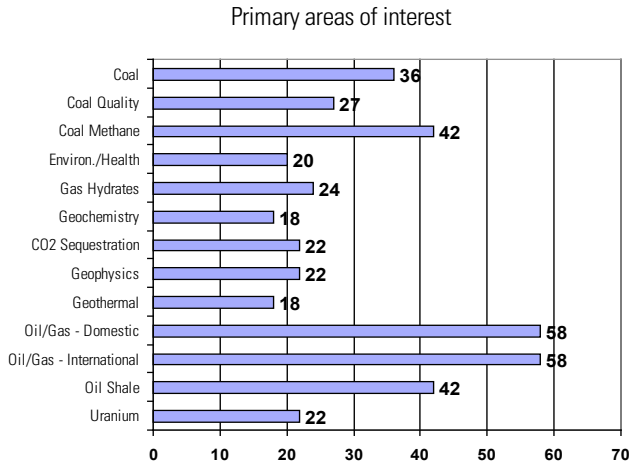
nature of restrictions or impediments to resource development in collaboration with BLM, US Forest Service, Department of Energy, and the Energy Information Administration, a product called for in the Energy Policy and Conservation Act;
- implemented a new Energy Program website template to improve navigation, layout, and data accessibility;
- developed a strategy to improve user familiarity with recently developed electronic forms to improve utilization, and
- involved stakeholders in identifying highest priority frontier lands in Alaska and highest priority critical minerals.
- In 2009, the USGS will publish a summary assessment of all technically recoverable petroleum resources for the entire northern Alaska province, complete mineral resource studies in support of economic development and land management in rural Alaska. conduct research in support of an assessment of the undiscovered petroleum resources within the Gulf Coast region, and complete methods required for quantitative assessment of undiscovered mineral deposits.

The USGS also commissions external evaluations to improve program efficiency and effectiveness. In response to a National Academy of Science recommendation, the Minerals Program made the data produced for the Federal Reserve index of industrial production available in the same form to the public. These domestic mineral data are collected by the USGS through voluntary cooperation of the mineral industry and are available through no other source.

This measure is tracked through surveys that document usage and collect anecdotal information about use. An example of the types of information obtained through this process (for the Energy Resources Program newsletter) demonstrates the utility of our products and programs for a wide variety of decisionmaking and outcomes. The USGS asked 250 subscribers to the Energy Resources Program newsletter about their satisfaction with and use of the newsletter. More than three-quarters of subscribers reported having accessed Web links in the newsletter. Subscriber statements about their use of the newsletter follows:

- "I provide a newsletter to the industry and your newsletter lets me know of new publications my readers might be interested in knowing about."
- "I use the ERP newsletter as one of many vehicles to stay abreast of progress and available data related to natural gas and coal research and development."
- "It is a source of background geological info that keeps me in touch with the advances in various fields."
- "My role of providing decision support to the top management has been greatly facilitated by your ERP newsletter."
- "The ERP newsletter provides a much-appreciated synopsis of higher-profile activities that can be quickly scanned, thus saving time that would otherwise be spent crawling through multiple Internet resources."
- "Will use the ERP newsletter as an overview for basin analysis to study potential plays in the midcontinent."

An additional survey of users of the annual USGS Mineral Commodity Summaries report is currently underway and will be reported in 2009.



The USGS continues to:

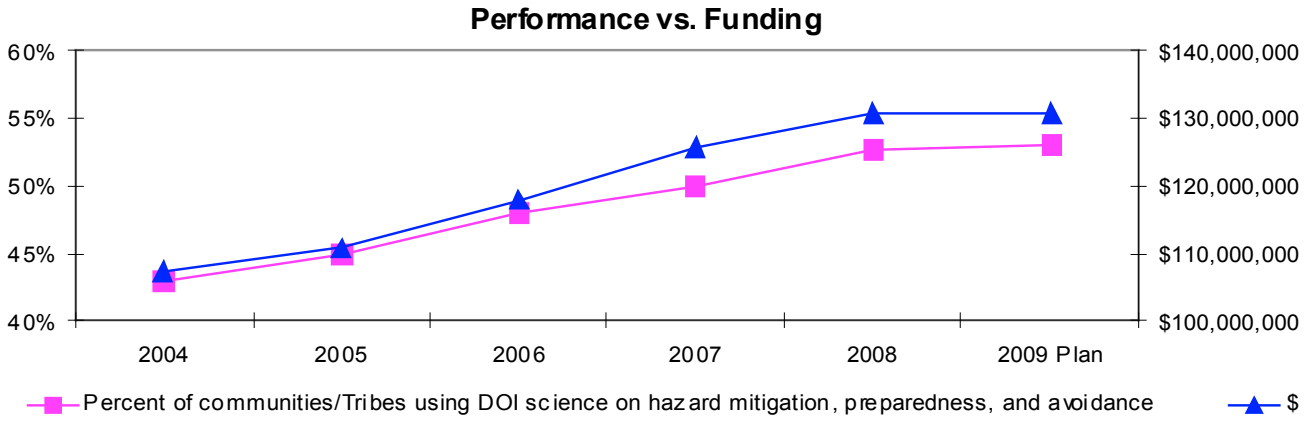
- seek customer and stakeholder requirements in science product development;
- proactively engage customers in product application through technical assistance workshops; and
- seek customer and stakeholder feedback through surveys and listening sessions to continue improvement in usability and usefulness of products and services.

Serving Communities

End Outcome Goal:

Improve the understanding, prediction, and monitoring of natural hazards to inform decisions by civil authorities and the public to plan for, manage and mitigate the effects of hazard events on people and property.

Percent of communities/Tribes using DOI science on hazard mitigation, preparedness and avoidance for each hazard management activity



	2004	2005	2006	2007	2008	2009 Plan
Target	37%	46%	48%	51%	53%	53%
Performance	43%	45%	48%	50%	53%	NA
Total Cost *	$107,436,102	$110,733,990	$118,005,777	$125,913,313	$130,869,528	$130,869,528

* Costs correspond to the End Outcome Goal

The ultimate outcome of USGS research, monitoring, and assessment is its use by a partner or customer in land and resource decisionmaking. Communities and tribes using USGS geologic hazards data continue to grow while costs increase slightly as we reach out to more communities at risk. While areas at risk for earthquakes and volcanoes are fairly discrete, distribution of landslide risk is dispersed across the Nation. Program managers have achieved cost efficiencies in at least one area, data processing and notification costs per unit volume of input data from earthquake sensors in monitoring networks

The USGS' strategy to "Improve Understanding," is to "ensure availability of scientific data and information." While holding costs down, USGS programs have made many major improvements in availability, accessibility, and usability of our geologic hazards data and science in 2008 and have implemented improvements aligned with PART evaluations to ensure that underlying programs are optimized for customer service and value. Included among these positive changes to Serve Communities, the USGS:

- made earthquake information available in Google Earth TM although huge databases of earthquake occurrences have been available publicly for a long time, the interactive graphic display of Google Earth TM makes it easy to understand the context and significance of each quake, with pop-up windows giving the user more information about the earthquake's magnitude, date, location and depth;
- worked closely with local authorities, emergency responders, schools, civic groups in the earthquake Country Alliance partnership for the November 13, 2008 Great Southern California ShakeOut, the largest earthquake drill in US history;
- helped FEMA improve loss estimation capabilities by incorporating USGS geologic hazards information, and
- coordinated with partners on deploying joint debris/flow/flash flood warning systems.

In 2009, the USGS will produce a uniform hazard spectra for a broad range of structures and maps that portray the degree of certainty and resolution of seismic hazard estimates nationwide, complete a hazard assessment of Mount Lassen and geologic maps for Mount Hood in Oregon and Glacier Peak in Washington, and continue to provide landslide assessments for areas burned by the extensive rash of California wildfires.

The USGS also commissions external evaluations to improve program efficiency and effectiveness. In response to an American Association for the Advancement of Science the Volcano Hazards Program has begun to respond to 15 new recommendations including those to improve and increase real-time web-based information dissemination, more international components in projects, and development of agreements with more State and academic partners.

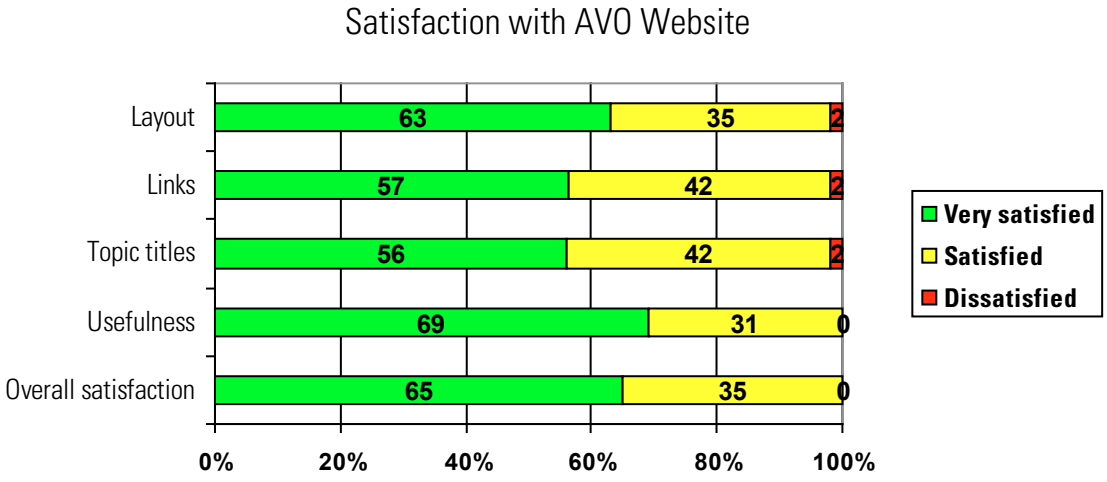
Research impact is tracked by each geologic hazard for its respective communities at risk. Results are documented in the performance budget for each hazard and as an aggregate average to give an indication of the level of usage of Interior's data for all geologic hazards. In addition, surveys like those for the other goals' products are conducted to further document usage and collect anecdotal information from the users. The 152 subscribers to the Alaska Volcano Observatory (AVO) notification service were asked about their satisfaction with and use of the AVO Web site. Examples of reported uses from civilian government agencies follow:

- "During the Mt. Spurr eruption, the Web site provided information and links that were critical to the decisionmaking that occurred in the Emergency Operations Center."
- "I use the automatic e-mail update from AVO to monitor activity up and down the Alaska Peninsula, as all 17 of Lake and Peninsula Borough's villages are in the zone for impacts from one or more volcanoes."

- "I use the information to determine if the Kenai Peninsula Borough schools should take appropriate actions."
- "Information is used to relay early warnings to potentially affected jurisdictions."
- "Review to make predictions of air quality in Anchorage."
- "Used extensively during St. Augustine eruptions for daily decisions, including plans of action for schools, elderly, etc."

The USGS continues to:

- seek customer and stakeholder requirements in science product development;
- proactively engage customers in product application through technical assistance workshops; and
- seek customer and stakeholder feedback through surveys and listening sessions to continue improvement in usability and usefulness of products and services.



The USGS principal financial statements, which are included in Section III of this report, are prepared in accordance with the U.S. Generally Accepted Accounting Principles using guidance issued by the Federal Accounting Standards Advisory Board (FASAB), OMB, and USGS accounting policies. While the financial statements have been prepared from the USGS books and records in accordance with the formats prescribed by OMB, they are different from the financial reports used to monitor and control budgetary resources that are prepared from the same books and records. The financial statements should be read with the realization that they are a component of the U.S. Government, a sovereign entity.

The DOI Office of the Inspector General (OIG) is responsible for auditing the principal financial statements of the USGS and has satisfied their responsibility by contracting these services to KPMG LLP.

This analysis of the financial statements contains highlights on selected aspects of the accompanying principal financial statements.

Assets – What We Own

The Fund Balance with Treasury of $311 million at September 30, 2008 is primarily composed of appropriated funds available to make authorized expenditures. It increased from FY2007 primarily due to timing of expenditures.

(In Thousands)	% Change	2008	2007
Condensed Financial Statement Data:			
Fund balance with Treasury	+5%	$ 310,832	$ 294,729
Accounts and interest receivable, net	+11%	122,195	110,074
Property, plant, and equipment, net	-2%	128,899	132,040
Other	-6%	3,107	3,289
Total Assets		$ 565,033	$ 540,132
Accounts payable	-2%	$ 45,459	$ 46,165
Employee related liabilities	+7%	146,543	136,409
Other	-4%	66,419	69,406
Total Liabilities	+3%	$ 258,421	$ 251,980
Total Net Position	+6%	$ 306,612	$ 288,152
Total appropriations received - SBR	+3%	$ 1,025,128	$ 990,859
Total costs	+3%	$ 1,492,641	$ 1,449,947
Total revenue	+7%	444,937	415,886
Total net cost of operations	+1%	$ 1,047,704	$ 1,034,061

The total net Accounts Receivable (A/R) of $122 million at September 30, 2008 is represented by 42 percent of amounts owed from other Federal agencies and 58 percent owed from the public. The majority of the accounts receivable is established to cover the direct and indirect costs for reimbursable services performed in support of surveys, investigations, and scientific research.

Most of the receivable balance is unbilled: $51 million is from Federal agencies and $42 million is from the public. The large unbilled balance is a result of agreements that were written for survey and research work. The revenue is recognized as work is completed, but the receipt of payment is often not due until completion of the survey or research report. The balance of unbilled A/R remained consistent in FY2008 due to overall operations being generally consistent with the prior year.

The general property, plant, and equipment (PP&E), net of accumulated depreciation, amounted to $129 million at September 30, 2008. The PP&E decrease from FY2007 is primarily due to current year depreciation expense.

Liabilities – What We Owe

The USGS is a scientific service organization where the majority of its liabilities are payroll and benefits related.

At September 30, 2008, the accrued payroll and benefits of $42 million, Federal Employees Compensation Act (FECA) liabilities, and annual leave due to employees represents 56 percent of USGS total liabilities of $258 million.

Accounts payable of $45 million consists of 11 percent due to other Federal agencies and 89 percent due to the public.

Deferred revenue, credits, and the deposit fund liability of $9 million consists primarily of amounts advanced to the bureau to cover reimbursable services to be provided at a future date.

Unfunded liabilities represented a significant portion of the total outstanding liabilities in FY2008. The largest liabilities in this balance consists of $62 million of unfunded annual leave and $43 million for FECA liabilities. The other significant unfunded liability is USGS abandoned sites of $22 million.

Budgetary Resources – What We Receive

The USGS received approximately 53 percent, or $1 billion, of its total budgetary resources of $1.9 billion through appropriations received in FY2008.

The approved budget for the USGS was modestly increased from FY2007. Other major sources of budgetary resources include unobligated balances carried over from FY2007 and spending authority from offsetting collections, totaling $382 million and $551 million respectively. As of September 30, 2008, $1.5 billion of budgetary resources have been obligated.

The offsetting collections from the bureau's reimbursable programs include the following: reimbursements from non-Federal sources such as States, Tribes, and municipalities for cooperative efforts and proceeds from the sale of photographs and record copies; proceeds from sale of personal property; reimbursements for permits and licenses of the Federal Energy Regulatory Commission; and reimbursements from foreign countries and international organizations for technical assistance. Reimbursements from other Federal agencies are for mission-related work performed at the request of the financing agency.

Appropriations represent the vast majority of the budgetary financing sources of the bureau. Other major financing sources are comprised of $425 thousand of transfers-in without reimbursement from other Federal agencies, $4 million in donations, and $57 million in imputed financing from costs absorbed by others. Imputed financed costs represent expenses paid by the Office of Personnel Management (OPM) for USGS retirement, health, and insurance benefits of USGS employees and Treasury's Judgement Fund on the behalf of the USGS.

Net Costs – What We Spend

In FY2008 and FY2007, net cost of operations totaled approximately $1 billion each year.

As mentioned in the previous budgetary resources discussion, the USGS budget was relatively flat from FY2007 to FY2008. Although the USGS instituted many changes in specific programs and operations at the cost center level during FY2008, there were generally no significant changes experienced in overall operations at the bureau level. As such, the total costs

presented on the FY2008 Statement of Net Cost are generally consistent with the prior year amounts.

Key Financial Metrics – What We Measure

Delinquent Debt Referred to Treasury over 180 Days Past Due

The Debt Collection Improvement Act of 1996 requires that delinquencies older than 180 days be referred to the Department of the Treasury's Financial Management Service (FMS), which was established as the Federal government's debt collection center. The USGS reports the status of accounts receivable quarterly through the Treasury Report on Receivables (TROR). As of September 30, 2008, the USGS referred to Treasury for cross servicing $101 thousand, or 100 percent, in delinquencies over 180 days past due. In FY2008, the USGS again surpassed the DOI's performance goal of referring 95 percent of the total amount eligible for referral to Treasury.

USGS billed accounts receivable due from the public increased from $24 million in FY2007 to $29 million in FY2008. Delinquent amounts from the public over 180 days past due decreased from $334 thousand in FY2007 to $266 thousand at the end of FY2008.

Employee Bankcard Use and Delinquencies over 60 Days Past Due

The use of government issued bankcards for official employee travel has been required for several years within the USGS. Emphasis has also been placed internally on paying the balance due in full by the due date established on the bankcard statements, as well as requiring supervisors to closely review and approve bankcard statements for their employees.

The DOI set a performance goal of maintaining no more than 2 percent of the total balance due past 60 days old. The USGS averaged about 1 percent of 60 days past due throughout FY2008. We attribute this success in part to our implementation during FY2005 of centralized billing of lodging cost, which significantly reduced the amount due by the individual traveler to the bankcard issuer and also increased the amount of rebate earned by the DOI from the credit card vendor. The rebate is available to the Secretary until expended for initiatives deemed appropriate and necessary.

Vendor Payments Made On Time

The Prompt Payment Act requires interest to be paid on invoices that are not paid on time in accordance with the Act. The USGS strives to pay vendors on-time and to avoid paying late payment interest penalties. DOI established a performance goal for bureaus to maintain 98 percent of the number of payments not requiring interest over the total number of payments subject to the Prompt Payment Act. The USGS again exceeded the DOI's performance goal by paying 99 percent of vendor invoices on-time and without penalty. The USGS will continue to monitor payment performance to ensure our timely vendor payment percentage stays on target.

Vendor Payments Made Via Electronic Funds Transfer (EFT)

During FY2008, the USGS continued its efforts to maximize the use of payment mechanisms compliant with EFT as required by the Debt Collection Improvement Act of 1996. The DOI established a performance goal to maintain over 96 percent of the number of vendor payments paid via electronic means over the total vendor payments made. During FY2008, the USGS exceeded the DOI's performance goal by maintaining 99 percent of payments made via EFT for vendor payments.

Other Bureau Financial Performance Metrics

During FY2008, the USGS continued to closely evaluate the financial operations of the bureau through sampling and other tests of compliance and performance. The results of internal performance metrics are distributed bureau-wide and have helped to maintain high quality processing of bureau transactions.

Stewardship Information

The USGS serves American citizens as a steward for a large, varied, and scientifically important body of heritage assets, and in conducting research and development that is critical to the health of our country and in understanding the Earth. Each year the USGS makes a substantial investment while fulfilling its stewardship responsibilities for the benefit of the Nation.

The USGS has heritage assets in two categories: museum collections and scientific library collections. The museum collection includes a widespread collection of natural history specimens and cultural objects in many science and administrative centers throughout the United States. The USGS library holdings, collected during more than a century of providing library services, are an invaluable legacy to the Nation.

Costs associated with stewardship initiatives are treated as expenses in the financial statements in the year the costs are incurred. However, these investments in stewardship are intended to provide long-term benefits to the public and are included as supplemental information to highlight their long-term-benefit nature and to demonstrate our accountability over them. Stewardship resources are not required to be included with the assets reported in our financial statements; however, heritage assets are disclosed in the footnotes to the financial statements. Additional information regarding the condition of our heritage assets is reported in the Required Supplementary Information and information regarding the USGS' stewardship investments is reported in the Required Supplementary Stewardship Information.

Improper Payments Act

The Improper Payments Information Act of 2002 (P.L. 107-300) requires Federal agencies to carry out a cost-effective program for identifying payment errors and recovering any amounts overpaid. An improper payment includes any payment that should not have been made, or that was made in an incorrect amount under statutory, contractual, administrative, or other legally applicable requirement. Incorrect amounts include: overpayments; underpayments (including inappropriate denials of payment or service); any payment made to an ineligible recipient or for an ineligible service; duplicate payments; payments for services not received; and payments that do not account for credit for applicable discounts.

In accordance with Department policy, the USGS concluded that our programs have a low risk for making improper payments and converted our annual risk assessments for all programs meeting OMB's criteria for significant erroneous payments to a three-year rotating cycle. Internal reviews are conducted annually to prevent, detect, and recover overpayments to vendors resulting from payment errors.

Limitations to Our Financial Statements

The principal financial statements have been prepared to report the financial position and results of operations of the USGS, pursuant to the requirements of 31 U.S.C. 3515(b).

While the statements have been prepared from the books and records of USGS in accordance with U.S. generally accepted accounting principles for Federal entities and the formats prescribed by the Office of Management and Budget, the statements are in addition to the financial reports used to monitor and control budgetary resources which are prepared from the same books and records.

The financial statements should be read with the realization that they are for a component of the United States government, a sovereign entity.

Management Assurances:

The Federal Managers' Financial Integrity Act of 1982 (FMFIA) and the OMB require all cabinet-level Federal agencies to annually review their internal control system. The objectives of DOI's internal control system are to provide reasonable assurance that:

- The Department's obligations and costs are in compliance with applicable laws;
- The Department's assets are safeguarded against waste, loss, unauthorized use, or misappropriation;
- The revenues and expenditures applicable to agency operations are properly recorded and accounted for to permit the preparation of reliable financial reports and to maintain accountability over assets;
- All programs are efficiently and effectively carried out in accordance with applicable laws and management policy.

The efficiency of the DOI's operations are continually evaluated using information obtained from reviews conducted by GAO, OIG, bureau reviews, and/or specifically requested studies. On a yearly basis, DOI requires all of its bureaus to conduct self-assessments of their FMFIA compliance. These diverse reviews provide a high level of assurance that Department systems and management controls comply with standards established by the FMFIA.

In support of the annually required DOI bureau reviews, the Associate Directors of Biology, Geology, Geography, Enterprise Information, and Water; the Regional Directors of Eastern, Central, and Western Region; the Associate Director of Administrative Policy and Services; the Associate Director of Human Capital; and the Chief Information Officer provided signed assurance statements to the Director that their areas of responsibility had assessed the systems of management, administration, and financial controls in accordance with standards, objectives, and guidelines prescribed by the FMFIA and the OMB Circular A-123, *Management's Responsibility for Internal Control*.

The objectives of the assessments ensured that:

- programs achieved their intended results;
- resources were used consistent with the bureau's mission;
- resources were protected from fraud, waste and mismanagement;
- laws and regulations were followed; and
- reliable and timely information was maintained, reported, and used for decision making.

In performing this assessment, the USGS relied on the knowledge and experience management has gained from the daily operations of its programs and systems of accounting and administrative controls, and information obtained from sources such as internal control assessments; OIG and GAO audits; program evaluations and studies; audits of financial statements; performance plans and reports; and other information.

Fiscal Year 2008 Assurance Statement

Based on the results of an external audit, the USGS identified one material weakness in its control over the effectiveness and efficiency of operations and compliance with applicable laws and regulations, to include FMFIA, as of September 30, 2008. The USGS was not in compliance with OMB Circular A-11, *Preparing, Submitting, and Executing the Budget* by not recording authority for the entire amount of multi-year reimbursable agreements and by drawing this authority down at year-end to equal obligations and expenditures. SFFAS No. 7, *Accounting for Revenue and Other Financing Sources* references OMB Circular A-11 and states "Recognition and measurement of budgetary resources should be based on budget concepts and definitions contained in OMB Circular A-11". Other than the exception noted, the internal controls were operating effectively and no other material weaknesses were found in their design or operation.

In addition, the USGS conducted its assessment of the effectiveness of internal control over financial reporting, which includes safeguarding of assets and compliance with applicable laws and regulations, in accordance with the requirements of Appendix A of OMB Circular A-123 and the Chief Financial Officer Councils Implementation Guide dated July 31, 2005, as implemented by the Department of the Interior. The assessment focused on the specific financial reports and the related financial statement line items identified by the Department as material to the consolidated Department of the Interior financial reports. Based on the results of this assessment, the USGS can provide reasonable assurance that its internal control over the financial reports and related line items were suitably designed and operating effectively as of June 30, 2008, and no material weaknesses were found in the design or operation of the internal control over financial reporting. However, an external audit identified a material weakness in the internal controls over budgetary resources. The existence of this weakness does not prevent the USGS from providing reasonable assurance for its internal controls over financial reporting.

I also conclude that the USGS information technology systems generally comply with the requirements of the Federal Information Security Management Act, and Appendix III of OMB Circular A-130, Management of Federal Information Resources.

Further, I conclude that the USGS can provide reasonable assurance that its financial systems substantially comply with the Federal Managers' Financial Integrity Act and with the component requirements of the Federal Financial Management Improvement Act.

Mark D. Myers
Director, USGS
September 2008

The President's Management Agenda:

In an effort to make government more citizen-centered and results-oriented, the Office of Management and Budget (OMB) instituted the President's Management Agenda (PMA) in 2001, which heralded a strategy for improving the management of the federal government. OMB grades agency progress and provides status reports through the use of the Executive Branch Management Scorecard using a green, yellow, red grading system. A score of green identifies an agency as meeting all standards of success for a goal. A yellow score identifies an agency as achieving an intermediate level of performance for all criteria within a goal. The final rating of red defines an agency as having one or more weaknesses. The USGS recognizes the importance of the PMA and follows the PMA criteria to strengthen its management practices, increase transparency and accountability, and improve program performance.

In FY2008, the USGS continued to improve in areas targeted in the PMA, which focuses on improving Federal management and program performance. Organized around the mutually reinforcing components, the PMA applies to every agency. The initiatives are:

- Strategic Management of Human Capital;
- Competitive Sourcing (renamed Commercial Services Management in 2008);
- Expanding Electronic Government (E-Gov);
- Budget and Performance Integration (renamed Performance Improvement in 2008);
- Improved Financial Performance;

In addition to the five governmentwide management initiatives, the PMA also presents agency-specific program initiatives. The four departmental program initiatives that the USGS reports to are:

- Real Property Asset Management;
- Transportation Management;
- Energy Management; and
- Environmental Stewardship.

These initiatives share a common goal of enhancing citizen-centered governance focused on delivering results that matter to the American public. The USGS strived to make progress in all initiatives during FY 2008: the USGS ended the year "green" for progress on eight of the nine initiatives, the exception being "yellow" on Environmental Stewardship; "green" for status on the E-Gov, Commercial Services Management, Improved Financial Performance and Energy Management initiatives; "yellow" for status on Performance Improvement, Strategic Management of Human Capital and Real Property Asset Management initiatives; and "red" for status on the Energy Management and Transportation Management initiatives. Current year accomplishments are discussed below.

Strategic Management of Human Capital

Workforce Planning—The USGS developed a bureauwide workforce plan that incorporates our 10-year strategic science plan and identifies staffing strategies that address the needed skills for achieving long-term science and science-support goals. The USGS was recognized by the Department of the Interior and Office of Personnel Management for its bureau workforce planning process and plan and has since developed a proposal to take the next steps with the workforce planning process and incorporate succession development and planning via a small pilot planned for the future (tentatively targeted for 2009).

Leadership Training— As a result of a 2007 supervisory development review by a group of USGS managers and supervisors, in 2008, significant changes were made to the current Supervisory Challenge course (first 40 hours of supervisory training) and a more comprehensive supervisory development program was designed. The Supervisory Challenge course now includes a major component on "transitioning into a supervisory role" and also focuses on leadership competencies. These competencies are communicated as foundational for any employee moving into supervisory or management positions. Another major improvement was the identification, tracking, and much more precise targeting of probationary supervisors, in order to facilitate development of solid supervisory skills and competencies early in their supervisory tenure. In early 2008, the USGS underwent a realignment of responsibilities for Regional Executives. These Executives formerly managed along scientific discipline lines and are now managing all science activities within geographic areas. As part of the realignment, a concerted effort was made to rotate individuals through developmental assignments to expand their competencies and increase their knowledge of a broader base of USGS science.

The Office of Human Capital worked to redesign and align developmental programs for employees to ensure that there is a focus on essential core, leadership, supervisory, and management competencies that begins as soon as a new employee comes on board with the USGS.

The USGS is developing a competency model for collaboration to support the assessment of competencies, gap analysis, hiring, and development of employees. A communication plan to introduce the concept of competencies and how competencies will be used in the assessment of workforce needs is in development. The communication plan will also address the bureau action plans to implement programs to help employees develop the competencies needed at all levels in the organization.

Competition Management Services

The USGS continued execution of its Business Strategy Review (BSR) process, outlined in the USGS Competitive Sourcing Green Plan FY 2005–2008. The USGS performs scientific and support activities through a combination of Federal employees and external capabilities and staff. Maintaining an effective workforce balance for all scientific and administrative activities is crucial to our continued mission success and is represented in our commitment to accurate reporting in the Federal Activities Inventory Reform (FAIR) Act.

Recognizing that agencies have broader means to fulfill the goals of the PMA initiative, in 2008, the Office of Management and Budget changed the name of the initiative from "Competitive Sourcing" to "Commercial Services Management." Competitive Sourcing involved using job competitions—between contractors and Federal employees—to determine whether Federal or private-sector employees could perform a government function more efficiently. Commercial Services Management, however, includes other forms of business reorganization that do not involve the private sector. The commercial services management initiative recognizes that agencies are working to improve the operation of their commercial functions and using a variety of techniques to do so.

Whereas the management initiative includes the use of competitive sourcing, it also calls for agencies to create high-performing organizations (HPOs) and to seek alternative means to re-engineer their business processes. Public-private competition, HPOs and business process re-engineering all rely on the same common-sense management processes, such as cost and workload analysis, to achieve efficiencies. In 2009, the USGS will continue to support OMB and Department of the Interior objectives for Commercial Services Management as they are defined.

Expanding E-Government

Geospatial One-Stop (GOS) —The USGS GOS portal is the official means for accessing metadata resources managed in the National Spatial Data Infrastructure Clearinghouse Network. In 2008 the portal, geodata.gov, continued its steady growth. With more than 190,000 individual metadata records contributed by 392 publishers, the portal saw a 27 percent increase in records from 2007. The number of portal users increased over 40 percent (now averaging 80,000 users per month) from 2007 levels. The USGS continued to focus on outreach and increasing participation with local governments and related associations, resulting in more Web mapping services becoming available primarily from major US cities and metropolitan areas. The portal also achieved several key enhancements, primarily focused on improving the quality of the links to live map services and providing reports to publishers. New enhancements also provided value to the data partnership "Marketplace," which provides a site where organizations can advertise their interest or intent in collecting geospatial data and seek partners for cost-sharing. About 2,500 Marketplace records were discoverable in 2008, and an estimated 250 contacts were made regarding possible partnerships for data acquisition. Communities of interest for geospatial data on GOS continued to expand in 2008. Communities are specialized areas for sharing information in specific data categories, such as administrative boundaries, agriculture, and the environment. Some of the improved dynamic new content on the site features the ocean and coastal data, fire mapping, and hurricanes.

Information Security—In 2008 the USGS ensured that effective information security practices were carried out by: (1) publishing information security standards, guidelines, and procedures; (2) providing general, role-based, and specialized IT security training; and (3)

continuing improvements to management, technical, and operational security controls. The transition of the security architecture to the Department's Enterprise Services Network is now complete (described in ESN, below) and the goal of establishing a comprehensive network security infrastructure across the U.S. Department of the Interior has been achieved.

Security Certification and Accreditation (C&A)—In 2008, all USGS systems remained certified and accredited. In 2008, security weaknesses that were identified through routine assessments were corrected, mitigated to an acceptable Risk, or placed on the Plan of Action and Milestones report for future resolution. Other C&A related activities were planned and executed, including continuous monitoring, internal control reviews, contingency plan tests, role based and awareness training, and compliance reviews. Planning began and a contract initiated to accomplish six C&A activities scheduled for 2009.

Security Operations — In 2008, the USGS deployed an Enterprise Vulnerability Management System (eVMS), migrated the USGS Web servers behind application firewalls, updated Computer Security Incident Response Team (CSIRT) operating procedures to reflect current Departmental policy, and migrated to the Department's Enterprise Services Network (ESN) Security Architecture. The eVMS provides vulnerability management for the USGS including reporting, tracking, and managing system-level vulnerabilities. This service provides the USGS with bureauwide security controls outlined in NIST 800-53a. The bureau migrated about half (~200) of its Web servers behind enterprise Web application firewalls, thus providing protection against malicious attacks including SQL injections, remote code execution, and hacking attempts. The USGS used both internal controls such as the Enterprise Symantec Anti-virus (eSAV) and external reporting groups to meet new requirements outlined in the DOI IT Security Policy Handbook for incident response. The USGS responded to 86 percent of incidents within the timeframe established by DOI policy. Due to several factors including reduction in staff, increase in number of reported incidents, and delays in responses back from several groups outside the authority boundary of the bureau, certain incidents were not closed according to policy. In 2008, the USGS completed the full migration of its IT systems to the ESN Security Architecture providing an enterprisewide intrusion detection and prevention capability.

Enterprise Services Network (ESN) — By the end of 2008, the USGS completed all three telecommunications milestones for full use of ESN networking services: ESN Transition, ESN Migration, and ESN Connection to Security Architecture. Finished in 2007, the Transition milestone resulted in the transition of all USGS-owned routers and wide area networking switches moving to the Department's ESN Network Operations and Security Center (NOSC) management. All sites now have 24x7 proactive networking monitoring from NOSC. The USGS completed the second milestone, ESN Migration, in June 2008, resulting in all USGS locations being migrated to the VerizonBusiness "very Broadband Network Service" (vBNS). The migration included installation of new circuitry and equipment. By having all the bureau's locations under vBNS, the achievement will ensure compliance with DOI security edits. The third and final ESN milestone, ESN Connection to the Security Architecture, was completed in August 2008 and thus moved the USGS completely behind the DOI ESN Security Architecture.

The USGS continues to move forward on the Remote Access and Virtual Private Network (VPN) services with testing of the electronic Remote Access Service (eRAS) in 2008 and continuing into 2009. If all tests prove successful, the USGS plans to fully adopt eRAS in 2009.

Performance Improvement

Whereas integrating performance information into the budget may facilitate making performance more of a factor in budget deliberations, the goal of the initiative has always been to improve program performance. Recognizing that the name of an initiative should convey the goals of the initiative, in 2008, OMB changed the name of the Budget and Performance Integration initiative to the Performance Improvement Initiative.

Since 2002, the USGS has worked with the Department and the Administration to establish accurate and meaningful performance measures for its programs and to tie the performance to resources in accordance with the President's Management Agenda. The USGS Budget and Performance teams work directly with bureau program staff to understand, evaluate, and

plan the science programs' budget and performance levels, ensuring responsiveness to USGS executive management decisions, departmental concerns, and Administration policies. The USGS has been commended for outstanding program management as evidenced in the consistently high ratings that the USGS has received from the PART. PART outcome and continuous program improvement being major criteria for defining scorecard success, the USGS has consistently scored well.

In 2008, the USGS was rated Green for Progress and Yellow for Status of Performance Improvement on the basis of criteria provided in July of this year. Over the course of the past year, the USGS has many Performance Improvement accomplishments to be proud of: the USGS was referenced as a model for PART program improvement plan status reporting by OMB's Associate Director for Administration and Government Performance, Robert Shea, in his first quarter report, dated January 31, 2008: "The Department of the Interior's 2007 PART Fall Update Assessment of its US Geological Survey—Energy Resource program is a good source on how to monitor, update and report on improvement plan actions." The details of this improvement action plan can be reviewed at: http//www.whitehouse.gov/omb/expectmore/detail/10001078.2993.html

The USGS improved integration of budget and performance information in budget process and materials and performance reports and cited PART ratings and improvement plan actions in support of funding requests in all phases of the budget cycle. The USGS facilitated senior management's focus on performance improvements by identifying select measures and areas for attention and improved senior-level involvement in oversight of the PART and the strategic plan reporting process while also improving tracking and monitoring of PART Program Improvement Plans that are developed to address PART recommendations. Actual evaluation of programs concluded in 2006 with 9 programs rating moderately effective and 1 effective.

Improving Financial Performance

In 2008, the USGS was rated Green for improved Financial Management. The Bureau is continuing to work with the Department and OMB to assist the Department in meeting the "getting to green" requirements by demonstrating successful usage of management reports for decisionmaking purposes in the Cooperative Water Program. Additionally, the USGS was able to report to the Department that the USGS has effective internal control over financial reporting. The USGS held a 2-day meeting early in fiscal year 2008 to prepare current year guidance for the A-123 Internal Control Reviews Plan and developed its Risk Assessment Methodology to identify where future Internal Control Reviews will occur.

The USGS will continue to pursue excellence in financial management, identify opportunities to streamline and automate functions, and improve internal controls. The USGS has refined reporting to senior managers on financial progress in several areas to reflect the results down to the cost-center level. These financial status reports include statistical results of internal audits on bankcard and invoice charges, and on travel and reimbursable agreements. The Bureau's financial managers use this information to identify problems and implement correct actions. These financial status reports formed the basis for the USGS' 2008 assurance statement to the Department that it has effective internal controls over financial reporting. In 2009, the USGS will work with the Department to implement a new Department-wide, comprehensive, integrated, risk-based internal control program.

During 2008, the USGS formed a team to develop standardized financial training that will be offered on an annual basis to all cost centers in the Bureau. This training provided attendees a detailed "hands-on" experience. The first training sessions for the Beginner AO/Budget Analysts and Administrative Technicians were completed in February 2008. The training session for the Advance AO/Budget Analysts was completed in July 2008.

Financial and Business Management System—The USGS continues to dedicate significant resources to the development of DOI's new Financial and Business Management System (FBMS). The DOI began work with a new integrator, IBM, during March 2006 and successfully implemented two bureaus in November 2006 with core finance and limited executive management information system functionality. A third bureau will be implemented into FBMS in November 2008.

In 2008, the USGS began its deployment of the new Department-wide FBMS. The FBMS deployment schedule outlines approximately 28 months of preparation time for the bureau-wide implementation. Tasks include blueprinting of current USGS business practices to the capability of the FBMS and to the prescribed policy and procedure standards set by DOI, data preparation for conversion, testing, procedures development, system configuration, and establishing roles and responsibilities. A significant difference for the USGS deployment is our current highly decentralized organization with over 160 offices and 400 locations with remote access to the various administrative systems for transaction processing and reporting. During 2008, the USGS completed the project preparation phase, identified roles and responsibilities in FBMS, and began data cleansing.

Real Property Asset Management

In December 2007, the USGS completed the requirement to provide 24 specific data elements for all USGS owned, leased and State or foreign government-owned assets into the Federal Real Property Profile (FRPP) as required by the Federal Real Property Council (FRPC). The inventory included 56 land, 368 buildings, and 274 structures records. The DOI Asset Management Plan Three-Year Rolling Timeline and the OMB Real Property Score Card require each Interior bureau to establish a verification and validation strategy to ensure accurate and complete reporting into the FRPP. The USGS strategy requires an annual 25 percent sample review of its FRPP inventory. In May 2008, the USGS completed this review.

Transportation Management

In 2008, the USGS began taking steps to implement the long-term goals of the Fleet Management Strategic Plan (FMSP). The fleet inventory and utilization data validation, completed in 2007, was utilized in 2008 to conduct an assessment and provide recommendations to optimize the placement of vehicles to increase vehicle sharing and the use of alternative fuels. A memorandum was issued to field offices to encourage the purchase of alternative fuel vehicles (AFVs) and hybrid vehicles. The Office of Administrative Policy and Services provided $15,000 to offset the cost of two hybrid vehicles for field use in the Eastern Region. Additionally, a Fleet Acquisition and Replacement Plan will be implemented as a strategy for reducing fleet size and acquiring higher fuel economy vehicles. In 2009, the USGS will continue implementing the long-range goals of the FMSP, focusing on reducing fleet costs and size, the average age of the fleet, and fossil fuel consumption.

Energy Management

In 2008, the USGS awarded a new contract for a Web-based system to assist in capturing, storing, and analyzing utility cost/consumption data. This contract replaces a utility bill analysis contract that has been in place for the previous 6 years. The contractor collects required energy data for USGS facilities that pay utility providers directly. Currently, 250 invoices are processed monthly through this system. In 2008, Energy Conservation Measures at the National Center located in Reston, Va., included installation of a high-efficiency air compressor system, reflective white-roof installation, and energy-efficient equipment for the cafeteria renovation. The energy program coordinator also worked with the National Center's IT Technical Service Team to arrange for the automatic shutdown of computers during nonworking hours. The USGS also implemented water conservation measures at the National Center that included replacing all bathroom faucets with photovoltaic low-flow faucets and changing the cooling water for several pieces of scientific equipment from domestic water to the closed-loop chilled water system.

Environmental Stewardship

Agencies and offices are required to implement sustainable practices in order to meet the goals and objectives outlined in Executive Order (EO) 13423 by utilizing Environmental Management Systems (EMS). The EO is designed to further strengthen environmental, energy, and transportation management. The Environmental Management (EM) Council plans to take aggressive action in order to successfully implement EO 13423. The EM Council is in the process of creating a bureauwide EMS in lieu of continuing with center-specific EMSs. The bureauwide EMS would encompass all the centers not currently designated as EMS-appropriate centers, and those EMS- appropriate centers that choose to discontinue their center-specific EMSs. However, the following factors pose a challenge in creating the bureauwide

EMS: an EMS that follows the ISO 14001 standard and has an EMS database to house all the EMS data is required, new policies must be developed, and center participation across the bureau must be ensured. Each EMS-appropriate center that chooses to continue with its EMS must conform to the EO by December 2008. A center is in full conformance when it has been the subject of a formal external audit, audit findings have been recognized by the appropriate level of the agency implementing the EMS, and the appropriate senior manager accountable for implementation of the EMS has declared conformance to EMS requirements. The USGS is committed to promoting procurement of green products in accordance with the Department's draft affirmative procurement plan, comporting requirements, and internal directives on drafting procurement specifications that specifically invoke the Resource and Recovery Act and other statutes and Executive Orders on pollution prevention and greening the government. USGS Contracting Officers receive training in environmental purchasing requirements through the governmentwide CO mandatory training curriculum, and promote environmental stewardship through Federal Acquisition Regulation Part 23 requirements.

The USGS promotes GSA's online green purchasing training in our online list of qualifying COR training. In addition, green purchasing objectives are emphasized in government charge card holder instructional materials. DOI has adopted the USGS' request that green purchasing objects be added to DOI's annual online training for card holders departmentwide. The USGS also maintains an internal Web page on Environmental Purchasing that includes links to recycled and biobased-content product information and sources. The USGS recognizes current shortcomings in and advocates upgrading Department- and Government- wide systems in the future to capture recycled and biobased-content data in order to advance visibility and reporting capability.

The USGS actively participates as a member of the DOI Sustainable Buildings Work Group (SBWG). This multi-bureau group reviewed and conducted a gap analysis of the existing Federal Leadership in High Performance and Sustainable Buildings Implementation Plan. The USGS plans to pattern the bureau plan after the DOI Sustainability plan. Regional Sustainability Coordinators meet monthly with the Regional Energy managers to provide updates and action items.

The present strategy calls for a 30-day review period of the final SBWG plan prior to the Assistant Secretary for Policy, Management and Budget's signature. OMB will then receive the final DOI Plan. The USGS developed draft Sustainability clauses for all construction and renovation projects. The Sustainability clauses address adherence to the guiding principles listed in the Implementation plan, and require projects to aim for Leadership in Energy and Environmental Design (LEED) Silver certification. Modifications were made to each Condition Assessment tasking with the same requirements. In FY 2008, the USGS formalized the bureau-specific Sustainable Buildings Implementation Plan. The USGS will continue to incorporate new technologies and materials into building designs and renovations. In 2008, the USGS continued to participate in the DOI Electronic Stewardship Task Force. The DOI Electronic Stewardship Implementation Plan has been drafted and the USGS will approve this document in conjunction with other DOI bureaus. In 2009, this document will be used as the foundation to draft the USGS Electronic Stewardship Plan. In 2008, the USGS implemented an Electronics Disposal Policy. The Compliance Management Plan is managed through the USGS Inspection and Abatement System (IAS). Internal environmental compliance audits are performed annually at all locations and documented within the IAS. This system allows all organizational levels to self assess environmental compliance, inclusive of tracking findings through final abatement action. The IAS was updated in 2008 to provide a better environmental auditing tool.

Looking Forward:

Where's the Data?: The Challenge of Managing and Sharing Invasive Species Information

The economic and environmental costs associated with the management of invasive species in Hawaii are staggering. It has been estimated that invasive pests result in over $150 million in annual economic damage and that 20 to 50 new non-native species arrive in Hawaii every year. Managing and effectively communicating the vast amount of information generated from the battle against invasive species is a serious challenge. Programs, which are focused on prevention, early detection, and control generate data; however, there is the need to have this information synthesized, organized, and presented in a meaningful way on a county and statewide level. Without this, legislators, managers, scientists, and the public find it difficult to assess and respond in battle against invasive species. For example, how does one facilitate the efficient flow of information about incipient invasive species locations to the appropriate agencies? How does one measure the efficacy of a particular management strategy or specific survey and treatment efforts? For too long, the answer to these questions in Hawaii has been "not very well."

Recognizing this situation, the USGS, under the National Biological Information Infrastructure, has implemented several critical technology and data management projects to address these issues. The Maui County Invasive Pest Early Detection Project http://pbin.nbii.gov/reportapest/maui/ is an evolving Web-based system that facilitates public involvement with invasive species early detection efforts. This system educates on how to identify, collect, and report on certain target species. In FY 2008, 20 public workshops were held and a 60-page, full-color invasive pest field guide was published. This system will expand to other islands in Hawaii in 2009.

The Hawaii Island-based Invasive Species Committee Statewide Reporting System is a system of documented data collection and reporting standards, guidelines, and protocols that result in the aggregation and sharing of invasive species information statewide. In 2008, this system has evolved to include early detection and nonplant control efforts.

HSPD-12

By October 27, 2010, all USGS employees, contractors, and other affiliates are required to be issued a DOI-Access card under the Homeland Security Presidential Directive-12 (HSPD-12). DOI selected the GSA Managed Service Office (MSO) to provide enrollment and card issuance services. In order to facilitate issuance, the Human Resources Offices have verified background investigations for current USGS employees and input the appropriate data into the Federal Personnel Processing System (FPPS). For current employees, required data is extracted from FPPS and combined with five additional data fields. The resulting data is then uploaded via a batch import process to sponsor an employee. The process to manage the sponsorship of current contractors, other affiliates, and all new individuals who need a card has been challenging to define and remains undocumented. The DOI HSPD-12 Implementation Team began defining these business processes in early June 2008. Another challenge has been determining the deployment schedule for rollout. The DOI HSPD-12 Implementation Team documented the phase one deployment solution and began to gather data on the phase two and phase three solutions, but additional time and analysis, as well as information from the GSA MSO is needed to finalize this document. A final area of concern is determining how to fund the costs for the new cards, what the exact charges will include, and how to account for the costs at the appropriate cost center.

Enhancing USGS Information Security

The USGS has significant challenges in keeping pace with a robust IT security infrastructure and posture. IT security weaknesses, if they remain unaddressed, can jeopardize USGS science programs. Examples include internal and external threats, Internet shutdown, compromises to sensitive information and Privacy Act and FISMA violations, Continuity of Operations plans and reviews, and permanent loss of the legacy of USGS science data. The Bureau is also an active enterprise partner with the Department's Office of the Chief Information Officer and looks to the OCIO staff to guide and assist with IT security issues and developments.

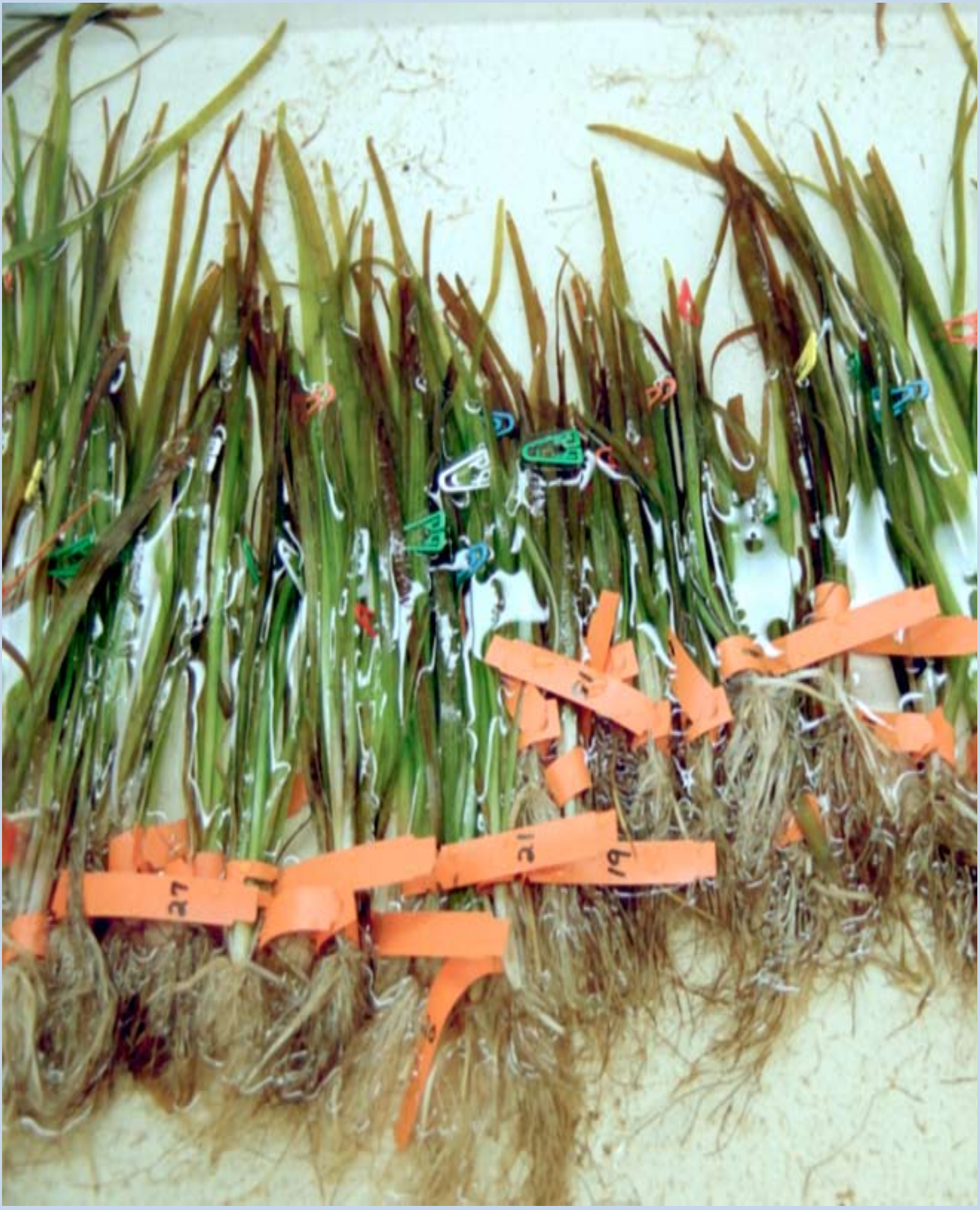
Achieving an Integrated Information Environment

The conduct of science is changing worldwide. Evolving tools and technologies are revolutionizing processes, extending or replacing research techniques, and sparking new discovery. The nature of scientific collaboration also is changing. As the complexity of scientific questions grows, the need for integrated expertise and data from multiple disciplines grows as well. This realization, coupled with advances in information technology, is fueling a worldwide movement to connect the data and research techniques of the world's scientists, making them accessible to a global science community, and transforming the way in which research, engineering, and education are conducted. Over the next decade and beyond, USGS technological and collaboration capabilities must advance in parallel with its scientific goals and capabilities. To address increasing complexity and to enhance collaboration, the USGS will integrate its data and participate in the emerging efforts to build a global, integrated science-computing and collaboration platform. In partnership with the earth and environmental science community, the USGS will develop new approaches to index data holdings by subject, place, and time, and make them available to all through Internet portals. Developing a fully integrated science data environment will improve the accessibility of science data and information within the USGS, across DOI, and with scientific partners, collaborators, and customers in other Federal agencies and the public. The challenge is to keep pace with and begin to accomplish this paradigm shift in science data management and capability under constrained budgets.

Electronic Records Management

The E-Government Electronic Records Management (E-Records Management) Initiative, for which National Archives and Records Administration (NARA) is the managing partner, will provide a significant benefit to citizens by increasing data accessibility and reducing the cost of delivering those services. In order to achieve this goal, significant effort is required by agencies to develop the supporting infrastructure that will ensure success. An investment by the USGS in electronic records management supports improving the management of electronic records, increasing the efficiency of the application of USGS information to support timely and effective decision-making. Additionally, this investment supports USGS requirements for vital records management to prevent the loss of information that is critical to the continuing operation of the USGS in the most efficient and economic manner possible.

The USGS faces significant challenges in supporting NARA's vision of an Electronic Records Archive (ERA). The depth and breadth of the USGS' rapidly growing volumes of electronic records creates a complex information environment. This information complexity, coupled with computer hardware, application software, and even storage media obsolescence, contributes to loss of valuable information. Addressing the challenge of preserving USGS electronic records and its legacy of science data will require the investment in significant organizational capabilities and the development of policies, plans, and practices to guide the USGS migration from paper-based to electronic records management.



USGS water contaminant samples.

Section II

Performance Data and Analysis

Contents

Message from the Director, Office of Budget and Performance

I am pleased to communicate the progress that the U.S. Geological Survey (USGS) has made in the advancement of scientific understanding during the past year. Every day the more than 8,000 highly dedicated scientists, technicians, and support staff of the USGS are working in more than 400 locations throughout the United States to deliver science for a changing world. We value this report as an integral part of our efforts to further accountability to our stakeholders and customers, as well as the American public. This year's report builds on our efforts to increase transparency, improve efficiency and more effectively communicate our goals. We believe our commitment to deliver high performance translates to success for all of our stakeholders. The bureau's considerable and multifaceted responsibilities are reflected in the pages that follow, where you will learn of the exceptional accomplishments that make a positive impact on the quality of life in America.

After starting the fiscal year operating under a continuing resolution, in December the President signed the 2008 Omnibus bill, thereby enacting funding for most of the Federal Government, including the Department of the Interior and the USGS. For FY 2008, Congress allowed the USGS to exercise 2-year budget authority. For the first time in the 129-year history of the USGS, our appropriations topped the billion dollar mark at $1,006,482,000. As Director of the Office of Budget and Performance (OBP), I am extremely proud of this accomplishment and attribute this success to the exceptionally talented individuals that I am fortunate enough to work with on a daily basis. Working with programs and regions, my office conducts a variety of Management Control Surveys and Customer Satisfaction/Outcome Surveys that have led to many enhancements in products and improvements in management. Since 2001, more than 3,600 customers—mostly scientists and resource managers—have described their usage and satisfaction with various aspects of more than 100 different science products.

Our scientists dedicate themselves to impartial study of the landscape, our natural resources, and the hazards that threaten health and livelihoods, furthering the Department's Strategic Plan Goals for Resource Protection, Resource Use, and Serving Communities. Building on our ever-growing knowledge base, the people of the USGS have created a treasure trove of information that America's decisionmakers can use to protect the people of the United States and the health of their economy and environment. Continuous improvement in program quality and service to the public is rigorously pursued and achieved. In 2008, the USGS addressed a total of 30 specific program improvement actions with 79 milestones; 76 milestones and 27 actions were achieved and the 3 remaining actions and milestones have recovery plans. The USGS was also cited as a model for program improvement plan status reporting by OMB This is but one example of the many performance accomplishments we are proud to have achieved during the past year.

In FY 2008, we also made significant strides in advancing the Department's record for Management Excellence goals in both financial and performance management. The USGS continued to meet existing and new requirements under the Office of Management and Budget (OMB) Circular A-123, including travel card and Improper Payments Information Act requirements. I am proud to report that the USGS fully implemented the requirements to assess and report on internal controls this year—a noteworthy accomplishment given the scope of our activities and the complexity of our mission. The financial and performance information presented herein is complete and accurate, and in accordance with the OMB guidance and the Reports Consolidation Act of 2000.

For the past 7 years, the President has challenged us to meet rigorous performance standards through the President's Management Agenda (PMA). The PMA is the focal point for the bureau's effort in management improvement. The USGS is steadfast in pursuing the goals of the PMA as evidenced in the "green" progress scores received at the end of FY 2008 for all five of the governmentwide Presidential initiatives. The USGS has demonstrated innovation and leadership in performance management by streamlining performance systems, sharing lessons learned, and working collaboratively to manage for results. To effectively manage the bureau, executive and senior leaders meet regularly to prioritize activities, discuss emerging issues, and review long-term strategies. Quarterly Status of Funds and Performance Reviews and quarterly Investment Review Board (IRB) meetings for IT and facilities assets maintain senior officials' cognizance of and accountability for the infrastructure supporting science, expenditures, and results.

In these times of fiscal uncertainty, the USGS is facing considerable challenges in maintaining the level of service the American public deserve; however, our progress has been steady and our outcomes continue to make a positive impact on the Nation. The coming fiscal year promises many challenges, including transitioning into a new Administration. We expect to see our hard work pay off with a smooth transition as we continue to provide sound science for decisionmaking and meaningful management data in the months to come. As for the prosperity of the Nation, science drives that too; whether energy and mineral resources studies to fuel the country, water and biological information to increase agricultural production and the public's sense of health and well-being, geologic mapping and geospatial information to guide infrastructure improvements and landscape understanding, our science is here to serve society. We will continue to promote sound business practices and further accountability while fulfilling our mission in service to the American public through the advancement of scientific knowledge of a changing world.

Carla M. Burzyk
Director, Office of Budget and Performance
October 2008

Performance Improvement

The integration of budget and performance is critical to the planning for and evaluation of success achieved by the USGS in the application of its science to building long-term bodies of data and information ensuring their relevance to partner and customer needs. The USGS has been particularly successful in this endeavor, owing to the physical integration of its budget, regional, and planning and performance teams in its Office of Budget and Performance.

FY2007 Criteria	FY2008 Criteria
Agency achieves planned improvements in program performance and efficiency in achieving results each year.	Effectiveness and efficiency improved as a result of agency implementation of plan to fulfill the EO to improve program effectiveness each year and utilizes agency best practices identified by the Performance Improvement Council.
Strategic plans contain a limited number of outcome-oriented goals and objectives. Annual budget and performance documents incorporate measures identified in the PART and focus on the information used in the senior management report described in the first criterion.	Agency strategic/annual plans contain at least one outcome-oriented measure for each strategic goal and program.
Reports the full cost of achieving performance goals accurately in budget and performance documents and can accurately estimate the marginal cost of changing performance goals. Has at least one efficiency measure for all PARTed programs.	Annual budget and performance documents consistently incorporate performance measures, and include: • At least one outcome-oriented measure covering each major programmatic area or initiative; • At least one efficiency measure for each program. • A discussion of performance gains and shortfalls; • The full cost of achieving performance goals including marginal cost analyses; and • Evaluation study results including independent and impact program evaluations.
Uses PART evaluations to direct program improvements, and PART ratings and performance information are used consistently to justify funding requests, management actions, and legislative proposals. Less than 10% of agency programs receive a Results Not Demonstrated rating for two years in a row.	Performance Improvement Officers coordinate quarterly meetings with senior agency officials to examine demonstrated achievements in using financial and performance information to make periodic program management decisions in each strategic goal area. Agencies implement best reporting practices identified by PIC. Completes program improvement actions informed by analyses of annual program results, regular program assessments, impact evaluations, and other performance information. Ensures managers are held accountable for completing those improvements on time.

Working in constant contact, these teams jointly develop and produce budget and performance documents that are fully integrated with respect to description of base programs and analyses, their funding and FTE implications, what the standards of their performance will be and how they will be evaluated. The three teams work closely with bureau program staff to understand, evaluate, and plan the science programs' budget and performance levels, ensuring responsiveness to USGS executive management decisions, departmental concerns, and Administration policies.

FY2008 Status
• USGS implemented the Department's plan to fulfill the EO by using Representative Performance Measures (RPMs). Met or exceeded targets and tracked expenditures in 2007. In 2008 performance improved in Serving Communities, sustained in Resource Protection, and lower but not significantly so for Resource Use. • 64% of PART efficiency measures are met or exceed the plan in 2008. 29% did not meet target but were improving and 7% did not meet the appropriate target but have explained cause for the slight deviation which does not impact overall program performance. • OMB referenced the USGS Energy Resource program as a model for PART program improvement plan status reporting — "a good source on how to monitor, update and report on improvement plan actions." The details of this improvement action plan can be reviewed at: http//www.whitehouse.gov/omb/expectmore/detail/10001078.2993.html • Throughout the FY 2009 budget process, USGS documented full cost of achieving performance goals, demonstrated the costing relationship of intermediate and outcome measures, and cited marginal cost and incremental performance in program initiative funding requests. • Program evaluations are cited in the performance budget.
• In the Interior Strategic Plan, USGS has an outcome-oriented measure identified as a RPM for each relevant end-outcome goal for each mission area. USGS PART measures were used in revision of the Strategic Plan to directly link bureau program performance to the Department's strategic planning. • Performance Budget/annual plan includes long-term, outcome oriented, and efficiency measures for each program that has been evaluated with PART (does not include administrative programs) and end outcome oriented measures stepped down from goal level to many programs.
• The USGS Annual Performance Budget/annual plan fully describes the relationship between relevant Strategic Plan intermediate and end outcome goals and bureau performance measure targets. • The USGS Annual Performance Budget/annual plan has an outcome-oriented measure identified as a RPM for each relevant end-outcome goal for each mission area. • Each program has an efficiency measure documented in the Performance Budget and reported in the PAR. • Performance gains/decreases have been used in the Performance Budget/annual plan to justify program changes.
• Quarterly Status of Funds and Performance Reviews with the Executive Leadership Team (ELT) and quarterly Investment Review Board (IRB) meetings for IT and facilities maintain senior officials' cognizance of and accountability for the infrastructure supporting science, expenditures, and results. The executive leadership periodically reviews program and regional 5-year plans for approval and follows progress with briefings on accomplishments. Special ELT sessions are also conducted for financial decisionmaking. • Refined reporting to senior managers on financial progress in several areas to reflect the results down to individual science center level. • Quarterly post cost of work activities by goal, program, and region on the intranet for availability to all employees for their tracking of progress and for management decisionmaking. • Regularly scheduled meetings held to discuss costing the intermediate measures, common/shared bureau measures, and marginal cost issues and processes (e.g., tracking marginal cost associated with investment plans/WCF). • Completed 96% of 79 milestones established to complete 27 program improvement actions. • Continued to focus senior management on targeted areas for performance-improvement in this year's budget planning process.

PART

With program evaluations and peer review integral to our culture, the USGS has particularly focused on program improvement through OMB's Program Assessment Rating Tool (PART) process. Using R&D criteria, OMB completed the assessment of all USGS major programs in 2006 where they earned "Moderately Effective" or better. The effort in FY2008 focused on continuous improvement relative to original findings in the assessments. To this end, the USGS created and implemented annual improvement plans that consist of follow-up actions and milestones. In FY2008, the USGS had 79 milestones associated with 30 follow-up actions, of which 76 milestones and 27 actions were completed.

Activity Based Cost/Management

General ABC reports and data can be extracted by all managers at all levels on a daily basis for verifying and validating and for performing analyses for decisionmaking. Continued efforts are being applied to standardize processes, ensure consistency of interpretation and meet the need for costing representative performance measures of outcomes. Processes and reports are being refined to aid in the need for better tracking of full unit cost. Mapping of ABC codes to programs is now being implemented for the future FBMS system.

USGS Activities

The USGS conducts research, monitoring, and assessments to contribute to understanding the natural world—America's lands, water, and biological resources and processes as well as its natural hazards. By combining biology, geology, hydrology, and geography expertise in one agency, the USGS is uniquely positioned to provide science information and conduct scientific research that ensure an integrated approach to advance scientific knowledge, improved understanding and utilize the latest technologies to provide timely answers and products and improve the quality of life for the communities we serve.

The USGS provides reliable, impartial information to the citizens of this country and to the global community in the form of maps, data, and reports containing analyses and interpretations of water, energy, mineral, and biological resources; land surfaces; marine environments; geologic structures; natural hazards; and dynamic processes of the Earth. The USGS provides scientific information to understand issues such as coastal erosion and pollution, sea-level rise, loss of wetlands and marine habitats, the geological processes controlling the invasion of cheat grass, and the role of dust in desert ecosystem health. Armed with this understanding, decisionmakers can respond better to both natural and human-induced changes. Through the application of science, decisionmakers are able to address complex issues concerning public safety, our environment, and natural resources; to address public health questions; and to promote public prosperity for the future well being of our country. USGS data and information are used daily by managers, planners, and citizens to understand, respond to, and plan for changes in the environment. Examples of the multitude of users are provided in the Management Discussion and Analysis section. USGS research and data products support the Department's resource and land management needs and provide the science information needed by other Federal, State, Tribal, and local government agencies; industry groups; agricultural interests; academia; non-profit organizations; and the American public to guide planning, management, and regulatory programs.

Strategic Plan

The Department of the Interior's Strategic Plan for Fiscal Year 2007-2012 integrates and aligns bureau responsibilities under four major mission areas and documents our commitment to achieving results through the use of rigorous performance measures and management excellence. For the USGS, a single science goal is repeated for each of our mission areas (Resource Protection, Resource Use, and Serving Communities). While programs may support more than one mission area, they have been identified with the primary area that they support. Therefore, most Geography, Geology, Biology, and Water Resources programs as well as Enterprise Information's National Geospatial Program are aligned with Resource Protection. Geology's Energy and Minerals programs are aligned with Resource Use and Geologic Hazards programs with Serving Communities. Science Support

and Facilities budget activities and the Enterprise Information resource, security and technology subactivities sustain the organization and are treated as indirect costs, being distributed to all measures to achieve full cost of performance.

The Department's Strategic Plan frames organizational responsibilities and operational assumptions, and converts them into expectations for performance and accomplishment. Essentially, it provides a high-level overview of performance, setting large mission goals and broad program objectives. Its greatest value, day-by-day, comes from connecting that larger view with each day's ground-level work. The USGS outcomes and measures focus on providing science to customers for solving the Nation's complex land- and resource -management problems and to minimize the loss of life and property from natural disasters. Performance measures serve as stepping stones to the goal and the outcome, keeping the program on track, on time, and within budget.

The Strategic Plan structure is built on a logic model focused on end outcomes; each mission area has its own end outcome goals. Supporting the end outcome goals are intermediate outcome goals and measures, with outputs that verify progress toward outcome achievement. Performance targets are set at every level, providing numerical measures of the USGS accomplishment that vary with inputs (financial and human resources).

Outputs are typically quantifiable products of work processes or activities. Activity-based costing connects outputs to costs and creates a powerful management tool for identifying efficiencies, focusing attention on achievement and innovation, and moving more quickly to spread best practices throughout the organization.

The Management's Discussion and Analysis section focuses on end outcome measures. The ultimate outcome related to providing scientific information is that our customers and partners use the information to make informed decisions. The Performance Data and Analysis section expands USGS performance data and accomplishments to include all performance measures that were used to request funding and to match achievement of these metrics against the targets that were set for the President's Budget request. Some variance in performance is due to funding actually received in the 2008 enacted appropriation.

Results

SP = Strategic Plan key measures
RPM = Representative Performance Measure
PART = PART Measure
BUR = Bureau specific measures

The PART and bureau level performance measures and their performance results are included with the strategic plan measures within the tables to follow. The following legend applies:

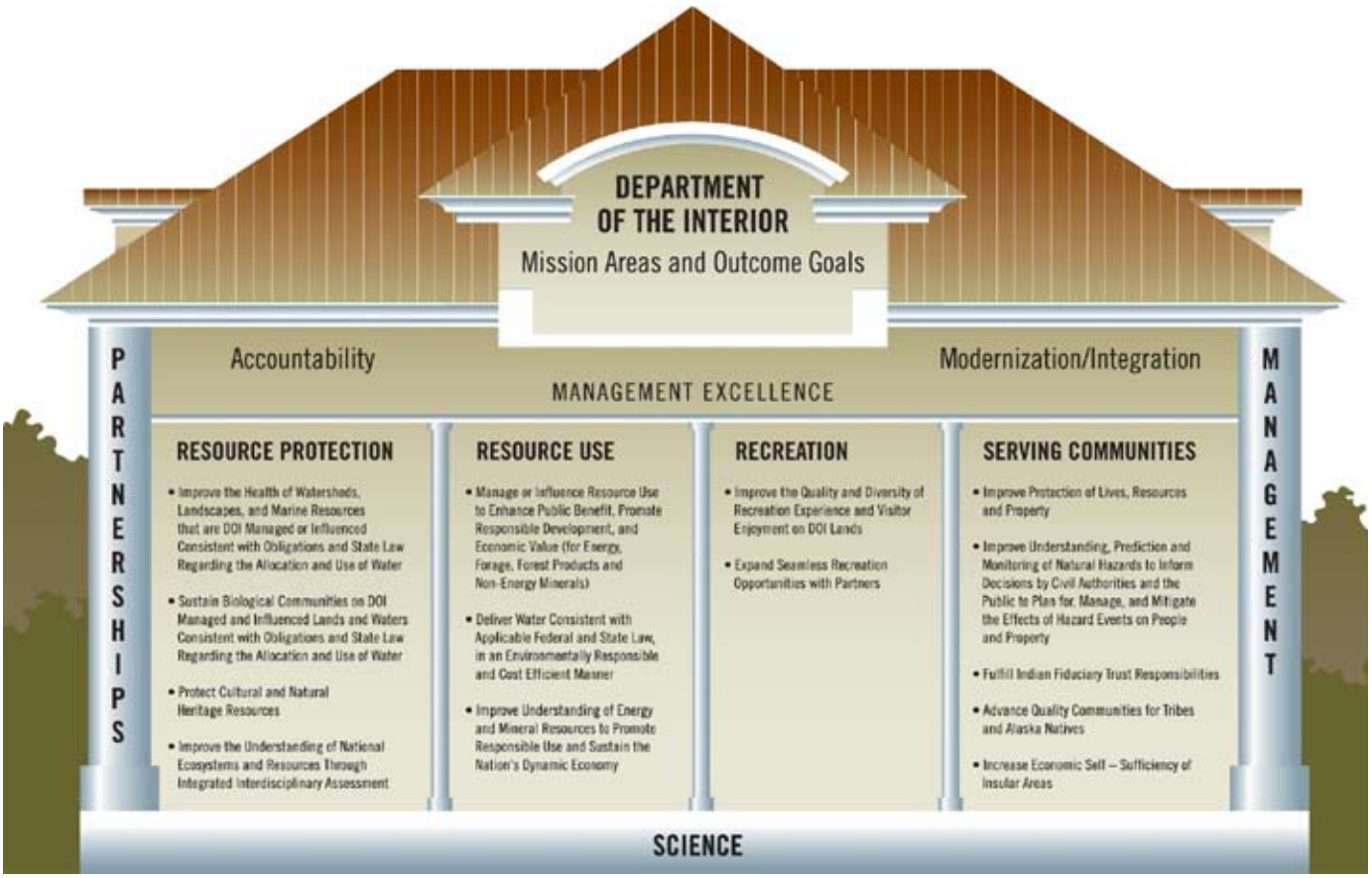
√ Targets Met or Exceeded
▲ Targets Not Met but Improving
▼ Targets Not Met
■ Targets Rebaselined

Each analysis of results begins with Target Met or Exceeded; Target Not Met but Improving; or Target Not Met.

The Department's Strategic Plan is available at the following address: http://www.doi.gov/ppp/Strategic%20Plan%20FY07-12/strat_plan_fy2007_2012.pdf

How We Performed in FY2008:

The USGS met the representative measures monitored during FY2008. Summary results for all performance measures are presented on the next page.



This structure depicts the four mission areas of the Department and the supporting pillars of partnerships and management. Science is presented as the foundation for informed resource-management decisions.

Summary of Performance Measure Results in FY2008:

√ Targets Met or Exceeded ▲ Targets Not Met but Improving ▼ Targets Not Met ■ Targets Rebaselined

End Outcome Goal	Total Number of Measures	Number of Measures Met or Exceeded	Number of Measures Not Met but Improving	Number of Measures Not Met	Number of Measures Rebaselined	Number of Measures Estimated
Resource Protection: Protect the Nation's Natural, Cultural, and Heritage Resources						
Improve the understanding of National ecosystems and resources through integrated interdisciplinary assessment.	71	58	4	7	2	0
Resource Use: Manage Resources to Promote Responsible Use and Sustain a Dynamic Economy						
Improve the understanding of energy and mineral resources to promote responsible use and sustain the Nation's dynamic economy.	16	14	0	2	0	0
Serving Communities: Improve Protection of Lives, Property, and Assets; Advance the use of Scientific Knowledge; and Improve the Quality of Life for the Communities We Serve						
Improve the understanding, prediction, and monitoring of natural hazards to inform decisions by civil authorities and the public to plan for, manage, and mitigate the effects of hazard events on people and property.	24	23	0	1	0	0
Totals	111	95	4	10	2	0

In the following pages, we present each of our performance measures with historical and current year results in relation to their applicable mission area and end outcome goals. For those measures that did not meet expected results, comments are provided immediately following the tables results. Highlights of significant accomplishments illustrating our work performed are also included in the following pages.

Resource Protection: Protect the Nation's Natural, Cultural, and Heritage Resources

End Outcome Goal:

Improve the understanding of National ecosystems and resources through integrated interdisciplinary assessment.

√ Targets Met or Exceeded ▲ Targets Not Met but Improving ▼ Targets Not Met ■ Targets Rebaselined

GPRA End Outcome Measure

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
1	Percent of targeted science products that are used by partners for land or resource management decisionmaking (DOI strategic plan key measure)	90%	93%	93%	≥90%	93%

√ Target Met or Exceeded. This measure is tracked by survey of customers and partners. The target is a threshold below which performance would indicate a problem that needs corrective action. So long as the actual result is above the target level, the process is under control and no corrective action is needed.

Intermediate Outcome: Ensure availability of long-term environmental and natural resource information, data and systematic analyses needed by land and resource managers for informed decisionmaking

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
2	Percent of North American migratory birds for which scientific information on their status (species distribution and number) and trend are available (PART measure) (DOI strategic plan key measure)	26%	26%	26.6%	26.6%	26.6%

√ Target Met or Exceeded

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
3	Percent of targeted fish and aquatic populations for which information is available regarding limiting factors (PART measure) (DOI strategic plan key measure)	31%	31%	38.66%	41%	41%

√ Target Met or Exceeded

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
4	Percent of targeted invasive species for which scientific information and decision support models are available to improve early detection (including risk assessments) and invasive species management (PART measure) (DOI strategic plan key measure)	51.6%	51.6%	54%	54%	54%

√ Target Met or Exceeded

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
5	Percent improvement in detectability limits for selected high-priority environmentally available chemical analyses (PART Efficiency measure)	n/a	6%	12%	19%	19%

√ Target Met or Exceeded

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
6	Increase long-term precision (decrease bias) for existing species monitored through the Breeding Bird Survey to enable a detection of 50% population decline of relevant species within 20 years (PART measure)	n/a	.0008	.0008	.008	.008

√ Target Met or Exceeded. Note that the 2008 target was corrected from 0.0008 to 0.008 due to earlier typographical error. The bias is derived from a statistical formula.

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
7	Percent of Cooperative Research Units students that work on subsequent fish and wildlife science advanced degrees or obtain employment in the fish and wildlife or other natural resources field, within targeted dates post-graduation	n/a	95%	95%	95%	95%

√ Target Met or Exceeded

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
8	Percent of focal migratory bird populations for which scientific information is available to support resource management decisionmaking (USGS in coordination with FWS) (PART measure)	n/a	56.88%	57.02%	57.16%	55.18%

■ Targets Rebaselined. These figures are based on an average of the 'state of knowledge' for the USFWS focal species considered to date. When the 2008 target was set, the six species included American Oystercatcher, Marbled Godwit, American Woodcock, Common Eider, Laysan Albatross, and Black-footed Albatross. In 2008, another species, the Cerulean Warber, was added to the species list to calculate the 'state of knowledge' for the focal species. When this species was included, the average was brought down, essentially recalibrating the target and will require baselining.

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
9	Percent of US land with land characterization and species distribution information available for resource management decisionmaking updated in the last 5 years (PART measure)	23.3%	42.3%	36.4%	37%	39%

√ Target Met or Exceeded

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
10 Old	Percent of North American migratory birds for which scientific information on their status (species distribution and number) and trends are available in a standardized and exchangeable format, to improve conservation plans of Federal and State agencies) (PART measure)	20%	25%	30%	31%	*

* Measure replaced with below measure with OMB approval. The word change is being proposed to make the measure more specific and therefore more meaningful.

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
10 New	Percent of focal migratory bird populations for which species pages are available through the NBII (BIMD) (PART)	na	na	8%	15%	15%

√ Target Met or Exceeded

11 Percent of North American amphibians and reptiles for which scientific information on their status (species distribution) are available in a standardized and exchangeable format, to improve conservation plans of Federal and State agencies (PART measure)

2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
90%	91%	92%	93%	93%

√ Target Met or Exceeded

12 Percent of North American mammals for which scientific information on their status (species distribution) are available in a standardized and exchangeable format, to improve conservation plans of Federal and State agencies (PART measure)

2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
93%	94%	94%	95%	95%

√ Target Met or Exceeded

13 Old Percent of US Federally-listed threatened and endangered or indicator fish species for which scientific information on a species status is available in a standardized and exchangeable format, to improve conservation plans of Federal and State agencies (PART measure)

2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
7.5%	12.4%	17.5%	20%	*

* Measure replaced with below measure with OMB approval. Simplified wording. Targets remain the same.

13 New Percent of US Federally-listed threatened and endangered fish species for which species profiles, ocurrence data and maps are available through the NBII (BIMD)(PART)

2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
na	na	17.5%	20%	20%

√ Target Met or Exceeded

14 Percent of river basins that have streamflow stations (PART measure) (DOI strategic plan key measure)

2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
82%	81%	81%	84%	79%

▼ Targets Not Met. Net loss of streamgages is due to funding erosion and changing requirements. Metric and requirements are being rebaselined using an automated process.

15 Percent of the Nation's 65 principal aquifers with monitoring wells used to measure responses of water levels to drought and climatic variations to provide information needed for water-supply decisionmaking (PART measure) (DOI strategic plan key measure)

2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
61%	61%	60%	60%	58%

▼ Targets Not Met. Cost increases for operation and maintenance resulted in a reduction of one monitoring well that could be supported with available funding.

16 Percent of targeted contaminants for which methods are developed to assess potential environmental and human health significance (PART measure) (DOI strategic plan key measure)

2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
20%	85%	41%	33%	35.7%

√ Target Met or Exceeded. In addition to 83 chemicals on the target list, methods were developed for an additional 55 chemicals that were not on the target list, raising the total chemicals for which environmental data was published to 138.

17 Percent of streamflow stations with real-time measurement/reporting of water quality (PART measure)

2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
7%	9%	11%	11%	11.6%

√ Target Met or Exceeded

18 Percent of ground-water stations that have real-time reporting capability in the ground-water climate response network (PART measure)

2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
67%	47%	52%	53%	54%

√ Target Met or Exceeded

19 Percent of U.S. with ground-water quality status and trends information to support management decisions (PART measure)

2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
39%	58%	68%	70%	76%

√ Target Met or Exceeded. Selected well networks planned for sampling in 2009 were completed in 2008 due to cost efficiency.

20 Percent of States with Web-based streamflow statistic tools to support water management decisions (PART measure)

2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
10%	14%	18%	26%	28%

√ Target Met or Exceeded. 1 State had additional resources that permitted faster deployment of streamflow statistics tools.

21 Percent of U.S. ground-water availability status and trends information to support resource management decisions (PART measure)

2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
7%	8%	9%	11%	11%

√ Target Met or Exceeded

22 Percent improvement in accuracy of watershed (SPARROW) model prediction for total nitrogen and total phosphorus (measured as reduced error) (PART measure)

2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
31%	24%	20%	20%	20%

√ Target Met or Exceeded

23	Percent of proposed streamflow sites currently in operation that meet one or more Federal Needs (PART measure)	2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
		61%	61%	62%	64%	62%

■ Targets Rebaselined. Target for the number of streamgages was met and exceeded, with the excess being due in part to additional (unanticipated) funding provided by Federal and non-Federal partners in the streamgaging program. In 2008 there was a National Academy of Science review recommended an increase in the proposed number of National Streamflow Information Program Federal-needs streamgages (the denominator for this measure).

24	Percent of surface area of the coterminous U.S. for which high-resolution geospatial datasets are cataloged, managed, and available through the *National Map* (DOI strategic plan key measure)	2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
		n/a	n/a	99.71%	100%	100%

√ Target Met or Exceeded. Determined that high-resolution geospatial data would not be made available for one sensitive area. Measure is complete with 699 areas.

25	Percent of the area of 11 Western States for which orthoimagery have been acquired through a FSA/ USGS partnership with other entities to achieve a 5-year cycle for 1-meter NAIP imagery	2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
		43%	23%	100%	100%	100%

√ Target Met or Exceeded

26	Percent of total cost FSA and USGS saved through partnering with other entities for imagery acquisition of 1-meter NAIP orthoimagery	2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
		44%	41%	32%	36%	27%

▼ Targets Not Met. State and Federal partners contributed less amounts than expected.

27	Percent of data acquisition costs for the *National Map* funded by partners	2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
		47%	74%	59.3%	60%	71%

√ Target Met or Exceeded

28	Percent of surface area with contemporary land cover data needed for major environmental monitoring and assessment programs (DOI strategic plan key measure and PART measure)	2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
		65%	94%	95%	100%	99.3%

▲ Targets Not Met but Improving. Late delivery of products from cooperators has delayed processing and completion of the land cover database. One of three layers of data, completion of metadata, and posting to the web for one State remains and will be completed by the end of first quarter 2009.

29 Percent of surface area with temporal and spatial monitoring, research, and assessment/data coverage to meet land-use planning and monitoring requirements (number of completed eco-region assessments out of 84 eco-regions) (PART measure)

2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
37%	48%	61%	69%	71%

√ Target Met or Exceeded

30 Percent of data accessible: Percentage of satellite data available from archive within 24 hours of capture (PART measure)

2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
97.2%	98.7%	95%	95%	95%

√ Target Met or Exceeded

31 Percent of US with regional geologic map coverage that is available to customers through the National Coopertive Mapping Database (PART measure)

2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
53%	55%	60.4%	63%	64.6%

√ Target Met or Exceeded. Due to improved collection of information pertaining to geologic map publication.

32 Percent of geologic investigations in NPS units that are cited for use by the NPS within three years of delivery (PART measure)

2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
80%	80%	100%	80%	92%

√ Target Met or Exceeded. Due to higher than anticipated number of NPS users of NCGMP publications.

33 Percent of EDMAP students that work on subsequent geoscience degrees or obtain a job in a geoscience field (PART measure)

2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
94%	95%	94%	95%	100%

√ Target Met or Exceeded

34 Percent of US with geologic maps that are being integrated into ground-water availability status and trends to support resource management decisions (PART measure)

2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
5%	6%	8%	10%	12%

√ Target Met or Exceeded. Because an opportunity with southern Nevada public lands management led to additional work on basin and range carbonate aquifers.

35 Number of counties or comparable jurisdictions that have adopted hazard mitigation measures based in part on geologic mapping and research (PART measure)

2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
10	12	14	14	17

√ Target Met or Exceeded. Due to several unanticipated communities using USGS geologic mapping information and research.

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
36	Percent of NPS units for which envionmental characterization based on airborne remote sensing is provided as digital GIS products and for which products are cited or use by NPS within two years (PART measure)	50%	50%	60%	75%	75%

√ Target Met or Exceeded

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
37	Percent of regional and major topical studies for which interpretive and synthesis products are cited by identified partners and users within three years of study completion (PART measure)	80%	80%	80%	80%	80%

√ Target Met or Exceeded

Intermediate Outcome: Ensure the quality and relevance of science information and data to support decisionmaking

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
38	Percent of studies validated through appropriate peer review or independent review (DOI strategic plan key measure)	100%	100%	100%	100%	100%

√ Target Met or Exceeded

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
39	Percent satisfaction with scientific and technical products and assistance for environmental and natural resource decisionmaking (DOI strategic plan key measure)	96%	91%	90%	≥90%	93%

√ Target Met or Exceeded. Customer satisfaction measures are a type of statistical quality control - with the target being the threshold level. That is, an actual result below the target would indicate a problem that needs corrective action. So long as the actual result is above the target level, the process is under control and no corrective action is needed.

PART Efficiency and Other Output Measures

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
40	Average cost per sample for selected, high priority environmentally available chemical analysis (PART measure)	$700	$680	$680	$650	$660

▲ Targets Not Met but Improving. Automation of methods and reduction in solvent use, salary (time) and supply costs (adjusted for inflation) reduced average cost. Increased costs of chemicals for analyses due to increases in manufacture of all petrochemical products and shipping costs prevented attainment of target.

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
41	Number of cumulative gigabytes managed (Biology)	791	1,134	931	1,000	710

▼ Targets Not Met. Actual 2008 aggregated total is lower than the target due to elimination of duplicates.

42	Number of annual gigabytes collected (Enterprise Information)	2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
		6,023	76,550	94,802	24,344	133,452

√ Target Met or Exceeded. While the number of geospatial features increased in the database, software upgrades to ArcSDE version 9.2 decreased the size of the database.

43	Number of cumulative gigabytes managed (Enterprise Information)	2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
		108,035	187,842	278,646	249,679	410,713

√ Target Met or Exceeded

44	Number of annual terabytes collected (Geography)	2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
		438.8	537.9	96	278	535.2

√ Target Met or Exceeded

45	Number of cumulative terabytes managed (Geography)	2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
		2,887.4	3,425.3	4,255.9	3,556.6	3,840.6

√ Target Met or Exceeded

46	Number of annual gigabytes collected (Geology)	2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
		117.8	218.8	1,570	210.8	686.8

√ Target Met or Exceeded

47	Number of cumulative gigabytes managed (Geology)	2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
		1,016	1,235	2,824.6	2,981.4	3,457.4

√ Target Met or Exceeded

48	Number of systematic analyses and investigations delivered to customers	2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
		2,127	2,157	2,879	2,530	5,513

√ Target Met or Exceeded. Due to unanticipated requests for additional products, and due to rebaselining needed during implementation of a new enterprise-wide information product tracking system that came online part way through the year.

49	Number of formal workshops or training provided to customers	2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
		403	313	392	195	386

√ Target Met or Exceeded. USGS had unexpectedly high demand from customers for workshops and/or training sessions.

50 Number of data standards used in implementing The National Map (NGP) (PART Measure)

2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
22	22	22	22	22

√ Target Met or Exceeded

51 Number of students who completed degree requirements for MS, PhD, and post-doctoral programs under the direction and mentorship of cooperative research unit scientists

2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
100	103	95	90	83

▼ Target Not Met. The number of students declined consistent with the decline in the number of research scientists that can be supported by the program. Productivity per scientist has not decreased.

52 Amount of fire-related data and information available on-line via the NBII, to assist land managers in fire management decisionmaking (PART measure)

2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
1.5 gb	15.42 gb	23.3 gb	30 gb	35 gb

√ Target Met or Exceeded. In 2008, the US Forest Service provided resources for the upgrade and enhancement of software and content for the Fire Research and Management Exchange System (FRAMES), resulting in more content than expected.

53 Number of Natural History Museum specimen data records available on-line via the NBII, to assist researchers in identifying and addressing threats to human and animal health (PART measure)

2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
20M	57.6M	59.3M	60M	60M

√ Target Met or Exceeded

54 Amount of invasive species data and information available on-line via the NBII, to assist in modeling and forecasting the spread of invasives (PART measure)

2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
800 mb	1,137 mb	1,441 mb	1,441 mb	1,542 mb

√ Target Met or Exceeded

55 Number of NBII Clearinghouse metadata records (BIMD) (PART Measure)

2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
NA	NA	29,170	41,000	41,000

√ Target Met or Exceeded

56 Average cost per gigabyte of data available through servers under program control (PART Efficiency measure)

2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
$63,000	$17,155	$3,794	$3,794	$3,794

√ Target Met or Exceeded

57 Number of real-time streamgages reporting in NWIS Web (PART measure)

2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
6,246	6,496	6,728	6,830	6,936

√ Target Met or Exceeded

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
58	Number of real-time ground-water sites reporting in NWIS Web	796	917	983	984	1,120

√ Target Met or Exceeded

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
59	Number of real-time water-quality sites reporting in NWIS Web	1,125	1,102	1,249	1,249	1,402

√ Target Met or Exceeded

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
60	Percent of WRD streamflow stations with 30 or more years of record (PART measure)	58%	59%	59%	58%	60%

√ Target Met or Exceeded

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
61	Percent of daily streamflow measurement sites with data that are converted from provisional to final status within 4 months of day of collection (PART measure)	10%	20%	24%	29%	28%

▲ Targets Not Met but Improving. Due to delay in implementing new system in the Northeast States.

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
62	Average cost per analytical result, adjusted for inflation, is stable or declining over a 5-year period (PART measure)	$8.63	$8.34	$8.08	$8.64	$7.87

√ Target Met or Exceeded.

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
63	Cost variance and scheduled variance for the LDCM project remained with +/- 10% tolerance	n/a	8%	44%	8%/0%	10%/0%

√ Target Met or Exceeded

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
64	Number of hours for fieldwork, compilation, and publication of a typical geologic map (PART Efficiency measure)	3,070	2,980	2,890	2,810	2,786

▼ Targets Not Met. The performance goal was set at an appropriate target level, and the deviation from that level is slight. There is no effect on overall program or activity performance.

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
65	Number of State Geological Surveys that add geologic map information to the National Cooperative Mapping Datatbase (PART measure)	48	49	50	51	51

√ Target Met or Exceeded. All 50 States and Puerto Rico have added information to the NGMDB. Measure is complete; 2008 is the last year for this measure.

66 Number of EDMAP students trained each year (PART measure)

2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
62	66	58	60	44

▼ Targets Not Met. Due to reduced number of proposals received from universities.

67 Number of digital geographic information products for priority NPS units that provide environmental characterization based on airborne remote sensing (PART measure)

2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
10	8	10	10	10

√ Target Met or Exceeded

68 Fraction of significant landfalling hurricanes for which post-storm assessment of impact are developed (PART measure)

2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
3/3	≥ 3/4	0/1	≥ 3/4	2/2

√ Target Met or Exceeded. USGS responded to both major hurricanes of the 2008 season, that is Hurricanes Gustav and Ike.

69 Percent of open ocean and great-lakes shoreline of coterminous US for which up-to-date characterization of the shoreline is provided (PART measure)

2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
62%	80%	80%	90%	90%

√ Target Met or Exceeded

70 Cost of collection and processing of airborne remote sensing data for coastal characterization and impact assessments (PART measure)

2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
.56	.55	.57	.35	.50

▲ Targets Not Met but Improving. Hyperspectral sensor could not be added to the Experimental Advanced Airborne Research Lidar (EARRL) suite until later than planned this year. Currently purchasing new laser which will result in cost reduction in 2009.

71 Number of environmental products in marine protected and managed areas provided for resource management and restoration planning (PART measure)

2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
54	63	76	75	75

√ Target Met or Exceeded

Examples of Resource Protection Goal Accomplishments

What's the Buzz? – A Gateway to Pollinator Resources on the Web

Over 4,000 species of bees, the primary pollinators of plants and agricultural crops, can be found in North America. Yet our knowledge of pollinators, their habitat needs, and the threats they are facing is limited. Successful monitoring, management, and conservation of pollinators and their habitats depend on the availability and accessibility of pollinator data and information. The National Biological Information Infrastructure (NBII) Pollinators Web site combines ecological and biological information on pollinator species including, bees, bats, hummingbirds, butterflies, and moths; pollination and related issues; and provides increased exposure and access to other important pollinator information sources.

In 2008, two areas of the Website in particular, the Pollinator Species area and the Conservation area, have been significantly enhanced with the addition of comprehensive information about representative U.S. native pollinator species and leading pollinator conservation initiatives and organizations. An additional content area, Threats, has also been developed to accommodate information and resources about Colony Collapse Disorder, Invasive Species, and other threats to pollinator conservation. Content areas being delivered in 2008 and in 2009 include those providing access to USGS research and the resulting datasets (where available), and on specific or taxonomic groups of bees found in North America. The site provides an education and communication conduit to USGS scientists for pollinator research, recommendations, and other information.
The NBII Pollinators Website was developed in partnership with the Ecological Society of America, North American Pollinator Protection Campaign, USDA, FWS, Smithsonian National Zoological Park, universities, the Duke Lemur Center, and by numerous private pollinator photographers.

A bumble bee (Bombus sp.) forages for pollen on the flower of a musk or nodding thistle (Carduus nutans) in an abandoned agricultural field. The thistle flower is approximately 3 inches in diameter. Banshee Reeks Nature Preserve, Loudoun County, Va., USA.

Invasive Plant Atlas of New England used as Model for Initiatives Nationwide

Often, non-native invasive species become established without anyone taking immediate notice; however, the public may take notice once a species becomes established and widespread. "Early Detection and Rapid Response" is one of the critical components of the National Invasive Species Council's Management Plan, "An Action Plan for the Nation," which stresses the importance of coordinated efforts of all stakeholders. A methodology for dealing with early detection, rapid assessment, and rapid response has been established as part of the Invasive Plant Atlas of New England (IPANE). IPANE serves as the model regional network of a broader national level invasive species framework for early detection, rapid assessment, and rapid response. IPANE products are now being used as templates for enhancements to a National Early Detection Toolbox. The toolkit includes basic information on forming invasive plant species interest groups gleaned from work pioneered by IPANE. Parts of the toolkit are built on the New England States' aquatic programs and will use IPANE aquatic information. IPANE has trained over 700 volunteers throughout New England on scientifically sound methods for collecting and reporting invasive species plant occurrences on the Web.

A collaborative effort between IPANE, the USDA, and the Appalachian Mountain Club establishes a "localized early detection network" for partner agency staff and citizen scientists working in new incursions of invasives reported shortly after the kick-off training session for the White Mountain Early Detection Network (WMEDN). IPANE and USDA personnel instructed over 100 participants on the identification of the 12 species of invasive plants and 4 species of invasive insects chosen as the focus of the training. The USGS collaborates with the Center for International Earth Science Information Network (CIESIN) at Columbia University, as well as with Discover Life, on this effort.

The Connecticut State Legislature recently cited IPANE for its valuable contribution to the prevention of invasive plant invasions, including the development of an official invasive species plant list. Connecticut Governor M. Jodi Rell also commended IPANE as one of five organizations in Connecticut "working diligently to educate the public on the identification, management, and use of native plants and other non-invasive alternatives that can be planted instead of invasive plants..."

USGS NBII Releases Improved Interface for Metadata Clearinghouse

The NBII Clearinghouse is a critical portal for record and data discovery through the use of metadata records. Originally, the Clearinghouse focused on servicing data providers. It organized metadata to highlight the contributors. The focus changed as metadata became an accepted and highly supported standard of effort for data management and sharing within the science community. The NBII refocused the Clearinghouse to respond more specifically to the research needs of the data user while continuing to recognize data providers. A new second generation user interface was designed to organize metadata records in such a way that benefits both users and providers. It now presents relevant records through a ranking and filtering system controlled by the user.

In 2008, the NBII (in conjunction with DOE's Oak Ridge National Laboratory) released the new enhanced version of the NBII Clearinghouse with powerful search capabilities and updated features. With over 40,000 records from 41 partners, users can search geographically or by specifying particular data providers (i.e., all USGS records), then bookmark or e-mail record results. Users can view search results in a combined view from all providers, or use filters to dynamically sort search results. A user can be informed about new metadata records in their interest areas as the data in the Clearinghouse grows. The new release can be accessed on the Internet at http://mercury.ornl.gov/nbii. The NBII is one of the principal organizations in the ORNL Mercury Consortium, along with NASA, DOE, and others, in support of making data and information available to all sectors.

Users of the NBII Clearinghouse range from biologists in Federal and State Agencies, land managers, data managers, research scientists, and the public. Our most recent monthly usage counts show increasing user numbers and burgeoning search hits via the Website.

Polar Bear Survival in a Vanishing Sea Ice Environment

With changes in sea ice recently observed in Alaska, many are concerned that U.S. polar bear populations will be adversely affected. USGS scientists have already documented one change in polar bear behavior, a shift in maternal dens from pack ice to land. Working with Canadian scientists, they also have documented declines in the survival rates and population size of polar bears in western Hudson Bay in connection with the melt of sea ice in that region, an event that now occurs 3 weeks earlier than in past years.

The USGS assembled an international team of scientists to conduct a series of analyses to help inform the Secretary's decision on whether to list polar bears under the Endangered Species Act. Partners included FWS, Canadian Wildlife Service, USDA, Ontario Ministry of Natural Resources, University of Alaska, Fairbanks, University of Wisconsin, Madison, Woods Hole Oceanographic Institution, Wildlife Conservation Society, and Western EcoSystems Technology, Inc.

The USGS team produced nine technical reports within 6 months to assist the Secretary in finalizing his decision. The collective work had three broad goals:

to document the current status of polar bears in the Beaufort Sea and southern Hudson Bay based on long time series of unanalyzed data; to predict how polar bear demographics in the Southern Beaufort Sea and sea ice habitat in the polar basin will change based on forecasts from global climate models; and to forecast the future status of polar bear populations across their geographic range.

The studies project a decline in polar bear populations throughout their range during the 21st century; however, the severity of the decline will depend on local sea ice conditions. In areas like Alaska where sea ice recedes far north of the continental shelf each summer and fall, extinction by mid-century will most likely be the outcome. Polar bears are predicted to persist longer in areas of northern Canada and Greenland where sea ice is expected to be more stable.

On the basis of the science, the Secretary listed the polar bears as a threatened species under the Endangered Species Act and issued administrative guidance and a rule that defines the scope of impact in order to protect the polar bear while limiting unintended harm to the U.S. society and economy.

The USGS is continuing its long-term studies of polar bears to evaluate and test the models it developed in the nine reports. This work is critical as seasonal sea ice continues to recede at unprecedented rates in the Arctic.

Research to support Polar Bear finding under the Endangered Species Act.

Geologic Maps Aid Park Service, Forest Service, and State Agencies in Missouri

Publication of geologic maps of the Piedmont Hollow (http://pubs.usgs.gov/sim/2979/) and the Cedar Grove quadrangles in 2008 mark delivery of a total of 14 geologic quadrangle maps on or in the vicinity of the Ozark National Scenic Riverways Park (ONSR; NPS) and the Mark Twain National Forest. Issues that are positively impacted by these data include (1) inventory of geologic databases mandated by the NPS for its parks, (2) studies of potential impacts on ground-water quality as a result of proposed base-metal prospecting in the Mark Twain National Forest, and (3) ecologic land-type classification and soil studies being done by the Missouri Department of Conservation and the Missouri Cooperative Soil Survey on State lands and in the ONSR. Ecologic land-type maps are used on State and Federal lands to manage activities such as land access, hunting seasons, and controlled underbrush burning. Investigators with these agencies also use USGS digital geologic data as an aid to their field activities.

Emerging Contaminants in the Nation's Ground Water and Untreated Drinking-Water Sources

A recent USGS report on emerging contaminants in the Nation's streams received widespread acknowledgement for getting the issue of pharmaceuticals, household chemicals, and other emerging contaminants on the radar screen as an important new environmental issue (http://toxics.usgs.gov/highlights/whatsin.html). In 2008, the USGS published two followup studies that collected baseline information on the environmental occurrence of pharmaceuticals, personal-care products, surfactants, flame retardants, naturally occurring sterols, and other organic contaminants commonly associated with human- and animal-waste sources in ambient ground water and in untreated sources of drinking water (both from wells and at stream intakes). Forty-seven wells in 18 States, and 74 sources of drinking water (25 wells and 49 streams) in 25 States were sampled. More information and the data from these studies are available on the Internet at http://in preparation.

USGS geologist enters data into a global-positioning-system-enabled hand-held computer while conducting field work on the upper Jacks Fork River, Mo., in the Ozark National Scenic Riverways Park.

USGS Tackling Fish Endocrine Disruption

USGS scientists continue to make significant contributions to the understanding of endocrine disruption in fish. Intersex, the presence of internal or external female characteristics in male fish, is being observed in more stream sites across the Nation. Studies have demonstrated that exposure to chemicals that are endocrine active can cause these effects on a fish and can have catastrophic effects on fish populations. A study of endocrine disruption in fish in Boulder Creek, Colorado, demonstrated how a complex mixture of endocrine-active chemicals in wastewater effluents can have an additive effect on local fish. Another study documented complex effects of fish exposure to nonylphenol, a surfactant used in large quantities in commercial and household detergents. They found that behavior of exposed males versus those not exposed varied significantly with exposure level. Low doses "primed" the males for breeding competition, whereas higher exposures inhibited their breeding behavior. In still another study, scientists studying fish health and intersex in the Potomac River in Virginia and West Virginia documented intersex in smallmouth bass and are continuing to evaluate the potential linkage to endocrine-active chemicals. More information on these studies can be found on the Internet at http:// in preparation.

USGS Responds to the Floods of 2008 with Technologies that Realize the Bureau's Vision for Better, Faster, Safer, and More Efficient Means of Water-Resources Data Collection and Dissemination

Repeated flooding of the Mississippi and Ohio River valley over the winter and spring of 2008 was met by a highly motivated and well-equipped and trained workforce of USGS hydrologists and hydrologic technicians. Their job is to (1) collect water-resources data to verify streamflow ratings and models; (2) maintain the field streamgaging and telemetry equipment vital to putting timely information into the hands of first responders, National Weather Service, emergency management agencies, water management agencies, and other users of the information; and (3) to analyze and document extreme hydrologic conditions (floods and droughts) for long-term water-resource management decisions. The widespread use of new technologies by the USGS such as real-time satellite telemetry, global positioning systems (GPS) enabled-field computing technologies, and acoustic Doppler current profiler (ADCP) streamflow-discharge measurement equipment, has transformed how the USGS responds to these extreme events. Record numbers of high-quality measurements are being made with smaller crews, more fuel-efficient vehicles, with less safety risk and timelier reporting of results. Stories and testimonials can be accessed at: http://www.usgs.gov/homepage/science_features/flooding_june08.asp.

Biosolids, Animal Manure, and Earthworms: USGS Makes the Connection

Animal manure and biosolids (the solid byproduct of wastewater treatment) often are applied to agricultural crops to provide nutrients for plant growth and to improve the quality of soil. Earthworms studied in agricultural fields where manure and biosolids were applied were found to contain organic chemicals from household products and manure. Earthworms continuously ingest soils and may accumulate soil contaminants in their bodies. The chemicals detected included the active ingredients commonly found in a variety of household products—including the disinfectant found in antibacterial soaps, fragrances

used in perfumes and detergents, and an antibiotic. These results were published in the Journal Environmental Science and Technology. These results build upon two recent studies that found that household chemicals were detected in biosolids and that pharmaceuticals were found in soil irrigated with reclaimed water. More information on these studies is available on the Internet at http://toxics.usgs.gov/highlights/earthworms.html. The information is very valuable to those who are looking at alternative ways of handling wastes intended for use as fertilizer. It is also useful to a wide range of scientists who are studying the potential adverse ecological health effects of the release of emerging contaminants to the environment.

USGS Completes the National Land Cover Database for Alaska

The USGS, on behalf of the interagency Multi-Resolution Land Characteristics (MRLC) Consortium, released the 2001 National Land Cover Database (NLCD 2001) for Alaska. This is the first time 30-meter-cell land cover has been produced for the State. The "2001" refers to the year which most of the Landsat imagery was captured. The NLCD 2001 for Alaska contains 19 land-cover classes, including three (dwarf scrub, sedge/herbaceous, and moss) that were specifically developed for the State. The NLCD 2001 products include land cover identified for all 30-meter cells across the State, and for the percentage of urban imperviousness and tree canopy for select 30-meter cells. NLCD information is essential for addressing a wide variety of issues, such as assessing ecosystem status and health, understanding spatial patterns of biodiversity, understanding climate change, and developing land management policy. Information from the original NLCD produced for the conterminous United States with 1992 imagery (NLCD 1992) has been used in thousands of applications in the private, public, and academic sectors, and the national consistency of the information is especially valuable for regional and national applications. Future updates of NLCD 2001 are planned to provide a way to monitor and assess land-cover change across the Nation. NLCD products are Web enabled and available for download from the MRLC Web site at http://www.mrlc.gov.

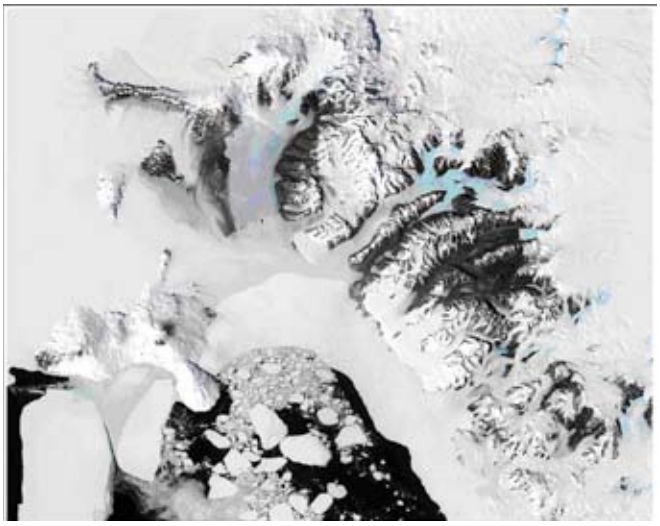
Extraordinary Response to the Landsat Image Mosaic of Antarctica (LIMA)

In stunning, up-close, and personal detail, the Landsat Image Mosaic of Antarctica (LIMA) brings Antarctica to life, both for the scientific community and the general public at large. The USGS led the effort, in cooperation with the National Aeronautics and Space Administration and the British Antarctic Survey, to produce LIMA, the most geometrically accurate, virtually cloudless, seamless, and highest resolution image map of Antarctica. The National Science Foundation funded the project. Created from over 1,000 Landsat 7 Enhanced Thematic Mapper Plus (ETM+) Antarctica scenes, LIMA went live online in late November 2007 to an extraordinary public reaction. The LIMA Web site (http://lima.usgs.gov) received 4 million hits in the first 12 hours after LIMA became available. The USGS was contacted by news media from around the world.

With such worldwide focus on the poles and their effect on global climate change, LIMA plays a critical role in supporting and fulfilling USGS science strategy and International Polar Year (IPY) goals. LIMA is an international effort, supports current scientific polar research, encourages new projects, and helps the general public visualize Antarctica and changes happening to this southernmost environment. LIMA has become available at a crucial moment when polar research is more critical and more projects are commencing or are in the planning stage (see http://lima.usgs.gov/documents/LIMAFactSheet.pdf).

Imagery from the Natural-Color, Pan-Sharpened LIMA (bands 3,2,1). A slender glacier tongue feeds into Radok Lake, a 6-kilometer (4-mile) meltwater lake near the Amery Ice Shelf.

Imagery from the Natural-Color, Pan-Sharpened LIMA (bands 3,2,1). Oblique view of McMurdo Dry Valleys.



Antarctica—a frozen dream comes to life through the extraordinary focus of LIMA. This section of the Natural-Color, Pan-Sharpened LIMA (bands 3, 2, 1) includes McMurdo Station (United States), the largest research base in Antarctica, at the tip of Hut Point Peninsula on Ross Island. Also visible are the Koettlitz and Ferrar Glaciers, and the Royal Society Range.

Biscayne Bay

In 2007, USGS scientists completed the development and calibration of an integrated surface- and ground-water model of Biscayne National Park (BNP) and surrounding areas. This calibrated modeling tool was utilized to assist in the determination of potential sources of hypersalinity in Biscayne Bay. The analysis of the model results and statistical analysis of data to determine the sources of hypersalinity to Biscayne Bay, which indicated that the hypersaline events were potentially a combination of canal operations and declines in rainfall, will be documented in a journal article in 2008. This work was jointly funded by Interior and the South Florida Water Management District. The model is also being used to provide insight into the causes of ecosystem degradation and to predict the effects of Everglades Restoration on future freshwater inflows to the bay.

Partnerships for Geospatial Data for The National Map

The National Geospatial Program has developed partnerships through its National Spatial Data Infrastructure (NSDI) Liaison network to acquire, maintain, and steward geospatial data for The National Map at a cost of $5.6 million. By acting as a coordinator with other agencies, the USGS has leveraged the $5.6 million investment to a total value of about $35 million. After quality assurance and control, the data will be made publicly available online for a myriad of government and private uses. Examples of leveraging funding between levels of government for maximizing geospatial data acquisition are as follows:

Boston Orthoimagery Agreements Exceed All Expectations

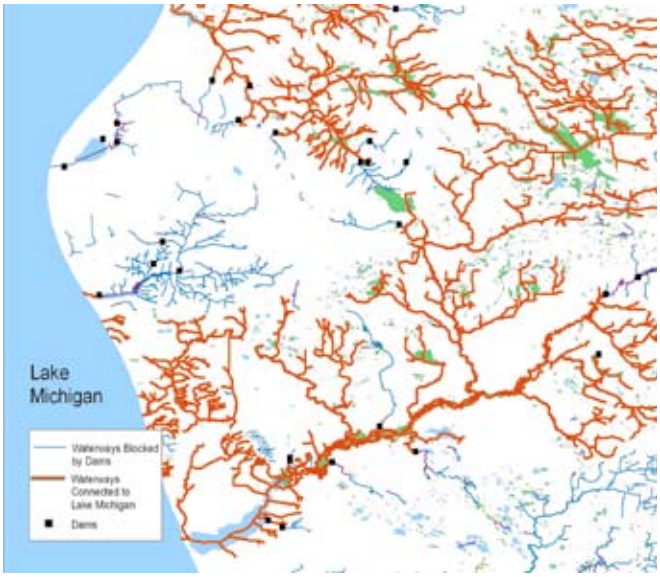
Thirty Boston area municipalities have partnered with the USGS for new four-band color, 0.15-meter (about 6-inch) pixel-resolution orthoimagery. The project meets local needs while greatly benefitting all levels of government, including USGS science programs and USGS geospatial program goals for the NSDI. By cooperating in this way, data costs were reduced across all levels of government.

As an outgrowth of the Imagery for the Nation Initiative, the Boston Upgrade project is a collaboration to put high-quality geospatial data into the public domain, utilizing Federal and State efficiencies and economies of scale while reducing costs at each level of government. It eliminates redundant procedures, contractor mobilization costs, contract management, as well as minimizes impacts on administrative resources. The USGS had previously negotiated a contract for new 2008 orthoimagery over the Boston Urban Area, funded by NGA. Learning of this, the directors of Massachusetts' Office of Geographic and Environmental Information (MassGIS) offered to

work with the USGS to negotiate "buy up" agreements for individual municipalities to pay for more detailed imagery over their parts of the Boston Urban Area footprint. The USGS liaison to Massachusetts helped negotiations between MassGIS and the USGS. This is the largest collaborative geospatial project accomplished by the USGS and demonstrates the level of interest for the data and for such cooperation. The USGS processed all 30 Joint Funding Agreements in a narrow timeframe necessitated by the window of opportunity for the spring 2008 flight.

U.S. Environmental Protection Agency has three significant uses of the National Hydrography Dataset (NHD). One is the addressing of events such as the location of impaired water, assessed water, permitted discharges, drinking-water intakes, and other points collected by the EPA and its State environmental partners. In this role, many individual water program databases managed by the EPA become integrated when linked to the NHD's common geospatial reference system. Over 8 million events in more than a dozen major water-program databases are now linked to the NHD. A second use is the communication of this information to the public through data displays on the Web such as the EPA's EnviroMapper for Water. The third use is in analysis involving the relationship between water uses and the quality of water supplying those uses. An important issue is the location of water classified as impaired for a particular use, designated as Impaired Water and known by the designation 303(d) after the relevant section of the Clean Water Act. These waters are identified in the NHD with an address locating the beginning point downstream and ending point upstream where the water has been given this designation. If water is designated as being impaired for use as drinking water, for example, then its relationship to drinking water intakes is of critical importance

At the *Institute of Fisheries Research* in Michigan the NHD is an important part of decision support for understanding the impact of dams and barriers on fish migration. Michigan has over 5,000 dams, and many of Michigan's inland waters are not accessible by fish species dependent upon upstream habitat for spawning. One of the benefits of a fish barrier, such as a dam, is the ability to block the passage of invasive species. For example, Lake Michigan contains over 160 invasive species, many brought in from around the world by discharged ballast tank water in ships. Many of these nonnative species can move upstream and infest the inland waters of a State such as Michigan. Scientists use GIS to analyze those waters directly connected to the Great Lakes and those isolated by dams or other barriers. While dams are blocking some invasive species from moving to inland waters, they are also blocking the movement of native species such as sturgeon, which need to swim upstream to spawn. So studies are underway to assess the impact of dams on fish migration, passage, and spawning within the Great Lakes Basin. A balance between protecting inland waters from invasive species and providing fish passage opportunities needs to be achieved, and a GIS using data such as the NHD is an important part of the analytical process. In studying this issue, fisheries scientists in Michigan recognize that not all streams can support sturgeon spawning, and accurate measures are necessary when weighing the balance between the positive and negative environmental and economic impacts of dams. Removing a dam may open up many miles of streams to migration and potentially restore a fishery. However, if only a small portion of those streams provide quality sturgeon habitat, then perhaps removing the dam may not be as beneficial as originally thought. The NHD network, in concert with dam and stream-habitat event data, is a critical component to advancing fisheries science and management in the Great Lakes region.



GIS map depicting upstream dams and fish passage routes in the area around Little Sable point and Muskegon, western Michigan.

The Landsat Legacy Continues…

Currently, NASA and the USGS are engaged in a partnership to continue to acquire Landsat-quality data that meet both NASA and USGS scientific and operational requirements for observing land use and land change. The LDCM activities transitioned from a planning phase into a full-fledged development effort to support a 2011 target launch date for the next Landsat mission – the 8th in a long, successful legacy of remote sensing missions. In accordance with the Project's Integrated Master Schedule (IMS), the Project has completed six element-level requirement reviews for the LDCM Ground System. In addition, the contracts needed to support development – the Landsat Data Continuity Contract (LDCC) and the Technical Support Services Contract (TSSC) -- were awarded in March 2008 and contract transition was accomplished during April 2008. The USGS also funds the Landsat Science Team (LST), which serves in an advisory capacity to NASA and the USGS on issues associated with the mission development.

GeoMAC Wildland Fire Support

GeoMAC is an interactive web application that the USGS developed and maintains for users to view fire locations and fire perimeters integrated with satellite, weather and historic fire data. After logging onto geomac.gov the user can use the 'Jump to Fire' tool to go directly to the fire of interest. This brings up the fire at a larger scale and allows the user access to more data layers. Data layers can be turned 'on and off' for viewing by checking the box in front of the layer. Users can access data from the Remote Access Weather Stations data, the National Interagency Fire Center, and fire weather warnings with just a few mouse clicks. GeoMAC has received 40 million requests so far this year. By far the busiest month was July, during the height of the California fires, with 18 million requests.

The weekend of June 21-22, a dry low-pressure system crossing through California produced dry lightening and ignited nearly 2000 fires across 17 counties causing one of the earliest starts to fire season in recent years. As of July 11, it was reported that a total of 793,483 acres had burned, exceeding the number of acres burned in the California Wildfires of 2007 and 2003. The National Preparedness Level quickly went to Level 5 (http://en.wikipedia.org/wiki/National_preparedness_level), which meant that the USGS and BLM personnel would process and load the wildland fire perimeter data into GeoMAC seven days a week. To date, over 5,000 perimeters have been loaded into the application, no small task when compared to 2,000 plus that were loaded in the 2007 fire season. The GIS Standard Operating Procedures on Incidents directs the GIS Specialists on a fire to upload their daily fire perimeters to the ftp.nifc.gov site so they would be available outside of the Incident. Perimeters are loaded into GeoMAC for public viewing but they are also made available to researchers, fire response personnel, NORTHCOM, the Red Cross, FEMA, academia and a host of other organizations and interested parties through a download site and an interactive data delivery system.

2008 California wildland fire complexes displayed in GeoMAC.

Comment from a GeoMAC user:
Thanks to all for putting together a great mapping site for fire information! Your mapping site works well, is easy to navigate, and appears to be exceptionally timely.

Comment from a homeowner in an area threatened by fire.
As a resident of Seiad Valley, California, your site has taken on new importance with the recent (late August 2008) "SLICKARD" fire which is just a few miles from our home. Somehow you folks have managed to provide up-to-date information which is often significantly delayed from other sources. Additionally, I have been able to keep out-of-town friends up to date on progress of the fire by comparing your mapping data to personal observations from various locations surrounding the fire. Reports they are most interested in because of their homes very close proximity to the northwest fire perimeter.

Resource Use: Manage Resources to Promote Responsible Use and Sustain a Dynamic Economy

End Outcome Goal:

Improve understanding of energy and mineral resources to promote responsible use and sustain the Nation's dynamic economy.

√ Targets Met or Exceeded ▲ Targets Not Met but Improving ▼ Targets Not Met ■ Targets Rebaselined

GPRA End Outcome Measure

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
72	Percent of targeted science products that are used by partners for land or resource management decisionmaking (DOI strategic plan key measure)	86.5%	87.5%	99%	≥ 90%	95%

√ Target Met or Exceeded. This measure is tracked by survey of customers and partners. The target is a threshold below which performance would indicate a problem that needs corrective action. So long as the actual result is above the target level, the process is under control and no corrective action is needed.

Intermediate Outcome: Ensure availability of energy and mineral resources information and systematic analyses needed by land and resource managers for informed decisionmaking

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
73	Number of targeted basins with energy resource assessments available to support management decisions (DOI strategic plan key measure and PART measure)	7	6	5	5	5

√ Target Met or Exceeded

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
74	Percent of targeted non-fuel mineral commodities for which up-to-date deposit models are available to support decisionmaking (DOI strategic plan key measure and PART measure)	n/a	n/a	0%	7%	7%

√ Target Met or Exceeded

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
75	Baseline Information: Average square miles of the United States with non-energy mineral information available to support management decisions (PART measure)	3,097,647	3,318,208	3,346,000	3,346,000	3,346,000

√ Target Met or Exceeded. This measure was completed at the end of 2007.

Intermediate Outcome: Ensure the quality and relevance of science information and data to support decisionmaking

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
76	Percent of studies validated through appropriate peer review or independent review (DOI strategic plan key measure)	100%	100%	100%	100%	100%

√ Target Met or Exceeded

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
77	Percent satisfaction with scientific and technical products and assistance for natural resource decisionmaking (DOI strategic plan key measure)	n/a	n/a	97%	≥ 80%	97%

√ Target Met or Exceeded. Customer satisfaction measures are a type of statistical quality control - with the target being the threshold level. That is, an actual result below the target would indicate a problem that needs corrective action. So long as the actual result is above the target level, the process is under control and no corrective action is needed.

PART Efficiency and Other Output Measures

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
78	Number of annual gigabytes collected (Energy)	97.793	158.048	37.409	20.038	1.173

▼ Targets Not Met. The shortfall is due to the untimely passing of key personnel related to data collection. The Energy Program will revisit this target in future planning to synchronize the target metric with realistic expectations of gigabyte growth.

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
79	Number of cumulative gigabytes managed (Energy)	351.289	509.338	546.747	544.864	547.920

√ Target Met or Exceeded

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
80	Number of cumulative gigabytes managed (Minerals)	16.131	16.221	16.3	16.3	16.3

√ Target Met or Exceeded

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
81	Number of systematic analyses and investigations delivered to customers	10	11	11	8	8

√ Target Met or Exceeded

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
82	Number of formal workshops or training provided to customers	16	15	15	14	14

√ Target Met or Exceeded

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
83	Percent of targeted analyses/investigations delivered which are cited by identified partners within 3 years of delivery (Energy) (PART measure)	86%	82%	82%	≥ 80%	87%

√ Target Met or Exceeded

84	Average cost of a systematic analysis or investigation (PART measure) (ERP)	2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
		$2.73M	$1.98M	$1.3M	$2.75M	$2.46M

√ Target Met or Exceeded

85	Number of mineral commodity reports available for decisions (PART measure)	2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
		746	690	717	700	649

▼ Targets Not Met. Consolidated some topics that had been reported individually, lowering the total number of reports without changing the information reported. In addition, 2008 is the first year of implementation of the Most Efficient Organization (MEO) in the minerals information data collection function. The transition to the MEO required hiring and training new staff, as well as redefinition of workflow. As a result, a series of reports that are usually monthly were temporarily published with several multi-month reports with no loss of information (but a considerable decrease in timeliness). Finally, consolidation in the steel industry resulted in consumption data for molybdenum and vanadium being reported incorrectly. USGS analysts caught the errors before publication and are working with the newly merged company to have them corrected. When this process is complete, eleven reports that have been held up will be released.

86	Percent of targeted analyses/investigations delivered that are cited by identified partners within 3 years of delivery (Minerals) (PART measure)	2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
		87%	93%	93%	≥ 80%	100%

√ Target Met or Exceeded

87	Average cost of a systematic analysis or investigation (PART measure) (MRP)	2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
		$4.18M	$4.3M	$3.7M	$4.9M	$4.7M

√ Target Met or Exceeded

Examples of Resource Use Goal Accomplishments

The First-Ever Assessment of Technically Recoverable Gas-Hydrate Resources – Alaska North Slope

Gas hydrate is a crystalline solid formed of water and natural gas (usually methane) and is potentially one of the most important energy resources for the future. Gas hydrate looks much like ice, but contains abundant amounts of methane (natural gas) in a solid form. Gas hydrates are known to exist in huge quantities in marine sediments several hundred meters below the sea floor and are also found in association with permafrost in the Arctic. The amount of natural gas resources projected to be contained in gas hydrates is huge and represents an enormous potential domestic resource. If we can understand how to produce this energy source safely, in an environmentally sound manner, gas hydrate production could significantly diversify the supply of our domestic energy resources. With the recognition of potentially vast gas hydrate accumulations beneath the sea along the outer continental margins of the world's oceans and in terrestrial permafrost regions of the Arctic, interest in the potential of gas-hydrates as an energy resource has grown in the last decade.

In the United States, almost all of the gas-hydrate potential lies under Federally managed lands or waters. However, the precise magnitude and producibility of an accumulation at a given site remains very much in question. Future contributions from gas-hydrate to world energy supplies depend on these issues pertaining to the availability, producibility, and cost of extracting methane from the hydrate phase. In 2008, the USGS released a first-ever assessment of technically recoverable gas-hydrate resources. This

assessment addresses the recoverability and potential production characteristics of onshore natural gas hydrates and associated free-gas accumulations. This work is being done in cooperation with the Bureau of Land Management (BLM).

The major USGS customers for this effort [BLM and Alaska Department of Natural Resources (DNR)] are responsible for oil and gas development that takes place on Alaskan and Federal public lands, as well as for most pipeline right-of-ways. The research that the USGS produces through this cooperative study will provide the BLM and the Alaska DNR with the knowledge of where potential gas-hydrate development may take place. For more information on USGS domestic and international gas-hydrate research activities, please visit http://energy.usgs.gov/other/gashydrates/.

Improved Understanding to Responsibly Meet America's Energy Resource Needs

The third phase of the Energy Policy and Conservation Act (EPCA) Inventory of oil and natural gas resources was delivered to Congress and released to the public in May 2008. This inventory is the culmination of a multi-agency collaborative effort that includes the USGS, BLM, the U.S. Forest Service, the Department of Energy, and the Energy Information Administration. This effort is in response to legislative mandates in Section 604 of the Energy Policy and Conservation Act of 2000, and further amended by Section 364 of the Energy Policy Act of 2005. These mandates called for an inventory of all onshore Federal lands to identify "the United States Geological Survey estimates of the oil and gas resources underlying these lands; and the extent and nature of any restrictions or impediments to the development of the resources…" This EPCA Phase III Inventory report, entitled Inventory of Onshore Federal Oil and Natural Gas Resources and Restrictions to Their Development, represents the first true national assessment of the restrictions and impediments to oil and gas exploration and development. The basis for the inventory came from USGS assessments for undiscovered, technically recoverable oil and gas.

This EPCA report includes all onshore Federal lands within the United States, and areas covered in detail by the Phase II inventory of 2006, which were updated where needed, and six additional areas (Central and Southern Alaska, Eastern Oregon-Washington, and the Ventura, Williston, and Eastern Great Basins) are analyzed in detail. The results show that 279 million acres of Federal lands are within areas mapped as having oil and natural-gas potential. These lands contain an estimated 31 billion barrels of oil and 231 trillion cubic feet of natural gas. The report provides an inventory of the extent and nature of limitations to development of these resources and does not make any policy recommendations in response to its findings. Federal land and resource managers use this information to develop Resource Management Plans and Environmental Impact Statements. Organizations and Federal and international agencies studying domestic and international energy markets use this information to make projections regarding future oil and gas supplies, as well as policy regarding energy resources and supply.

Central Colorado Assessment Project: Geoscience for Mineral Resource and Environmental Assessments of Public Lands

Central Colorado remains one of the fastest growing regions in the western United States. Population growth has caused tremendous pressure on a variety of natural resources and has created many land management issues for local, State, and Federal government agencies. One of the principal land management agencies in the area, the U.S. Department of Agriculture Forest Service (FS), requested studies of four National Forests in central Colorado in preparation for their cyclic forest planning efforts. Compilation of newly acquired data and the results of past studies has provided the FS with accurate and up-to-date earth science data that are compatible with existing FS GIS (Geographic Information Systems) layers used in the planning process. Selected spatial data layers delivered include geology (seamless geologic maps at the scale of 1:100,000), geochemistry (rock and stream-sediment data), geophysics (magnetic, filtered magnetic, gravity, filtered gravity, airborne radiometric), remote sensing, locations of known mineral deposits with claim history, and rock age determinations. The FS will use this new geoscience data to better understand the distribution of metallic, industrial mineral resources that may have potential for development, as well as the geochemical and environmental effects of

historic mining activity on surface and ground water and aquatic life. The study area includes much of the Colorado Mineral Belt, a northeast-trending zone in central Colorado that has provided much of Colorado's historical metal production and continues to provide most of the State's metal production.

USGS research improves cyanide management

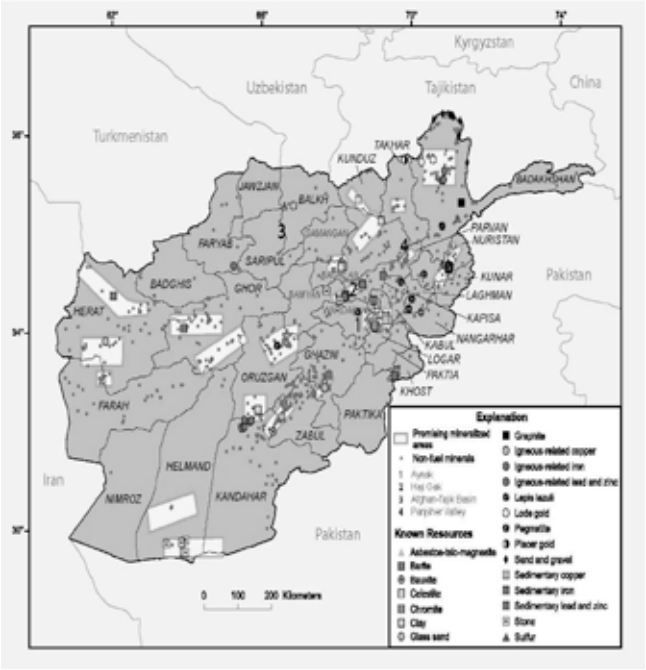
Cyanide is an effective metallurgical agent that liberates gold cheaply and efficiently from mined ores, but it can also be toxic to wildlife. Recently completed USGS research demonstrates that the environmental risk posed by using cyanide to process gold ores might be diminished if closer attention were paid to monitoring and remediation of cyanide-cobalt complexes. These complexes result from the trace amounts of cobalt that are found in many gold ores, and appear under some circumstances to be longer lived than other cyanide-metal complexes.

In case studies of mining operations in three western states, improved analytical techniques developed in USGS laboratories allowed recognition of a cyanide-cobalt complex that older methods could not detect. Toxicity tests using rainbow trout and freshwater crustaceans revealed that the cyanide-cobalt complex is not especially hazardous to aquatic life, but that exposure to sunlight causes the complex to break down and then release cyanide in a highly toxic form.

Domestic gold production, which in 2007 placed the United States fourth among gold-producing nations, relies heavily on mines located on both Federal and private lands that employ cyanide heap leach technology to extract gold from ore. Because cyanide presents possible environmental consequences to wildlife, regulations require removal of cyanide from waters discharged from both active and inactive mine sites. The improved analytical methods developed at the USGS make it possible to routinely detect low levels of cyanide-cobalt complexes as part of improved water treatment and site remediation at active and abandoned mine sites.

Significant Potential for Undiscovered Resources in Afghanistan

Afghanistan has significant amounts of undiscovered non-fuel mineral resources according to the USGS' 2007 assessment. USGS scientists worked cooperatively with the Afghanistan Geological Survey of the Afghanistan Ministry of Mines, between 2004 and 2007, to compile existing information about known mineral deposits and evaluate the possible occurrence of undiscovered deposits of non-fuel mineral resources. This assessment will be used in rebuilding Afghanistan's natural resources sector, provide valuable new information to the global business and mining communities, and serve as a foundation for future work on areas of mineral resource potential. "Afghanistan's natural resources have a quality comparable to the highest-class minerals of the entire region," said Afghanistan's Ambassador to the United States Said T. Jawad. "We are grateful to the efforts of the USGS and our Ministry of Mines in allowing global investors an opportunity to receive the latest information on their assessment for more informed business decisions." The USGS was commissioned by the U.S. Agency for International Development and the Islamic Republic of Afghanistan to develop this assessment. Results of the 2007 preliminary assessment of non-fuel mineral resources of Afghanistan are available at the USGS Afghanistan Web site (http://afghanistan.cr.usgs.gov) and at the Afghanistan Geological Survey Web site (http://www.bgs.ac.uk/afghanminerals/).



Map of Afghanistan showing mineralized areas recommended for further study (rectangular areas), known non-fuel mineral deposits and prospects (small dots), and selected mineral deposits for which resources have been published in the past (various symbols).

Serving Communities: Improve Protection of Lives, Property, and Assets; Advance the Use of Scientific Knowledge; and Improve the Quality of Life for Communities We Serve

End Outcome Goal:

Improve the understanding, prediction, and monitoring of natural hazards to inform decisions by civil authorities and the public to plan for, manage, and mitigate the effects of hazard events on people and property.

√ Targets Met or Exceeded ▲ Targets Not Met but Improving ▼ Targets Not Met ■ Targets Rebaselined

GPRA End Outcome Measure

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
88	Percent of communities/Tribes using DOI science on hazard mitigation, preparedness, and avoidance for each hazard-management activity (Hazards) (DOI strategic plan key measure)	45%	48%	50%	53%	53%
	√ Target Met or Exceeded					

Intermediate Outcome: Provide information to assist communities in managing risks from natural hazards

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
89	Number of areas for which detailed hazard assessments are completed (DOI strategic plan key measure)	n/a	49	51	53	53
	√ Target Met or Exceeded					
90	Number of urban areas for which detailed seismic hazard maps are completed (PART measure)	3	3	3	4	4
	√ Target Met or Exceeded					
91	Number of metropolitan regions where Shakemap is incorporated into emergency procedures (PART measure)	5	5	5	5	5
	√ Target Met or Exceeded					
92	Percent of potentially hazardous volcanoes with published hazard assessments (PART measure)	62.8%	64.3%	65.7%	67.1%	67.1%
	√ Target Met or Exceeded					
93	Use Rate — Earthquakes: Percentage of communities using DOI science on hazard mitigation, preparedness, and avoidance for each hazard management activity	63.4%	63.9%	67%	67%	67%
	√ Target Met or Exceeded					

94	Use Rate — Landslides: Percentage of communities using DOI science on hazard mitigation, preparedness, and avoidance for each hazard management activity	2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
		3.9%	4.4%	4.9%	5.4%	5.4%

√ Target Met or Exceeded

95	Use Rate — Volcanoes: Percentage of communities using DOI science on hazard mitigation, preparedness, and avoidance for each hazard management activity	2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
		66.4%	74.2%	76.6%	85.9%	85.9%

√ Target Met or Exceeded

96	Use Rate — Landslide Hazards: Number of responses to inquiries from the public, educators, and public officials to the National Landslide Information Center on hazard mitigation, preparedness, and avoidance strategies for landslide hazards	2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
		5,200	1,600	1,600	1,600	1,600

√ Target Met or Exceeded

Intermediate Outcome: Ensure the quality and relevance of science information and data to support decisionmaking

97	Percent of studies validated through appropriate peer review or independent review (DOI strategic plan key measure)	2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
		100%	100%	100%	100%	100%

√ Target Met or Exceeded

98	Percent satisfaction with scientific and technical products and assistance for natural hazard planning, mitigation, and emergency response (DOI strategic plan key measure)	2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
		n/a	n/a	87%	≥ 80%	87%

√ Target Met or Exceeded. Customer satisfactiion measures are a type of statistical quality control - with the target being the threshold level. That is, an actual result below the target would indicate a problem that needs corrective action. So long as the actual result is above the target level, the process is under control and no corrective action is needed.

PART Efficiency and Other Output Measures

99	Number of systematic analyses and investigations delivered to customers	2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
		6	4	248	239	221

▼ Targets Not Met. Resources were directed to developing the earthquake components of the multi-hazards demonstration projects in California and the Pacific NW. Additional workshops were held (see above). As a result of the demonstration projects, 2008 R&D activities have produced new research results that will be published in 2009.

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
100	Number of real-time ANSS earthquake sensors (reported yearly and cumulative at the end of the year) (PART measure)	40 cuml 563	160 cuml 723	63 cuml 786	17 cuml 803	19 cuml 805

√ Target Met or Exceeded

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
101	Percent of earthquake monitoring global seismic network stations that have telemetry (increase reporting speed from one hour to 20 minutes)	86%	89%	96%	93%	96%

√ Target Met or Exceeded.

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
102	Number of formal workshops or training provided to customers	19	15	14	12	19

√ Target Met or Exceeded. Resources were directed to developing the earthquate components of the multi-hazards demonstration projects in California, the Pacific NW, and the Central U.S.; these activities required additional coordination workshops.

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
103	Number of sites (mobile or fixed) monitored for ground deformation to identify volcanic activity	88	94	159	170	174

√ Target Met or Exceeded

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
104	Number of areas or locations for which geophysical models exist that are used to interpret monitoring data (PART measure)	4 ⅓	4 ⅔	5	5 ⅓	5 ⅓

√ Target Met or Exceeded

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
105	Number of volcanoes for which information supports public-safety decisions (PART measure)	51	51	52	52	52

√ Target Met or Exceeded

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
106	Percent of potentially active volcanoes monitored (PART measure)	72.9%	72.9%	74.3%	74.3%	74.3%

√ Target Met or Exceeded

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
107	Number of counties, or comparable jurisdictions, that have adopted improved building codes, land-use plans, emergency response plans, or other hazard mitigation measures based on USGS earthquake-hazards information (PART measure)	565	569	593	593	593

√ Target Met or Exceeded

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
108	Number of counties, or comparable jurisdictions, that have adopted improved building codes, land-use plans, emergency-response plans, or other hazard-mitigation measures based on USGS landslide hazards information (PART measure)	71	80	89	98	98

√ Target Met or Exceeded

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
109	Number of counties, or comparable jurisdictions, that have adopted improved building codes, land-use plans, emergency-response plans, or other hazard-mitigation measures based on USGS volcano-hazards information (PART measure)	170	190	196	220	220

√ Target Met or Exceeded

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
110	Percent data availability for real-time data from the GSN (PART measure)	89%	88%	88%	86%	87%

√ Target Met or Exceeded

		2005 Actual	2006 Actual	2007 Actual	2008 Planned	2008 Actual
111	Data processing and notification costs per unit volume of input data from earthquake sensors in monitoring networks (in cost per gigabyte) (PART measure)	.79 $k/Gb	1.3 $k/Gb	1.19 $k/Gb	1.33 $k/Gb	.89 $k/Gb

√ Target Met or Exceeded. Efficiency was achieved by replacing a higher-cost contractor with a lower-cost government employee, and by continuing to leave one position unfilled. Unexpected year-end porcessing of tape data also contributed to high performance.

Examples of Serving Communities Goal Accomplishments

Ground-Motion Models Predict Shaking Intensity

The USGS has developed a new set of ground-motion prediction relations that uses a global dataset of earthquakes containing important close-to-rupture recordings for recent earthquakes, including the magnitude-7.5 Izmit (Turkey) and magnitude-7.6 Chi-Chi (Taiwan) earthquakes. The new relations are used to predict ground shaking for future earthquakes in a variety of applications that help reduce earthquake risk and ensure public safety. They are applied in the 2008 update of the USGS national seismic hazard maps, which are used by engineers for earthquake provisions in building codes throughout the Nation, as well as for earthquake loss estimation and setting premiums for earthquake insurance. The new relations are also key components for assessment of earthquake hazard for critical facilities in the western United States.

Earthquake Scenario for Southern San Andreas Fault Released

In May 2008, the USGS Multi-Hazards Demonstration Project released a scenario describing the expected impacts that a magnitude-7.8 earthquake on the Southern San Andreas Fault would have on southern California and the Nation. Information in the scenario can be used to reduce lifeline vulnerability, retrofit critical structures, improve monitoring systems, plan emergency response, and educate our citizens. This November, the scenario will be the basis of the Golden Guardian exercise, which is to be the largest emergency drill ever planned in California. It is being organized by FEMA and the California Offices of Homeland Security and Emergency Services. This professional emergency response drill will run concurrent with a public preparedness exercise called the Great Southern California ShakeOut that will engage local school districts and businesses to practice earthquake safety drills. The public exercise is being organized as part of a major Dare to Prepare campaign by the Earthquake Country Alliance, a broad public-private coalition of organizations.

USGS researchers led the construction of the scenario to represent a realistic example of what a future large earthquake on the San Andreas fault might look like. Using the predicted fault displacements from the scenario earthquake, as well as established methodologies to predict the shaking levels throughout southern California, enables USGS researchers and stakeholders to consider in detail the potential impact of a future "Big One" in California. The total impact of this scenario earthquake is estimated to be approximately 1,800 fatalities and about $200 billion in losses. Among its findings, this work has highlighted significant lifeline vulnerabilities at key transportation arteries that cross the fault. USGS researchers have been in close communication with lifeline operators to discuss results and concerns.

Using USGS Earthquake Science to Inform Mitigation Efforts

On July 8, 2008, almost 19 years after the 1989 Loma Prieta earthquake, San Francisco's current Mayor announced legislation to speed up the retrofitting of soft-story construction which was especially vulnerable to the earthquake and resulted in substantial damage and loss of life. The legislation would expedite the review and wave associated fees for permits to retrofit soft-story buildings which have more windows and doors than solid wall on the first floor.

About 2001, the San Francisco Department of Building Inspection established a Community Advisory Panel for Seismic Safety (CAPSS) to recommend mitigation strategies for the City's soft-story construction. The Applied Technology Council (ATC) conducted an impact assessment of likely damage with USGS providing information on expected ground motions and amplification based on soil type. The panel did not conclude their effort, but their work was restarted by the current Mayor to improve the City's preparedness on the centennial of the 1906 San Francisco earthquake. The USGS was a leading participant in the vigorous outreach efforts for the centennial.

The USGS is currently conducting another major public awareness campaign, focused on the 140th anniversary of the 1868 Hayward Fault earthquake in October. The occurrence of the past five earthquakes on the Hayward Fault averaging 140 years apart is providing motivation to retrofit buildings throughout the San Francisco Bay area.

Seattle Urban Hazard Maps Used for Prioritized Retrofitting

The City of Seattle has completed a study of problems posed by earthquake ground motions to unreinforced masonry buildings, using the new USGS Urban Seismic Hazard Map as the key input for earthquake hazards. The detailed USGS maps include geological details ranging from local site conditions to the three-dimensional structure of the Earth beneath Seattle. Ground motions on the USGS maps are particularly high in several parts of Seattle with a large number of unreinforced masonry buildings. Seattle has a history of such buildings failing during the 1949, 1965, and 2001 earthquakes in Puget Sound. The City of Seattle study identified nearly 1,000 unreinforced masonry buildings, including a public high school, that are at very high risk in the next earthquake. Because only about 15% of such buildings have been seismically retrofitted, the City is using the new study to formulate policy to reduce the danger to the population. The Mayor of Seattle has called the results of the study

"a public safety issue." The use of the Seattle Urban Seismic Hazard maps as underpinning a major local policy decision is a clear indicator of the importance developing these maps can have in our cities with high earthquake hazards and risks.

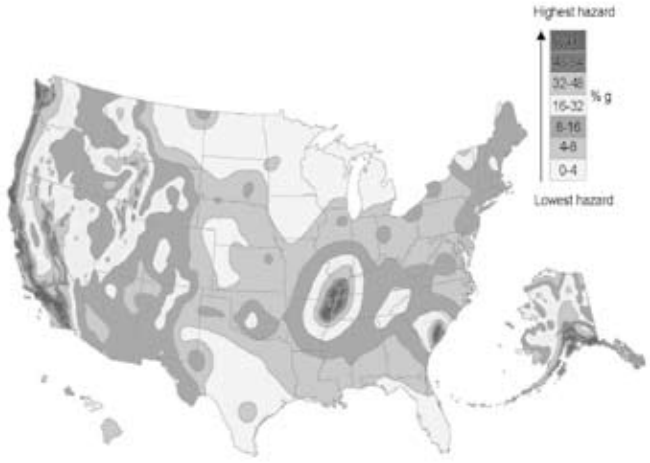
Supporting Rapid Earthquake Response

Within 30 minutes of the magnitude-7.9 (M7.9) earthquake that struck Sichuan province in China, the USGS National Earthquake Information Center used data from stations of the Global Seismographic Network to deliver results showing the estimated population exposed to potentially damaging shaking using its newly released Prompt Assessment for Global Earthquake Response (PAGER) system. These results were used by the Chinese, as well as by disaster relief organizations, to identify the hardest-hit areas, even before reports emerged from the region. In the ensuing weeks, the USGS EROS Data Center coordinated the U.S. Government's response to Chinese requests for imagery. USGS scientists analyzed the changes in the crustal stress field induced by the M7.9 Sichuan China earthquake to forecast the location of hazardous aftershocks, as part of the science and humanitarian response to the disaster. The analysis was provided to the Chinese government to mitigate further loss of life in the epicentral region.

Updated National Seismic Hazard Maps

In April 2008, the USGS released an updated version of the National Seismic Hazard Maps showing that earthquakes remain a serious threat in 46 States of the United States. This revision incorporates new seismic, geologic, and geodetic information on earthquake rates and the manner in which the energy released in earthquakes dies off with distance from the rupture. National-scale maps of earthquake-shaking hazards provide information essential to creating and updating the seismic design provisions of building codes used in the United States. The timing of the National Seismic Hazard Map release is tied to the schedule for revising model building codes that are developed by international code committees and then considered by State and local governments for adoption. Cities and counties rely on seismic design provisions in building codes to ensure that structures such as buildings, bridges, highways and utilities are earthquake resistant.

The National Seismic Hazard Maps consist of a series of maps and databases describing ground shaking at many points across the country and have many applications in addition to building codes. They are used by insurance companies to set rates for properties in various areas of the country, by civil engineers to estimate the stability and landslide potential of hillsides, by the U.S. Environmental Protection Agency to set construction standards that ensure the safety of waste-disposal facilities, and by the Federal Emergency Management Agency to plan the allocation of assistance funds for earthquake education and preparedness. The geologic and geophysical data-collection, research, and modeling results that underpin the maps have been generated by USGS scientists, as well as by their colleagues in academia, State government, and the private sector, funded by external grants from the USGS Earthquake Hazards Program.



National seismic hazard map for 50 states showing the levels of horizontal shaking that have a 2-in-100 chance of being exceeded in a 50-year period. Shaking is expressed as a percentage of the acceleration of gravity.

Coordinated Response to California Wildfires

The Multi-Hazards Demonstration Project coordinated the USGS response to the catastrophic 2007 southern California firestorms as well as the subsequent debris flows that threatened fire-burned steep slopes and downstream populations. Upon the onset of the fires, the USGS funded collection of new airborne, remotely sensed data, enhanced the debris-flow mapping project with extra staff, and coordinated the fire response with the California Office of Emergency

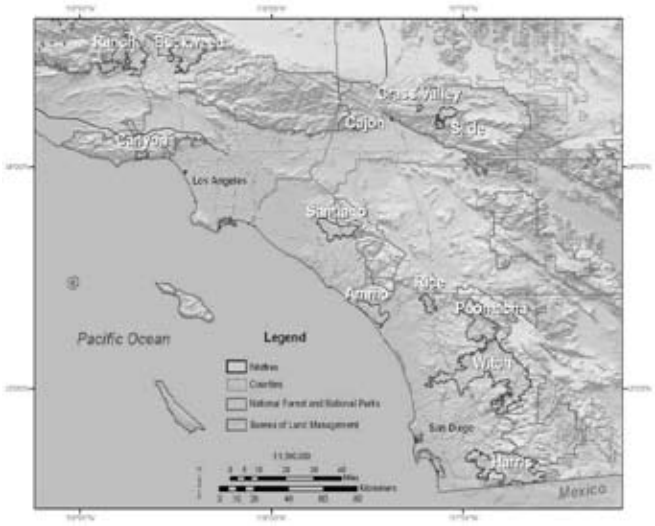
Services and FEMA officials at the Joint Field Office and later Multi-Agency State and Federal task force.

Just in time for the first round of post-fire rains, the USGS and FEMA were able to complete and release a series of flood inundation and debris-flow maps showing the areas within the 11 burned areas that may be impacted by flooding and debris flows. These maps illustrated to Federal, State and local emergency responders the volume of debris flows that can be expected from specific areas, and identified the areas prone to impact by floods and debris flows. The maps were provided to forecasters as part of the joint NOAA-USGS flash flood and debris-flow warning system for recently burned areas in southern California. "These maps are designed to provide emergency managers with tools to implement protective measures to preserve values at risk, including life and property," said Lee Rosenberg, a member of the Multi-Agency Support Group that represents Federal and State agencies. At the site of the Canyon fire in Malibu, Calif., newly installed USGS instruments and streamgages are helping to keep emergency responders and the public informed and alert. USGS scientists also released an "ash advisory" before the rains based on preliminary results of ash samples taken immediately from burn sites in suburban and wildland areas.

The USGS conducted assessments of some critically endangered species within the fire footprints. Several aquatic species were in extreme peril of complete destruction from flooding, debris flows, and dry ravel. For example, half of the remaining populations of the endangered tidewater goby south of Los Angeles County downstream from the Ammo Fire were taken into captivity by the USGS to ensure their persistence through the winter. Several populations of genetically pure southern California steelhead may have been destroyed when dry ravel filled the few remaining pools that the species occupies.

An American Helping Hand for Volcano Disasters

In 2008, the U.S. Ambassador to Indonesia and the Head of the Ministry of Energy and Mineral Resources' (MOE) Geological Agency of Indonesia signed an agreement whereby the USGS Volcano Disaster Assistance Program (VDAP) would work with MOE's Center for Volcanology and Geologic Hazard Mitigation to establish a regional volcano observatory on North



Methods for the emergency assessment of debris-flow hazards from basins burned by the fires of 2007, southern California.

Sulawesi and the Sanghe Islands. Some 500,000 people are at risk from explosive eruptions in this part of Indonesia. By the end of a visit by the VDAP team in March 2008, 14 real-time seismic stations were in operation. This capacity-building project, which also includes technical training and scientific exchange, is scheduled for completion in 2011. In May 2008, a very large and unexpected eruption from a long dormant volcano caused the evacuation of about 8,000 people and destroyed the town of Chaite'n in southern Chile. The U.S. Ambassador to Chile offered help in establishing telemetered monitoring equipment, and the USGS' VDAP quickly responded with equipment and a field team. VDAP also provided advice to its Chilean counterpart on data interpretation, managing the ash hazard to aviation, and in developing a national volcano monitoring system. In ensuing discussions that included a briefing by USGS scientists to the president of Chile, plans are being developed for scientific exchange that will bring the scientific, monitoring, and hazard lessons learned back to the United States.

Completion of a combined rainfall-infiltration and slope stability model for unsaturated soils, which can be used to predict debris flow initiation locations and conditions in Oregon

Fast-moving debris flows can be lethal (they kill hundreds worldwide yearly), and understanding debris flow initiation and conditions is essential to reduce losses from landslides and debris flows. The Landslide Hazard Program (LHP) completed a combined rainfall-

Chaite'n vent - May 2008: Aerial view, looking northwest, showing the vent area within the caldera of Chaite'n volcano, southern Chile. A lava dome is visible behind and to the left of jetting steam and ash plumes.

infiltration and slope stability model for unsaturated soils, which can be used to predict debris flow initiation locations and conditions in Oregon. The model was released as Open File Report 2008-1159, "TRIGRS—A Fortran program for transient rainfall infiltration and grid-based regional slope-stability analysis." The Oregon Department of Geology and Mineral Industries plans to use this model along with other USGS methods and models for analysis of debris flow potential.

Near-real time monitoring data of the Florida River landslide area in Colorado

The Landslide Hazard Program continued to maintain monitoring equipment and public web pages to provide near-real time monitoring data of the Florida River landslide area in Colorado. Florida Water Conservancy District and La Plata County used this information for emergency management and reservoir management planning purposes. Informed emergency management and reservoir management planning is essential in safeguarding water sources.

Landslide emergency alerts posted through DOI Common Alert Protocol (CAP)

The Landslide Hazard Program continued to issue landslide emergency alerts posted through DOI Common Alert Protocol (CAP). Two CAP alerts were issued in Southwest CA for the counties of San Diego, and Orange. These alerts, which were given for previously burned areas, were also issued by the National Weather Service. Alerts give residents time to evacuate and in some cases will lead to lives saved.

USGS landslide research project used by the City of Seattle

A study of how the City of Seattle used information from the USGS-focused landslide research project was completed by the Planwest Partners, Inc and the USGS. Findings from the study that documented widespread use of USGS-generated landslide hazard information was presented at a Roundtable discussion with USGS landslide experts in Golden, CO and at the American Planning Association national convention in Las Vegas, Nevada. USGS scientists will use information from this study to ensure that their research findings are incorporated into local decision making that will ultimately lead to the reduction of losses and damage due to landslides.

Examples of Management Excellence Goal Accomplishments

Successful management is imperative to meet strategic mission goals. To succeed, the USGS is holding managers as well as scientists accountable for results, more effective means of leveraging available resources, and the continuous introduction and evaluation of process, structural, and technology improvements. The Department's management approach is guided by the Secretary's key business principles: accountability and modernization/integration. In the Interior Strategic Plan, our goals of Accountability and Modernization/Integration and the President's Management Agenda converge to form a non-mission area of the strategic plan - Management Excellence. Like the programmatic mission areas, Management Excellence is structured to include outcome goals and strategies with associated performance measures. Each aspect of the President's Management Agenda is reflected within

this framework. The USGS supports Management Excellence goals throughout the organization with dedicated funding in Science Support and Facilities as well as the information security, technology, and resource components of Enterprise Information. Performance is reported by the Department as an aggregate of Bureau performance. Five examples of management accomplishments follow:

Science Planning

A key aspect of implementing our Science Strategy is creating and sustaining a work environment and culture that is more conducive to collaborative, interdisciplinary scientific research. The realignment of the Regional Executives was one step toward building our capacity for interdisciplinary science. Another part of our commitment toward achieving the goals of our Science Strategy is to implement a common bureau science planning process. The Regional Executives and the discipline Chief Scientists have been charged with developing and refining a bureau science planning model that takes advantage of our new regional management structure and enhances our ability to achieve the Science Strategy goals.

Two-year Funding

The USGS' FY 2008 appropriation contained language that would provide the USGS with two-year authority for our SIR appropriation. Previously, the USGS received its appropriations for three types of funding, annual, and two-year and 'X' year. At the start of FY 2008 the House appropriation for the USGS contained language that would provide the USGS with two-year authority; however this same language was not included on the Senate side. OMB provided guidance to the USGS that if two-year money was appropriated during the course of Fiscal Year 2008, the USGS would have to report the entire fiscal year as if it started the year with two-year funding. So, to circumvent a need to "convert" funding mid-year, the USGS made a determination to start FY 2008 as if it had two-year money. The USGS' accounting system allowed us to configure the system to have accounts set-up for two year availability, but with the Fund Code assigned to our annual appropriation symbol. By doing this, when we received two-year money during FY 2008, it was a simple matter of changing our Fund Code assignment to the two-year appropriation. As a result, we were able to avoid the need to reprocess transactions that occurred while we were under a continuing resolution.

2008 Managers Meeting

The 2008 Managers Meeting was held June 17-19 in Tulsa, OK, and nearly 275 managers from across the Bureau participated. The purpose of the meeting was to create a shared vision among all USGS leaders for implementing the USGS Science Strategy. Attendees met with their counterparts, networked, learned about the latest science activities, and heard from and provided input to senior executives about our strategic direction, budget, priorities, new policies, and organizational change. In an effort to make the meeting more transparent and accessible to all employees, key sessions were videotaped and PowerPoint presentations and short summaries for each session were available to employees via the Web. During the meeting, podcasts and blogs from Program Coordinators, Regional Executives, and Chief Scientists were posted throughout each of the 3 days.

Facilities Budget Allocation

In 2008, the USGS initiated a review of allocating and managing facilities funding for both rent and operations and maintenance (O&M) allocations which resulted in recommendations to improve processes and to design a facility cost savings strategy to promote and maximize Bureau-wide cost savings. These recommendations were submitted to the USGS Investment Review Board, which approved them for implementation in 2009. The recommendations include equally distributing shortfalls across the bureau; retaining a percentage of the regional allocation to handle unforeseen facilities funding problems throughout the fiscal year; making one facilities allocation at the beginning of the fiscal year to stabilize center's budgeting and expenditures; and defining a facilities savings strategy which promotes corporate behavior geared to reduce costs in all areas of facilities—rent, O&M, energy, etc.

Standard Internal Control Surveys

To ensure quality and relevance of internal USGS products and services to USGS employees, the Office of Budget and Performance (OBP) conducts a variety of standard management control surveys.

- Administrative Support Service Surveys are conducted prior to administrative reviews at USGS science centers. Since 2002, 65 surveys have been conducted.
- Information Technology Support Service Surveys are conducted prior to IT reviews at USGS science centers. Since 2002, 16 surveys have been conducted.
- Meeting Evaluations are conducted after the conclusion of USGS conferences/workshops. Since 2003, 11 surveys have been conducted.
- Hiring Assistance Surveys provide employee input to the selection process for USGS management positions. Since 2008, 6 surveys have been conducted.
- Employee Satisfaction Surveys are conducted on specific internal products, services, and websites. Since 2001, 30 surveys have been conducted.
- Organizational Assessment Surveys provide a broad review of operations and conditions at a science center or office. Since 2002, 17 surveys have been conducted.

In response to the expressed needs of employees, the USGS has made many enhancements to its internal products and services. Each type of survey follows a standard format, although each is modified to meet a specific science center's or office's customer information needs. As a result, the final outcome of each survey is immediately useful to science center or office management, and can be aggregated to support Bureau level performance reporting. OBP follows up with the managers to ascertain how survey results were applied.

Creating efficiencies in administrative reviews

Since 2004, employee opinions have been sought in advance of administrative reviews and science centers. At least 10 versions of an on-line questionnaire have been used to gather employee opinions. Starting in 2008, a single standard questionnaire has been adopted for use in all regions. The standardization reduces the time required to create the on-line questionnaire from an average of one hour to no more than ten minutes. The new standard questionnaire eliminates duplicative questions from the most common previously used version, reducing by half the average time required to complete the questionnaire and to analyze the results. Total savings are estimated as about 200 hours per year.

In keeping with Departmental and OMB policy for performance data verification and validation (V&V), the USGS has complied with requirements for performance data credibility.

During FY 2008, the USGS GPRA coordinators for each Budget Activity/scientific discipline completed and certified a validation checklist comprised of criteria in the DOI V&V Assessment Matrix for all DOI Strategic Plan, bureau specific, and PART performance measures. This included assessing data accuracy, completeness, consistency, availability, and internal-control practices that serve to determine the overall reliability of the data collected. GPRA coordinators document any inconsistencies, inaccuracies or anomalies in performance data to ensure integrity of the performance data.

The USGS demonstrated accountability by establishing a clear connection among mission, work activities, and what work accomplishes for the funds that have been authorized and appropriated. V&V criteria include scrutiny to determine that goals are realistic and measurable, understandable to users, and ultimately used in decisionmaking. This added documentation and assurance of creditability and usability of USGS performance measures for management decisionmaking.

Peer review is a Fundamental Science Practice at the USGS, one of 3 OMB R&D investment criteria, and a performance measure for all programs. In FY 2008, the USGS began using the A-123 Internal Control Review process to validate the peer review process. In the first year of implementation, the USGS tested peer review for four programs:

- Geographic Analysis and Monitoring
- Geologic Hazard Assessments
- Cooperative Water Program
- Biological Information Management and Delivery

Peer review addresses:

- Scientific Excellence, Integrity and Objectivity
- Conflict of Interest
- Impartiality and Nonadvocacy
- Methodology and Documentation
- Public Benefit and Access
- Natural Hazards and/or Public or Wildlife Health
- Accessibility and Corporate Identify

Roles and responsibilities of those in the review and approval process were tested and were generally found to be working as intended. In addition to validating the process, the control testing identified areas that could be further improved and these recommendations were provided to the Fundamental Science Practice Advisory Council for consideration.

Data Validation and Verification Element	Explanation
1. Extent to which data V&V criteria have been disseminated throughout the bureau activity area units	Data V&V criteria have been disseminated to all USGS GPRA coordinators for each Budget Activity/scientific discipline and to program coordinators throughout the bureau.
2. Extent to which protocols have been implemented in units providing performance data	Program coordinators and/or performance measure owners have documented and signed performance data verification and validation process criteria for each measure included in the performance budget.

Data Validation and Verification Element	Explanation
a) Are collection standards followed?	Performance measure names, terminology and DOI performance definition templates are understood and being followed. There is no common enterprise-wide data entry system for the bureau. The data entry point for collection of performance data is in the Office of Budget and Performance (OBP). An example of how program coordinators collect data for program performance is given for a biological resources discipline that they provide to OBP for consolidation. The Biological Information Management and Delivery Web site requires common collection standards to report quarterly accomplishments. Reporting stations are notified at the same time of a reporting requirement, and all use the same procedure for reports. For Biological Research & Monitoring, new GPRA guidance was communicated to center directors and Regional Executive (REX) staff. This guidance establishes collection and review and editing procedures involving REX staff, with headquarters follow-up. Consistent reporting procedures, including database formats are used by centers and regions.
b) Are data entry and transfer rules used?	Systems used to track performance data do not have extensive editing capabilities, but standard processes are used to capture performance data. Program offices understand how to obtain information about performance data and maintain data currency. For example, Water procedures for data entry, data sources and assumptions, and methods are documented by OBP discipline coordinator and are available to other OBP staff.
c) Are data security measures implemented?	1) Firewalls, password protection, etc. are established according to bureau information system requirements. 2) Access to the databases and/or Excel spreadsheets are only available to registered, logged-on USGS users.
3. Does the bureau conduct oversight and certification of data?	USGS GPRA coordinators for each budget activity/scientific discipline provide oversight and standards to be followed, verify performance data accuracy, ensure documentation is maintained, and certify performance data reported. OBP provides a second level of oversight.
4. Are other relevant actions taken to insure credibility of performance data?	Yes, for example, OBP makes comments in the DOI database, if for any reason; the data is changed after it has been entered.
Data Source(s)	Data sources such as large databases, local files, Excel spreadsheets, reference files, and hardcopy files are documented. For example, the Water Discipline uses a software query to extract the performance data from the National Water Information System (NWIS), a database and user interface through which the streamgages, ground-water sites, and water-quality sites report their hydrologic data on the Internet.
Data Limitations	Any data limitations are documented.
Corrective/Improvement Actions (Needed, In Progress, or Recently Completed)	DOI's contracted evaluation made four recommendations for improvement and USGS developed an Action Plan to address recommendations. USGS has implemented all the recommendations and will encourage Program Coordinators to take DOI training when it becomes available.

Program evaluations are an important tool in analyzing the effectiveness and efficiency of our programs and evaluating whether they are meeting their intended objectives. Our programs are evaluated through a variety of means, including performance audits, PART, financial audits, internal control reviews, and external reviews from Congress, OMB, OIG, and other organizations, such as the National Academy of Public Administration and the National Academy of Science.

These reviews, which may take several years to complete, are critical to maintaining the USGS' reputation for scientific excellence and credibility as well as providing guidance for future research needs. The evaluations improve the accountability and quality of programs, but also identify and address gaps in programs; redirect or reaffirm program directions; identify and provide guidance for development of new programs; and review and/or motivate managers and scientists.

The USGS conducts both internal and external peer and management reviews to improve the accountability and quality of programs; identify and address gaps in programs; redirect or reaffirm program directions; identify and provide guidance for the development of new programs; and review and/or motivate managers and scientists.

Reviews are both internal and external, conducted by the USGS and non-USGS scientists, technicians, or specialists who are not involved in the specific proposal, project, program, or product under review. The USGS goal is to conduct an independent external peer review of ongoing programs about every 5 years, combined with more frequent independent internal management reviews.

Program	Strategic Plan Mission Area	Purpose of Program Evaluation	Actions Taken in Response to Evaluation
Mineral Resources	Resource Use	To determine the importance to the U.S. economy of information on production and consumption of nonfuel mineral commodities.	The National Research Council (NRC) report, Minerals, Critical Minerals, and the U.S. Economy released in October 2007, concludes that minerals are indeed critical to the U.S. economy and suggested a new methodology for determining the extent to which any particular mineral is critical at any time, called a criticality matrix. USGS is working with members of the NRC panel to improve understanding of their proposed method and seek advice on specifics of application of their findings to the revision of the National Mineral Resource assessment, scheduled to begin in 2012. The primary use of this tool is expected to be in identifying priority commodities for both minerals information and research and assessment studies. This prioritization process will maximize the likelihood that the updated National Mineral Resource assessment is an unbiased, efficient, and cost-effective source for information required by decision-makers to ensure supply of critical mineral materials to meet the Nation's civilian and defense needs.

Program	Strategic Plan Mission Area	Purpose of Program Evaluation	Actions Taken in Response to Evaluation
Volcano Hazard	Serving Communities	• Review response of the Volcano Hazards Program (VHP), to the 2000 National Research Council (NRC) review (Fink et al., 2000). • Review degree to which VHP met the goals of its previous 5-year plan. • Evaluate the soundness of the current 5-year plan. • Provide input on the National Volcano Early Warning System (NVEWS) (Ewert et al., 2005).	The American Association for the Advancement of Science panel found that the VHP did an adequate job of responding to the previous review and meeting its previous five-year-plan goals. The panel strongly praised NVEWS, and had approximately 15 recommendations toward improving the initiative and other aspects of the VHP, including suggestions for the next five-year plan. The VHP has begun action on these recommendations, including better and more real-time web-based information dissemination, requests for projects with more of an international component, and development of agreements with more state and academic partners.

Reconnaissance mapping in the Alaska Range.

Section III

Financial Information

Contents

Message from the Chief Financial Officer

In Fiscal Year 2008, the USGS continued its journey towards management excellence through the improvements and accomplishments made over the Bureau's financial management and administrative programs. Our continued progress towards management excellence is presented in the FY2008 Performance and Accountability Report (PAR). The PAR discloses the USGS' most important financial and program performance information. It is our chief publication to Congress and the American people. This report details program leadership and stewardship over the public funds to which we have been entrusted.

I am pleased to report that for the fifth consecutive year we have received an unqualified ("clean") opinion on the Bureau's consolidated financial statements from our independent auditors. This is the best possible audit result. With it the American people can have confidence that the financial statement information presented here is both accurate and reliable. In addition to our opinion, the USGS achieved a number of other noteworthy accomplishments in FY2008. The USGS:

- Developed a Bureau-wide administrative core competency and training plan that is available to managers and employees. The plan is available through the Bureau's intranet site;
- Commenced activities in support of the USGS deployment of the FBMS that included completion of project preparation and continued to provide senior subject matter experts to the Department's FBMS Project Management Office. The USGS is scheduled to deploy the FBMS in November 2010;
- Completed preparations for converting to a new Department-wide charge card sevice provider, JPMorgan;
- In response to OMB's mandate that the Department fully comply with GSA's E-Travel solution, on behalf of the Department, the USGS piloted the selected vendor's software solution. Based on the success of this pilot, the Bureau was the first bureau to fully implement. The E-Travel system is fully automated, providing an end-to-end travel solution with electronic signature capabilities;
- Exceeded the goal of 40% for performance based acquisitions by awarding 57% of total eligible contracts as performance-based acquisitions;
- Significantly improved the Bureau's utilization of space. In FY2008, the USGS negotiated collocation agreements with the DOI Office of the Secretary and in collaboration with GSA, an agreement with the Department of Homeland Security. The Bureau achieved further reduction in space used by returning unused square footage to the GSA and by consolidating science center space into a single facility;

- Developed standardized financial training for administrative technicians, accountable officers, and budget analysts. This annual training will provide cost centers detailed "hands-on" experience; and
- Met and/or exceeded our annual performance goals.

Our number one resource in the USGS is our employees. This PAR and the achievements that it describes are the result of these extraordinarily dedicated and exemplary folks. It is with their ongoing commitment and dedication that the USGS will continue its journey towards management excellence. Our mission, performance metrics, and management will continue to be the foundation on which we achieve results.

Karen D. Baker
Chief Financial Officer
October 2008

United States Department of the Interior

OFFICE OF INSPECTOR GENERAL
Washington, DC 20240

APR 17 2009

Memorandum

To: Director, U.S. Geological Survey

From: Kimberly Elmore
Assistant Inspector General for Audits, Inspections and Evaluations

Subject: Independent Auditors' Report on the U.S. Geological Survey Financial Statements for Fiscal Years 2008 and 2007 (Report No. X-IN-GSV-0016-2008)

INTRODUCTION

This memorandum transmits the KPMG LLP (KPMG) auditors' report of the U.S. Geological Survey (USGS) financial statements for fiscal years (FYs) 2008 and 2007. The Chief Financial Officers Act of 1990 (Public Law 101-576), as amended, requires the Inspector General or an independent auditor, as determined by the Inspector General, to audit the Department of the Interior (DOI) financial statements.

Under a contract issued by DOI and monitored by the Office of Inspector General (OIG), KPMG, an independent public accounting firm, performed an audit of the USGS FY2008 and FY2007 financial statements. The contract required that the audit be performed in accordance with the "Government Auditing Standards" issued by the Comptroller General of the United States and Office of Management and Budget Bulletin No. 07-04, "Audit Requirements for Federal Financial Statements" as amended.

RESULTS OF INDEPENDENT AUDIT

In its audit report dated April 7, 2009 (Attachment 1), KPMG issued an unqualified opinion on the USGS financial statements. However, KPMG identified four significant deficiencies in internal controls over financial reporting, one of which was considered to be a material weakness. In addition, KPMG identified one instance in which USGS did not comply with laws and regulations. KPMG made 12 recommendations that, if implemented, should resolve the findings.

STATUS OF RECOMMENDATIONS

In its March 10, 2009 response (Attachment 2) to the draft report, USGS agreed with all five findings and all 12 recommendations. USGS also addressed each of the 12 recommendations, stating that it implemented 6 recommendations and was in the process of

implementing 6 recommendations. We will refer the six unimplemented recommendations to the Assistant Secretary for Policy, Management and Budget for tracking of implementation (see Attachment 3, "Status of Audit Report Recommendations").

EVALUATION OF KPMG AUDIT PERFORMANCE

To ensure the quality of the audit work performed, the OIG:

- reviewed KPMG's approach and planning of the audit;
- evaluated the qualifications and independence of the auditors;
- monitored the progress of the audit at key points;
- coordinated periodic meetings with USGS management to discuss audit progress, findings, and recommendations;
- reviewed and accepted KPMG's audit report; and
- performed other procedures we deemed necessary.

KPMG is responsible for the attached auditors' report dated April 7, 2009, and the conclusions expressed in it. We do not express an opinion on USGS financial statements nor on KPMG's conclusions regarding 1) effectiveness of internal controls, 2) compliance with laws and regulations, or 3) substantial compliance of USGS financial management systems with the Federal Financial Management Improvement Act of 1996.

REPORT DISTRIBUTION

The legislation, as amended, creating the OIG requires semiannual reporting to the Congress on all audit reports issued, actions taken to implement audit recommendations, and recommendations that have not been implemented. Therefore, we will include the information in the attachment in our next semiannual report. The distribution of the report is not restricted, and copies are available for public inspection.

We appreciate the cooperation and assistance of USGS personnel during the audit. If you have any questions regarding the report, please contact Robert Romanyshyn at 202-208-5512.

Attachments (3)

cc: Assistant Secretary, Water and Science
Audit Liaison Officer, Water and Science
Chief Financial Officer, U.S. Geological Survey
Audit Liaison Officer, U.S. Geological Survey
Director, Office of Financial Management
Associate Director, Office of Financial Management
Audit Liaison Officer, Office of Financial Management

ATTACHMENT 1

KPMG LLP
2001 M Street, NW
Washington, DC 20036

Independent Auditors' Report

Director of the U.S. Geological Survey and Inspector General,
U.S. Department of the Interior:

We have audited the accompanying consolidated balance sheets of the U.S. Geological Survey (USGS), a component of the U.S. Department of the Interior (Interior), as of September 30, 2008 and 2007, and the related consolidated statements of net cost and changes in net position, and combined statements of budgetary resources (hereinafter referred to as "consolidated financial statements") for the years then ended. The objective of our audits was to express an opinion on the fair presentation of these consolidated financial statements. In connection with our fiscal year 2008 audit, we also considered USGS's internal controls over financial reporting and tested USGS's compliance with certain provisions of applicable laws, regulations, contracts, and grant agreements that could have a direct and material effect on these consolidated financial statements.

Summary

As stated in our opinion on the consolidated financial statements, we concluded that USGS's consolidated financial statements as of and for the years ended September 30, 2008 and 2007, are presented fairly, in all material respects, in conformity with U.S. generally accepted accounting principles.

As discussed in Note 17, USGS restated the fiscal year 2007 combined Statement of Budgetary Resources, which relates to the material weakness listed as item A below.

As discussed in Note 11 to the consolidated financial statements, in fiscal year 2008 USGS changed its method of accounting for and reporting of heritage assets to adopt changes in accounting standards.

Our consideration of internal control over financial reporting resulted in the following conditions being identified as significant deficiencies:

Significant Deficiencies

A. Budgetary Controls

B. Controls over Abandoned Sites Liability

C. General and Application Controls over Financial Management Systems

D. Controls over Property, Plant, and Equipment

We consider the first significant deficiency, above, to be a material weakness.

The results of our tests of compliance with certain provisions of laws, regulations, contracts, and grant agreements, exclusive of those referred to in the *Federal Financial Management Improvement Act of 1996* (FFMIA), disclosed no instances of noncompliance or other matters that are required to be reported herein under *Government Auditing Standards* and OMB Bulletin No. 07-04, *Audit Requirements for Federal Financial Statements*.

The results of our tests of FFMIA disclosed an instance, listed in the item E below, where USGS's financial management systems did not substantially comply with applicable Federal accounting standards. The results of our tests of FFMIA disclosed no instances in which USGS's financial management systems did not substantially comply with the Federal financial management systems requirements and the United States Standard General Ledger at the transaction level.

E. *Federal Financial Management Improvement Act of 1996* (FFMIA)

The following sections discuss our opinion on USGS's consolidated financial statements; our consideration of USGS's internal controls over financial reporting; our tests of USGS's compliance with certain provisions of applicable laws, regulations, contracts, and grant agreements; and management's and our responsibilities.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of U.S. Geological Survey (USGS), a component of the U.S. Department of the Interior (Interior), as of September 30, 2008 and 2007, and the related consolidated statements of net cost and changes in net position, and combined statements of budgetary resources (hereinafter referred to as "consolidated financial statements") for the years then ended.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the USGS as of September 30, 2008 and 2007, and its net costs, changes in net position, and budgetary resources for the years then ended, in conformity with U.S. generally accepted accounting principles.

As discussed in Note 17, USGS restated the fiscal year 2007 combined Statement of Budgetary Resources, which relates to the material weakness listed as item A below.

As discussed in Note 11 to the consolidated financial statements, in fiscal year 2008 USGS changed its method of accounting for and reporting of heritage assets to adopt changes in accounting standards.

The information in the Management's Discussion and Analysis, Required Supplementary Information, and Required Supplementary Stewardship Information sections is not a required part of the consolidated financial statements, but is supplementary information required by U.S. generally accepted accounting principles. We have applied certain limited procedures, which consisted principally of inquiries of management regarding the methods of measurement and presentation of this information. However, we did not audit this information and, accordingly, we express no opinion on it.

Our audits were conducted for the purpose of forming an opinion on the consolidated financial statements taken as a whole. The information in the Introduction, Performance Data and Analysis, and Appendix, as reflected in the 2008 Performance and Accountability Report, is presented for purposes of additional analysis and are not required as part of the consolidated financial statements. This information has not been subjected to auditing procedures and, accordingly, we express no opinion on it.

Internal Control Over Financial Reporting

Our consideration of the internal control over financial reporting was for the limited purpose described in the Responsibilities section of this report and would not necessarily identify all deficiencies in the internal control over financial reporting that might be significant deficiencies or material weaknesses.

A control deficiency exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent or detect misstatements on a timely basis. A significant deficiency is a control deficiency, or combination of control deficiencies, that adversely affects USGS's ability to initiate, authorize, record, process, or report financial data reliably in accordance with U.S. generally accepted accounting principles such that there is more than a remote likelihood that a misstatement of USGS's consolidated financial statements that is more than inconsequential will not be prevented or detected by USGS's internal control. A material weakness is a significant deficiency, or combination of significant deficiencies, that results in more than a remote likelihood that a material misstatement of the consolidated financial statements will not be prevented or detected by USGS's internal control.

In our fiscal year 2008 audit, we consider the deficiencies, described below, to be significant deficiencies in internal control over financial reporting. We believe that the first significant deficiency described below is a material weakness. Exhibit I presents the status of prior year significant deficiencies.

A. Budgetary Controls

Unfilled customer orders should be promptly recorded, properly classified, and accounted for in order to prepare timely and reliable reports. USGS did not record the total budget authority provided by the customer order at its commencement. In addition, USGS incorrectly reduced unfilled customer orders at the end of each fiscal year and then recorded the same customer orders at the beginning of the following fiscal year because of accounting system limitations and USGS not fully understanding the accounting standards. This resulted in USGS understating budgetary resources in the year the USGS received the customer order. As a result of our observations, USGS analyzed and increased its unfilled customer orders by $244 million, $246 million, and $260 million in 2006, 2007, and 2008, respectively.

Recommendations:

We recommend that USGS implement policies and procedures which include the following:

1. Establish agreement funding levels in the general ledger system at the full dollar amount reflected on the agreement.

2. Ensure all agreements signed in the current fiscal year with a period of performance in the current fiscal year will be entered into the general ledger system when they are received. Create an accrual process that will allow USGS to capture agreements that may be signed but not able to be entered into the general ledger system in time for year-end.

3. Ensure Federal agreements citing the Economy Act use the USGS treasury account symbol (TAS) that mirrors the TAS of the agency providing the funding.

4. Ensure funding for agreements with non-Federal customers is recorded in the first year of a two-year TAS and confirm that the balances are rolled forward into the subsequent two-year TAS.

Management's Response

Management has prepared an official response presented as a separate attachment to this report. In summary, management agreed with our findings and its comments were responsive to our recommendations. We did not audit USGS's response and, accordingly, we express no opinion on it.

KPMG

B. Controls over Abandoned Sites Liability

We inquired of management as to the process and controls surrounding the creation of the abandoned sites liability. USGS utilizes a deferred maintenance database to track the abandoned sites liability. USGS management stated that there is no centralized process or internal controls surrounding the addition and deletion of sites to or from the deferred maintenance database.

Recommendation

We recommend USGS develop policies and procedures to properly initiate, authorize, record, process, and report the abandoned sites liability.

Management's Response

Management has prepared an official response presented as a separate attachment to this report. In summary, management agreed with our findings and its comments were responsive to our recommendations. We did not audit USGS's response and, accordingly, we express no opinion on it.

C. General and Application Controls over Financial Management Systems

USGS did not have adequate information technology controls to protect one of its financial information systems as required by OMB Circular No. A-130, *Management of Federal Information Resources*. These conditions could affect USGS's ability to prevent and detect unauthorized changes to financial information, control electronic access to sensitive information, and protect its information resources.

1. *Entity-wide Security Program and Planning*

The Certification and Accreditation (C&A) package lacked specific information related to the security controls and compliance requirements. Specifically, the System Security Plan (SSP) did not identify specific access and logging controls and the SSP's table of applications did not include the financial system.

2. *Access Control*

USGS has not implemented a process to formally monitor logs of changes made to user security profiles.

3. *System Software*

USGS's service provider has not implemented a mechanism to identify and monitor inappropriate changes to the system software. Additionally, the process by which USGS's service provider documents approvals for system software changes is not reliable. Also, USGS's service provider did not implement appropriate patches for the system software.

Recommendations

We recommend that USGS:

1. *Entity-wide Security Program and Planning*

    a. Ensure that the C&A package is updated to include specific access and logging controls.

2. *Access Control*

    a. Implement a process to formally monitor logs of changes made to user security profiles.

3. *System Software*

    a. Work with their service provider to:
        1. Implement a mechanism to identify and monitor inappropriate changes to the system software.
        2. Improve the process to document approvals for system software changes.
        3. Implement appropriate patches for the system software.

Management's Response

Management has prepared an official response presented as a separate attachment to this report. In summary, management agreed with our findings and its comments were responsive to our recommendations. We did not audit USGS's response and, accordingly, we express no opinion on it.

D. Controls over Property, Plant, and Equipment

During the fiscal year, we performed control test work over the USGS annual physical inventory process, additions to capitalized property, and disposals of capitalized property. We noted issues as a result of our test work in all areas.

Annual Physical Inventory Process

In performing interim control procedures over the existence of USGS's personal property detail listing as of April 30, 2008, we noted five instances out of sixty sample items tested where the property listed in the fixed asset subsystem could not be physically located in the field. The effect of these errors was an overstatement in gross property, plant, and equipment (PP&E) of $138 thousand, an overstatement in accumulated depreciation of $91 thousand, and an understatement in losses on disposal of $51 thousand.

As a result of the exceptions noted above, we performed substantive test work over the existence of USGS real and personal property as of 6/30/08. We selected a statistical sample of real property and personal property from the fixed asset subsystem detail. Two of the ninety-eight assets in our personal property sample were determined to no longer be in existence. Since these assets were fully depreciated, but not written off, the effect of the above errors was a known overstatement in gross PP&E and accumulated depreciation of approximately $1.5 million and a projected error of $2.4 million.

Additions to Capitalized Property

In performing our interim dual-purpose procedures over a substantive sample of additions to capitalized property, we noted one asset addition that was acquired by USGS through a donation from a state agency. USGS incorrectly accounted for the asset, valued at $124 thousand, as a transfer-in rather than a donation.

In performing our year-end dual-purpose procedures over a judgmentally selected sample of additions to capitalized property, we noted that two of the five items selected were recorded as 2008 additions to fixed assets but were received in a prior fiscal year. These assets were acquired for $418 thousand.

Disposals of Capitalized Property

In performing our interim dual-purpose procedures over a judgmental sample of dispositions of capitalized property, we noted 2 instances out of 45 sample items tested where the disposal documents were prepared and approved in March 2003 and May 2007, but the items, acquired for $34 thousand and fully depreciated, were removed from FAS during the current fiscal year.

Heritage Assets – Museum Collections

USGS has not established policies and procedures to ensure implementation of Statement of Federal Financial Accounting Standard (SFFAS) No. 29, *Heritage Assets and Stewardship Land.* USGS incorrectly reported two additions to museum collections during FY 2008 which should have been reported in the beginning balance.

Recommendations

We recommend that USGS:

1. Improve its communication with the Custodial Property Officers (CPOs) in the field and update their policies and procedures over management of fixed assets. Specifically, the policies and procedures for:

   a. The annual inventory should be more specific when instructing the cost centers in generating and distributing property listings to ensure that they account for all items.

   b. Accounting for donations from non-Federal entities.

   c. Processing disposals of assets should be more explicit in describing the routing of documents to the Regional Branches of Property Management.

   d. Processing additions to ensure that they are recorded in a timely manner and the proper budget object class codes are used.

2. Provide training to all CPOs to re-enforce the policies and procedures over the addition and disposal of capitalized property.

3. Ensure the accession process over museum collections is in accordance with the Departmental Manual and SFFAS No. 29.

Management's Response

Management has prepared an official response presented as a separate attachment to this report. In summary, management agreed with our findings and its comments were responsive to our recommendations. We did not audit USGS's response and, accordingly, we express no opinion on it.

Compliance and Other Matters

The results of our tests of compliance described in the Responsibilities section of this report, exclusive of those referred to in FFMIA, disclosed no instances of noncompliance or other matters that are required to be reported herein under *Government Auditing Standards* or OMB Bulletin No. 07-04.

The results of our tests of FFMIA disclosed an instance, described below, where USGS's financial management systems did not substantially comply with applicable Federal accounting standards. The

results of our tests of FFMIA disclosed no instances where USGS's financial management systems did not substantially comply with Federal financial management systems requirements or the United States Government Standard General Ledger at the transaction level.

E. *Federal Financial Management Improvement Act of 1996* (FFMIA)

USGS is required to prepare its financial statements in accordance with Federal accounting standards. As discussed in the Internal Control over Financial Reporting section of this report, we identified a material weakness that affected USGS's ability to prepare its combined Statements of Budgetary Resources and related disclosures in accordance with Federal accounting standards. As a result, USGS does not substantially comply with the accounting standard indicators of FFMIA.

Recommendation

We recommend USGS management address the control weakness described in the Internal Control over Financial Reporting section of this report.

Management's Response

Management has prepared an official response presented as a separate attachment to this report. In summary, management agreed with our findings and its comments were responsive to our recommendations. We did not audit USGS's response and, accordingly, we express no opinion on it.

* * * * * * *

Responsibilities

Management's Responsibilities. Management is responsible for the consolidated financial statements; establishing and maintaining effective internal control; and complying with laws, regulations, contracts, and grant agreements applicable to USGS.

Auditors' Responsibilities. Our responsibility is to express an opinion on the fiscal year 2008 and 2007 consolidated financial statements of USGS based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and OMB Bulletin No. 07-04. Those standards and OMB Bulletin No. 07-04 require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement. An audit includes consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of USGS's internal control over financial reporting. Accordingly, we express no such opinion.

An audit also includes:

- Examining, on a test basis, evidence supporting the amounts and disclosures in the consolidated financial statements;
- Assessing the accounting principles used and significant estimates made by management; and
- Evaluating the overall consolidated financial statement presentation.

We believe that our audits provide a reasonable basis for our opinion.

In planning and performing our fiscal year 2008 audit, we considered USGS's internal control over financial reporting by obtaining an understanding of USGS's internal control, determining whether internal controls had been placed in operation, assessing control risk, and performing tests of controls as a basis for designing our auditing procedures for the purpose of expressing our opinion on the consolidated financial statements. We did not test all internal controls relevant to operating objectives as broadly defined by the *Federal Managers' Financial Integrity Act of 1982*. The objective of our audit was not to express an opinion on the effectiveness of USGS's internal control over financial reporting. Accordingly, we do not express an opinion on the effectiveness of USGS's internal control over financial reporting.

As part of obtaining reasonable assurance about whether USGS's fiscal year 2008 consolidated financial statements are free of material misstatement, we performed tests of USGS's compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of the consolidated financial statement amounts, and certain provisions of other laws and regulations specified in OMB Bulletin No. 07-04, including the provisions referred to in Section 803(a) of FFMIA. We limited our tests of compliance to the provisions described in the preceding sentence, and we did not test compliance with all laws, regulations, contracts, and grant agreements applicable to USGS. However, providing an opinion on compliance with laws, regulations, contracts, and grant agreements was not an objective of our audit and, accordingly, we do not express such an opinion.

We have also noted certain additional matters involving internal control over financial reporting and its operation that we have reported to management of USGS in a separate letter dated April 7, 2009.

This report is intended solely for the information and use of Interior's Office of Inspector General, USGS's management, Interior's management, OMB, the U.S. Government Accountability Office, and the U.S. Congress and is not intended to be and should not be used by anyone other than these specified parties.

KPMG LLP

April 7, 2009

Exhibit I

U.S, Geological Survey
Status of Prior Year Finding
September 30, 2008

Reference	Condition	Status
A	General and Application Controls over Financial Management Systems	This condition has been partially corrected. See finding C.

ATTACHMENT 2

United States Department of the Interior

U.S. GEOLOGICAL SURVEY
Office of the Director
Reston, Virginia 20192

MEMORANDUM

MAR 1 0 2009

To: Kimberly Elmore
Assistant Inspector General for Audits, Inspections and Evaluations

Through: Amy Holley MAR 1 1 2009
Chief of Staff for Water and Science

From: Suzette M. Kimball
Acting Director, U.S. Geological Survey

Subject: Draft Independent Auditor's Report on the U.S. Geological Survey Financial Statements for Fiscal Years 2008 and 2007 (Assignment No. X-IN-GSV-0016-2008)

Thank you for the opportunity to comment on the Draft Independent Auditor's Report on the U.S. Geological Survey's (USGS) Financial Statements for Fiscal Years (FY) 2008 and 2007. We have reviewed the report and concur with the four findings on internal control over financial reporting and the one instance where our financial management system did not substantially comply with Federal accounting standards.

The USGS has already begun implementing corrective actions that respond to the recommendations included in this audit report. Specifically:

A. Budgetary Controls

Management concurs. The USGS has taken steps to remediate this issue. We have established funding in our financial system at the full value of our current reimbursable agreements and in the proper Treasury Account Symbols based on availability of the fund source. In addition, we have provided training to our Fiscal Services staff on recording new and modified agreements.

B. Controls over Abandoned Sites Liability

Management concurs. The USGS has developed procedures, which, once fully implemented, will provide for strong controls and oversight of our abandoned sites inventory and associated remediation costs.

C. General and Application Controls over Financial Management Systems

Management concurs. The National Business Center (NBC) hosts the financial management system identified in this audit report. A revised Statement of Work (SOW) for the interagency agreement for support and hosting is under review. The new SOW enumerates the security requirements incumbent upon the NBC with respect to hosting the USGS system. It will also establish an agreed-upon timeline for remediation of the findings listed below.

1. *Entity-wide Security Program and Planning*

The NBC assured us that they have updated their System Security Plan (SSP) to include specific access and logging controls and included the financial system in the table of applications covered by the SSP.

2. *Access Control*

The USGS is working with the NBC to provide audit logging reports of changes to privileged user access profiles. That information will be used by the USGS to review for unauthorized activity.

3. *System Software*

The revised SOW will require the NBC to perform applicable audit logging functions in accordance with National Institute of Standards and Technology (NIST) 800-53, "Recommended Security Controls for Federal Information Systems States."

D. Controls over Property, Plant, and Equipment

Management concurs. The USGS has updated our annual inventory guidance, and implemented additional procedures concerning asset additions and disposals, which will help ensure that asset inventories are complete and accurate. In addition, we have updated our procedures for accession of museum collections to be in accordance with the Departmental Manual and Statement of Federal Financial Accounting Standard (SFFAS) No. 29.

E. Federal Financial Management Improvement Act of 1996 (FFMIA)

Management concurs. As described in Finding A, Budgetary Controls, we have already implemented corrective actions to ensure that the balance is properly stated in FY 2009.

Should you have questions regarding our response, please feel free to contact Karen Baker, Associate Director, Office of Administrative Policy and Services, at (703) 648-7200.

Copy to: Jeff Norris
c/o KPMG LLP
2001 M Street, NW
Washington, D.C. 20036

ATTACHMENT 3

STATUS OF AUDIT REPORT RECOMMENDATIONS

Recommendation	Status	Action Required
A.2., A.4., C.2., C.3., D.2., E.	Resolved; not implemented.	Recommendations will be referred to the Assistant Secretary, Policy, Management and Budget for tracking of implementation.
A.1., A.3., B., C.1., D.1., D.3.	Resolved and Implemented	No action required.

USGS scientists collecting emerging contamients in Broadhead Creek, PA.

Financial Statements

This part of the Section III *Financial Information* contains our principal financial statements.

Contents include:

U.S. Geological Survey

Balance Sheet

As of September 30, 2008 and 2007

(in thousands)

Assets (Note 2):		**2008**	**2007**
Intragovernmental Assets:			
Fund Balance with Treasury (Note 3)	$	310,832	294,729
Accounts and Interest Receivable (Note 4)		51,009	45,390
Other		2,586	2,713
Total Intragovernmental Assets		364,427	342,832
Accounts and Interest Receivable, Net (Note 4)		71,186	64,684
Inventory and Related Property, Net (Note 5)		485	489
General Property, Plant, and Equipment, Net (Note 6)		128,899	132,040
Other		36	87
Total Assets	$	565,033	540,132
Stewardship Assets (Note 11)			
Liabilities (Notes 7 and 17):			
Intragovernmental Liabilities:			
Accounts Payable	$	5,052	6,400
Other (Notes 7 and 8)		29,557	34,216
Total Intragovernmental Liabilities		34,609	40,616
Accounts Payable		40,407	39,765
Federal Employee and Veteran Benefits (Note 8)		35,780	35,644
Environmental and Disposal Liabilities (Note 10)		510	108
Other:			
Unfunded Annual Leave		61,799	59,622
Abandoned Sites Liabilities		22,122	20,757
Grants Payable		20,440	20,194
Other Liabilities		42,754	35,274
Total Liabilities		258,421	251,980
Commitments and Contingencies (Notes 10 and 12)			
Net Position:			
Unexpended Appropriations - Other Funds		205,447	192,712
Cumulative Results of Operations - Earmarked Funds (Note 16)		2,583	2,466
Cumulative Results of Operations - Other Funds		98,582	92,974
Total Net Position		306,612	288,152
Total Liabilities and Net Position	$	565,033	540,132

Principal Financial Statements—*The accompanying notes are an integral part of these financial statements.*

U.S. Geological Survey

Statement of Net Cost

For the Years Ended September 30, 2008 and 2007

(in thousands)

(Notes 13 and 17)		2008	2007
Resource Protection			
Improve the Understanding of National Ecosystems and Resources			
Costs	$	1,258,290	1,224,777
Less: Earned Revenue		427,420	401,817
Net Costs		830,870	822,960
Resource Use			
Improve the Understanding of Energy and Mineral Resources			
Costs		103,482	99,257
Less: Earned Revenue		6,884	5,985
Net Costs		96,598	93,272
Serving Communities			
Improve the Understanding, Prediction, and Monitoring of Natural Hazards			
Costs		130,869	125,913
Less: Earned Revenue		10,633	8,084
Net Costs		120,236	117,829
Total			
Costs		1,492,641	1,449,947
Less: Earned Revenue		444,937	415,886
Net Cost of Operations	$	1,047,704	1,034,061

U.S. Geological Survey

Statement of Changes in Net Position

For the Year Ended September 30, 2008

(in thousands)

		(Note 16) Earmarked	All Other	2008
UNEXPENDED APPROPRIATIONS:				
Beginning Balances	$	-	192,712	192,712
Budgetary Financing Sources:				
Appropriations Received, General Funds		-	1,022,430	1,022,430
Appropriations Transferred In/(Out)		-	5,100	5,100
Appropriations Used		-	(991,625)	(991,625)
Other Adjustments		-	(23,170)	(23,170)
Net Change		-	12,735	12,735
Ending Balances - Unexpended Appropriations	$	-	205,447	205,447
CUMULATIVE RESULTS OF OPERATIONS:				
Beginning Balances	$	2,466	92,974	95,440
Budgetary Financing Sources:				
Appropriations Used		-	991,625	991,625
Non-Exchange Revenue and Other		-	158	158
Transfers In/(Out) Without Reimbursement		(5)	263	258
Donations and Forfeitures of Cash and Cash Equivalents		2,617	-	2,617
Other Financing Sources:				
Donations		-	1,670	1,670
Transfers In/(Out) Without Reimbursement		(37)	204	167
Imputed Financing from Costs Absorbed by Others (Note 9)		-	56,934	56,934
Total Financing Sources		2,575	1,050,854	1,053,429
Net Cost of Operations		(2,458)	(1,045,246)	(1,047,704)
Net Change		117	5,608	5,725
Ending Balances - Cumulative Results of Operations	$	2,583	98,582	101,165

Principal Financial Statements—*The accompanying notes are an integral part of these financial statements.*

U.S. Geological Survey

Statement of Changes in Net Position

For the Year Ended September 30, 2007

(in thousands)

		(Note 16) Earmarked	All Other	2007
UNEXPENDED APPROPRIATIONS:				
Beginning Balances	$	-	192,658	192,658
Budgetary Financing Sources:				
Appropriations Received, General Funds		-	988,050	988,050
Appropriations Used		-	(981,327)	(981,327)
Other Adjustments		-	(6,669)	(6,669)
Net Change		-	54	54
Ending Balances - Unexpended Appropriations	$	-	192,712	192,712
CUMULATIVE RESULTS OF OPERATIONS:				
Beginning Balances	$	2,548	68,669	71,217
Budgetary Financing Sources:				
Appropriations Used		-	981,327	981,327
Non-Exchange Revenue and Other		-	20	20
Transfers In/(Out) Without Reimbursement		(3)	6,382	6,379
Donations and Forfeitures of Cash and Cash Equivalents		2,709	-	2,709
Other Financing Sources:				
Donations		-	1,408	1,408
Transfers In/(Out) Without Reimbursement		-	95	95
Imputed Financing from Costs Absorbed by Others (Note 9)		-	66,346	66,346
Total Financing Sources		2,706	1,055,578	1,058,284
Net Cost of Operations		(2,788)	(1,031,273)	(1,034,061)
Net Change		(82)	24,305	24,223
Ending Balances - Cumulative Results of Operations	$	2,466	92,974	95,440

U.S. Geological Survey

Statement of Budgetary Resources

For the Years Ended September 30, 2008 and 2007

(in thousands)

		2008	Restated 2007
Budgetary Resources (Notes 14 and 17):			
Unobligated Balance:			
Beginning of Fiscal Year	$	382,297	367,395
Recoveries of Prior Year Unpaid Obligations		6,373	7,802
Budget Authority:			
Appropriations Received		1,025,128	990,859
Spending Authority from Offsetting Collections:			
Earned:			
Collected		515,000	523,393
Change in Receivables from Federal Sources		12,304	(17,224)
Change in Unfilled Customer Orders:			
Advance Received		312	(2,007)
Without Advance from Federal Sources		23,681	229
Total Budget Authority		1,576,425	1,495,250
Nonexpenditure Transfers, Net		5,100	6,159
Permanently Not Available		(23,170)	(6,669)
Total Budgetary Resources	$	1,947,025	1,869,937
Status of Budgetary Resources:			
Obligations Incurred:			
Direct	$	992,029	999,058
Reimbursable		528,040	488,582
Total Obligations Incurrred		1,520,069	1,487,640
Unobligated Balance Available:			
Apportioned		411,132	361,572
Unobligated Balance Not Available		15,824	20,725
Total Status of Budgetary Resources	$	1,947,025	1,869,937
Obligated Balance:			
Obligated Balance, Net:			
Unpaid Obligations, Brought Forward, Beginning of Fiscal Year	$	313,175	305,785
Less: Uncollected Customer Payments from Federal Sources, Brought Forward, Beginning of Fiscal Year		(408,474)	(425,468)
Total Unpaid Obligated Balances, Net, Beginning of Fiscal Year		(95,299)	(119,683)
Obligations Incurred, Net		1,520,069	1,487,640
Less: Gross Outlays		(1,503,973)	(1,472,449)
Less: Recoveries of Prior Year Unpaid Obligations, Actual		(6,373)	(7,802)
Change in Uncollected Customer Payments from Federal Sources		(35,985)	16,995
Total, Unpaid Obligated Balance, Net, End of Fiscal Year		(121,561)	(95,299)
Obligated Balance, Net, End of Period - by Component:			
Unpaid Obligations		322,897	313,175
Less: Uncollected Customer Payments from Federal Sources		(444,458)	(408,474)
Total, Unpaid Obligated Balance, Net, End of Fiscal Year		(121,561)	(95,299)
Net Outlays:			
Gross Outlays		1,503,973	1,472,449
Less: Offsetting Collections		(515,312)	(521,386)
Less: Distributed Offsetting Receipts		(1,796)	(2,401)
Net Outlays	$	986,865	948,662

Principal Financial Statements—*The accompanying notes are an integral part of these financial statements.*

USGS scientist measuring volcanic gases, Anatahan Volcano.

Notes to the Financial Statements

This part of the Section III *Financial Information* contains our accompanying notes, which are an integral part of the financial statements.

Contents include:

Note 1 Summary of Significant Accounting Policies

A. Reporting Entity

The USGS, a bureau within the Department of the Interior, was established on March 3, 1879, by an act of Congress to conduct systematic and scientific "classification of the public lands, and examination of the geological structure, mineral resources, and products of the national domain." The mission of the USGS is to serve the Nation by providing reliable scientific information to describe and understand the earth; minimize loss of life and property from natural disasters; manage water, biological, energy and mineral resources; and enhance and protect our quality of life.

The USGS accomplishes its mission through integrated science programs consisting primarily of

- the Geography program, which meets the Nation's needs for accurate, nationally-consistent base geospatial data by ensuring access to and advancing the application of these data and related natural science information for users;
- the Geologic Program, which provides Earth science information used to evaluate resource potential, define risks associated with natural hazards, and characterize the potential impact of natural geologic processes on human activity, the economy, and the environment;
- the Water Resources program, which continuously assesses the Nation's water availability and quality, provides geographic and cartographic information, and addresses flood hazards by moderating the impacts of floods and improving flood disaster response; and
- the Biological Research program, which generates and distributes information needed in the conservation and management of the Nation's biological resources.

B. Basis of Presentation

These financial statements have been prepared to report the financial position, net cost of operations, changes in financial position, and budgetary resources of the USGS, consistent with the Chief Financial Officers' Act of 1990 and the Government Management Reform Act of 1994. These financial statements have been prepared from the books and records of the USGS in accordance with U.S. Generally Accepted Accounting Principles using guidance issued by the Federal Accounting Standards Advisory Board (FASAB), OMB, and USGS accounting policies, which are summarized in this note. These financial statements present proprietary and budgetary information, while other financial reports also prepared by the USGS pursuant to OMB directives are used to monitor and control the USGS use of Federal budgetary resources. The Statement of Budgetary Resources is presented on a combined, rather than consolidated basis, and therefore intra-entity eliminations were not made for the purposes of this statement.

C. Basis of Accounting

Financial transactions are recorded on an accrual accounting basis and a budgetary basis. Under the accrual method, revenues are recognized when earned and expenses are recognized when a liability is incurred, without regard to receipt or payment of cash. Budgetary accounting facilitates compliance with legal requirements and mandated controls over the use of Federal funds. It generally differs from the accrual basis of accounting in that obligations are recognized when new orders are placed, contracts are awarded, and services are received that will require payments during the same or future period. Except for the Statement of Budgetary Resources, all statements are presented on a consolidated basis and use eliminating entries to avoid overstatement of balances caused by intra-entity activity.

D. Assets

Assets presented on the USGS' Balance Sheet include both entity and non-entity balances. Entity assets are assets that the USGS has authority to use in its operations. Non-entity assets are held and managed by the USGS, but are not available for use in operations.

Intragovernmental assets arise from transactions between the USGS and other Federal entities.

E. Fund Balance with Treasury

Fund balance with Treasury is a cash balance remaining as of fiscal year-end from which the USGS is authorized to pay liabilities resulting from operational activity, except as restricted by law. Fund balance with Treasury includes funds received from direct appropriations, transfers, offsetting receipts, recoveries, and funds held in budget clearing accounts.

The USGS is permitted by law to use appropriated funds to finance its working capital fund.

F. Accounts and Interest Receivable

Accounts receivable consist of amounts owed to the USGS by other Federal agencies and the public. Unbilled accounts receivable represent amounts that have been earned but not yet billed to reimbursable customers. Receivables from Federal agencies result from reimbursable services performed, and from joint funding agreements with State, local, and regional agencies for cooperative work in support of the "Surveys, Investigations, and Research" (SIR) appropriation. Receivables also include balances owed for credit sales of products and maps to Federal agencies and the public and for interest, administrative costs, and penalties due on delinquent receivables. The majority of USGS accounts receivable are generated from the water resource and national mapping programs.

Amounts due from Federal agencies are considered fully collectible. Receivables due from the public are stated net of an allowance for estimated uncollectible amounts, determined by considering the debtor's current ability to pay, the debtor's payment record and willingness to pay, and an analysis of aged receivable activity.

G. Inventory

Inventory includes maps and map products that are held for sale. All inventory products and materials are valued at historical cost, using a method of averaging actual costs to produce like-kind scale maps within the same fiscal year. The USGS estimates an allowance for excess, spoiled, or obsolete map inventory to arrive at a net realizable value, based on inventory turnover and current stock levels.

H. Property, Plant, and Equipment

Property, plant, and equipment consist of land, structures, facilities, leasehold improvements, facilities under construction, equipment, and software purchased or developed for internal use. There are no restrictions on the use or convertibility of property, plant, and equipment.

The USGS capitalizes property, plant, and equipment purchases with an acquisition cost in excess of $100 thousand for land, structures, facilities, and software, and $15 thousand for all other capital assets. Depreciation or amortization is computed using the straight-line method over the assets' useful lives of 30 years for structures and facilities, and ranging from 3 to 25 years for equipment and 2 to 10 years for software.

Internal use software includes purchased commercial off-the-shelf software (COTS), contractor-developed software, and software that was internally developed by USGS employees. Internal use software is capitalized at cost if the acquisition cost is $100 thousand or more. For COTS software, the capitalized costs include the amount paid to the vendor for the software; for contractor-developed software it includes the amount paid to a contractor to design, program, install, and implement the software. Capitalized costs for internally developed software include the full cost (direct and indirect) incurred during the software development stage. Amortization of capitalized software begins on the date of acquisition, if purchased, or when the module or component has been successfully tested if developed internally.

Costs for construction projects are recorded as construction-in-progress until completed. Depreciation expense begins once the asset is placed into service.

The USGS leases the majority of its office space and vehicles from the General Services Administration (GSA). The lease costs approximate commercial lease rates for similar properties and vehicles.

I. Other Assets: Advances and Prepayments

Payments in advance of the receipt of goods and services are recorded as prepaid charges at the time of prepayment and recognized as expenditures/operating expenses when the related goods and services are received.

J. Stewardship Assets

Stewardship assets consist of museum and library collection heritage assets that have been entrusted to the USGS to be maintained in perpetuity for the benefit of current and future generations. The stewardship heritage assets managed by the USGS are considered priceless and irreplaceable. Because of this, the USGS assigns no financial value to them and the property, plant, and equipment capitalized and reported on the Balance Sheet excludes these assets in accordance with Federal accounting standards. Any purchases of new stewardship assets are expensed in the year they were incurred.

K. Liabilities

Liabilities covered by budgetary or other resources are those liabilities of the USGS for which Congress has appropriated funds or funding is otherwise available to pay amounts due. Liabilities not covered by budgetary or other resources represent amounts owed in excess of available Congressionally-appropriated funds or other amounts. The liquidation of liabilities not covered by budgetary or other resources is dependent on future Congressional appropriations or other funding. Intragovernmental liabilities are claims against the USGS by other Federal entities.

L. Contingent Liabilities

A contingency is an existing condition, situation, or set of circumstances involving uncertainty as to possible gain or loss. The uncertainty will ultimately be resolved when one or more future events occur or fail to occur. The USGS recognizes a contingent liability when a past event or exchange transaction has occurred and a future outflow or other sacrifice of resources is measurable and probable. A contingency is disclosed in the Notes to the Financial Statements when any of the conditions for liability recognition are met and when the chance of the future confirming event or events occurring is more than remote but less than probable. A contingency is not disclosed in the Notes to the Financial Statements when any of the conditions for liability recognition are not met and when the chance of the future event or events occurring is remote.

M. Environmental and Disposal Liabilities

The USGS has responsibility to remediate its sites with environmental settlements or decisions that are adverse to the Federal government. The USGS has accrued environmental liabilities where losses are determined to be probable and the amounts can be estimated. The liability for future cleanup of environmental hazards is probable when the government was legally responsible for creating the hazard or was otherwise related to it in such a way that it is legally liable to clean up the contamination.

N. Other Liabilities: Deposit Fund

The deposit fund liability represents receipts of funds held on deposit prior to completion of a signed agreement to provide reimbursable services to Federal and public entities. The deposit fund liability also consists of monies that were not obligated prior to the agreement expiration that are funded by annual year appropriations, which will be returned to the customer.

O. Accrued Annual, Sick, and Other Leave and Compensatory Time

Annual leave and other compensatory leave time are accrued when earned. The accrual is presented as a component of other liabilities with the public on the Balance Sheet and is adjusted for changes in compensation rates and reduced for annual leave taken. Sick leave is provided to employees on a use or lose basis and is expensed when taken.

P. Workers' Compensation

The Federal Employees' Compensation Act provides income and medical cost protection to covered Federal civilian employees injured on the job, to employees who have incurred work-related occupational diseases, and to beneficiaries of employees whose deaths are attributable to job-related injuries or occupational diseases. The FECA program is administered by the Department of Labor (DOL), which pays valid claims and subsequently seeks reimbursement from the Federal agencies employing the claimants.

The FECA liability consists of two components. The first component is based on actual claims paid by DOL but not yet reimbursed. The USGS reimburses DOL for the amount of the actual claims as funds are appropriated for this purpose. Reimbursements to the DOL on payments made occur approximately two years subsequent to the actual disbursement. As a result, the USGS recognizes a liability for the actual claims paid by DOL and to be reimbursed by the USGS. Budgetary resources for this intra-governmental liability are made available to the USGS as part of its annual appropriation from Congress in the year in which the reimbursement to the DOL takes place.

The second component is the estimated liability for future benefit payments as a result of past events. This liability includes death, disability, medical, and miscellaneous costs. DOL determines this component annually, as of September 30, using a method that considers historical benefit payment patterns, wage inflation factors, medical inflation factors, and other variables. The projected annual benefit payments are discounted to present value using OMB's economic assumptions for 10-year Treasury notes and bonds. To provide for the effects of inflation on the liability, wage inflation factors (i.e., cost of living adjustments) and

medical inflation factors (i.e., consumer price index medical adjustments) are applied to the calculation of projected future benefit payments. These factors are also used to adjust historical benefit payments to current-year constant dollars. A discounting formula is also used to recognize the timing of benefit payments as thirteen payments per year instead of one lump sum payment per year. Based on information provided by the DOL, the Department allocates the actuarial liability to its bureaus and Departmental offices based on the payment history for the bureaus and Departmental offices. The estimated liability is not covered by budgetary resources and will require future funding.

DOL also evaluates the estimated projections to ensure that the estimated future benefit payments are appropriate. The analysis includes three tests:

(1) a comparison of the current-year projections to the prior-year projections; (2) a comparison of the prior-year projected payments to the current-year actual payments, excluding any new case payments that had arisen during the current year; and (3) a comparison of the current-year actual payment data to the prior-year actual payment data. Based on the outcome of this analysis, adjustments may be made to the estimated future benefit payments.

Q. Revenues, User Fees, and Financing Sources

Appropriations. The USGS receives the majority of the funding needed to support its programs through Congressional appropriations. Financing sources are received in annual, multi-year, and no-year appropriations that may be used, within statutory limits, for operating and capital expenditures.

Upon expiration of an annual or multiple-year appropriation, the obligated and unobligated balances retain their fiscal year identity, and are maintained separately within an expired account. The unobligated balance can be used to make adjustments to existing obligations, but is otherwise not available for expenditures. Annual and multiple-year appropriations are canceled at the end of the fifth year after expiration. No-year appropriations do not expire. Appropriations of budget authority are recognized as used when a liability for goods and services or benefits and grants are incurred.

Non-Exchange Revenue. These revenues generally result from donations to the Federal government and from the Federal government's sovereign right to demand payment, including taxes, fines and penalties. These revenues do not reduce the cost of the USGS' operations and are reported on the Statement of Changes in Net Position.

Exchange Revenues. Additional funds are obtained through reimbursements for services performed for other Federal agencies and the public, and fees charged for surveys, investigations, and research. Revenue and intra-governmental reimbursements are recognized as earned when the goods have been delivered or services rendered by the USGS. Revenues earned from public sources are derived from States and municipalities for making cooperative topographic and geologic surveys and water resource investigations; proceeds from the sale of photographs, maps, and records; proceeds from the sale of personal property; and reimbursements from permits and licenses of the Federal Energy Regulatory Commission. Revenues from certain cooperators represent about half of the total cost; the USGS pays the remaining half of the total cooperators cost. Revenues earned from other Federal agencies are derived from special-purpose mapping and investigations. Revenues are also received through the Department of State, from foreign countries, and international organizations for scientific and technical assistance.

The USGS has specific legislative authority to receive revenue from non-Federal reimbursable customers as budgetary resources. The USGS also has authority to receive contributions from outside organizations to perform work desired mutually by multiple parties. In addition, the USGS receives rental receipts for quarters provided at remote locations.

Deferred Revenue. Deferred revenue consist of advances received from Federal and public entities for goods and services that will not be fully earned until the related goods or services have been provided by the USGS. The majority of the USGS deferred revenue is generated from the Water Resources Program. Revenue is recognized as reimbursable costs are incurred, and the deferred revenue balance is reduced accordingly.

User Fees. User fees are set at a level that will recover the full costs associated with the services for specific customers. Prices for information products that are sold on a retail basis are set at a level that will recover the full costs of reproduction and dissemination, or

costs incurred after the mission related information is collected and archived. User fees and product prices are developed in accordance with cost components of OMB Circular A-25, *User Charges* with review and approval by the Director, or a delegated party. The annual Cost Recovery Report and regularly scheduled independent pricing reviews by product line are among the methods used to monitor compliance with the USGS policies.

Imputed financing sources. In certain cases, operating costs of the USGS are paid for by funds appropriated to other Federal entities. For example, pension benefits for most USGS employees are paid for by the OPM and certain legal judgments against the USGS are paid from the Judgment Fund maintained by Treasury. OMB indicates that imputed costs to be recognized by Federal entities include the following: (1) employees' pension benefits; (2) health insurance, life insurance, and other benefits for retired employees; (3) other post employment benefits for retired, terminated, and inactive employees, including severance payments, training and counseling, continued health care, and unemployment and workers' compensation under the Federal Employees' Compensation Act; and (4) losses in litigation proceedings. The USGS also records intra-departmental imputed costs in accordance with Department policy and FASAB's Interpretation Number 6, *Accounting for Imputed Intra-departmental Costs: An Interpretation of SFFAS Number 4*. The USGS includes applicable imputed costs on the Statement of Net Cost. In addition, an imputed financing source is recognized on the Statement of Changes in Net Position.

R. Retirement Plans

Civil Service Retirement System (CSRS) and Federal Employees Retirement System (FERS). All USGS employees with permanent status participate in either the CSRS or FERS defined-benefit pension plans. FERS went into effect on January 1, 1987. FERS automatically covers most employees hired after December 31, 1983. Employees hired prior to January 1, 1984, could elect to either join FERS or remain in CSRS.

OPM is responsible for administering and reporting CSRS and FERS assets, accumulated plan benefits, and liabilities applicable to federal employees governmentwide.

For CSRS-covered employees, in both FY2008 and FY2007, the USGS was required to make contributions to the plan matching the employee's contribution, which was 7 percent of the employee's basic pay. For each fiscal year, OPM calculates the U.S. government's service cost for covered employees, which is an estimate of the amount of funds that, if accumulated annually and invested over an employee's career, would be enough to pay that employee's future benefits. Since the U.S. government's estimated service cost exceeds contributions made by employer agencies and covered employees, this plan is not fully funded by the USGS and its employees.

The USGS has recognized an imputed cost and imputed financing source for the difference between the estimated service cost and the contributions made by the USGS and its covered employees.

FERS contributions made by employer agencies and covered employees exceed the U.S. Government's estimated service cost. For FERS-covered employees, the USGS was required in FY2008 and FY2007 to make contributions of 11.2 percent of basic pay. Employees contributed 0.8 percent of basic pay. Employees participating in FERS are covered under the Federal Insurance Contributions Act (FICA), for which the USGS contributes a matching amount to the Social Security Administration.

Thrift Savings Plan (TSP). Employees covered by CSRS and FERS are eligible to contribute to the U.S. Government's TSP, administered by the Federal Retirement Thrift Investment Board. A TSP account is automatically established for FERS-covered employees, and the USGS makes a mandatory contribution of 1 percent of basic pay. FERS-covered employees are entitled to contribute up to $15,500 of basic pay to their TSP account, with the USGS making matching contributions up to 5 percent of basic pay. Employees covered by CSRS are entitled to contribute up to $15,500 of basic pay to their TSP account. The USGS makes no matching contributions for CSRS-covered employees.

Federal Employees' Health Benefit (FEHB) Program. Most USGS employees are enrolled in the FEHB Program, which provides post-retirement health benefits. OPM administers this program and is responsible for the reporting of liabilities. Employer agencies and covered employees are not required

to make any contributions for post-retirement health benefits. OPM calculates the U.S. government's service cost for covered employees each fiscal year. The USGS has recognized the entire service cost of these post-retirement benefits for covered employees as an imputed cost and imputed financing source.

Federal Employees' Group Life Insurance (FEGLI) Program. All USGS employees with permanent status can elect to participate in the FEGLI Program. Participating employees can obtain basic term life insurance, with the employee paying two-thirds of the cost and the USGS paying one-third. Additional coverage is optional, to be paid fully by the employee. The basic life coverage may be continued into retirement if certain requirements are met. OPM administers this program and is responsible for the reporting of liabilities. For each fiscal year, OPM calculates the U.S. Government's service cost for the post retirement portion of basic life coverage. The USGS contributions to the basic life coverage are fully allocated by OPM to the pre-retirement portion of coverage, and accordingly, the USGS has recognized the entire service cost of the post-retirement portion of basic life coverage as an imputed cost and imputed financing source.

S. Earmarked Funds

Earmarked funds are financed by specifically identified revenues and other financing sources. These funds are required by statute to be used for designated activities or purposes and must be accounted for separately from the General Fund.

T. Allocation Transfers

The USGS is a party to allocation transfers with other Federal agencies as a receiving (child) entity. Allocation transfers are legal delegations by one department of its authority to obligate and outlay funds to another department. A separate fund (allocation account) is created by Treasury as a subset of the parent fund account for tracking and reporting purposes. All allocation transfers of balances are credited to this account, and subsequent obligations and outlays incurred by the child entity are charged to this allocation account as they execute the delegated activity on behalf of the parent entity. Generally, all financial activity related to these allocation transfers is reported in the financial statements of the parent entity from which the underlying legislative authority, appropriations, and budget apportionments are derived. The USGS receives allocation transfers, as the child, from the U.S. Agency for International Development and the Office of the Secretary, Department of the Interior.

U. Income Taxes

The USGS, as a Federal agency, is not subject to Federal, State, or local income taxes and, accordingly, no provision for income taxes has been recorded in the accompanying financial statements.

V. Use of Estimates

The preparation of financial statements in accordance with U.S. Generally Accepted Accounting Principles requires management to make certain estimates and assumptions in reporting assets, liabilities, revenues, expenses, and financial sources; and in the related note disclosures. Actual results could differ from these estimates. Significant estimates underlying the accompanying financial statements include accounts payable; grants payable; the allowance for doubtful accounts receivable; property, plant, and equipment useful lives and impairments; contingent and environmental liabilities; abandoned sites; the FECA actuarial liability; and the allowance for obsolete inventory.

W. Reclassifications

Certain reclassifications have been made to the 2007 balances to conform to the 2008 presentation.

Note 2 Assets Analysis

The USGS assets are considered entity assets, except for a portion of accounts receivable which consist of accrued interest and penalties from delinquent debt. At September 30, 2008 and 2007, this amount was $157 and $102 thousand respectively. The USGS has no entity restricted assets.

Note 3 Fund Balance with Treasury

Fund Balance with Treasury as of September 30, 2008 and 2007 is as follows:

		2008	2007
General Funds	$	197,729	187,419
Special Funds		125	133
Revolving Funds		106,192	98,223
Trust Funds		1,351	1,226
Other Fund Types		5,435	7,728
Total Fund Balance with Treasury by Fund Type	$	310,832	294,729

The fund types and their purpose are described below:

General funds. These funds consist of expenditure accounts used to record financial transactions arising from Congressional appropriations.

Special funds. These accounts are credited with receipts from special sources that are designated by law for a specific purpose. When collected, these receipts are available immediately for expenditure for special programs, such as providing housing for employees on field assignments, operations and maintenance for the temporary housing, cleanup associated with the Exxon Valdez oil spill, and operating science and cooperative programs.

Revolving funds. These funds consist of cash flows to and from the government resulting from the operation of the Working Capital Fund and do not fund the Bureau's normal operating expenses. These funds are restricted to the purposes set forth in the legislation that established the Working Capital Fund and related investment plans.

Trust funds. These funds are used for the acceptance and administration of funds contributed from public and private sources and programs in cooperation with other Federal and State agencies or private donors.

Other Fund Types. These funds include miscellaneous receipt accounts, transfer accounts, performance bonds, deposit and clearing accounts, and disbursements awaiting proper classification.

Unobligated, unavailable fund balance represents amounts from appropriations for which the period of availability for obligation has expired. These balances remain available for upward adjustments of obligations incurred during the period for which the appropriation was available.

114 Notes to the Financial Statements—As of September 30, 2008 and 2007 (in thousands)

Status of Fund Balance with Treasury as of September 30, 2008 and 2007, is as follows:

		2008	2007
Unobligated:			
Available *	$	143,788	115,236
Unavailable		15,824	20,725
Obligated not Yet Disbursed *		145,785	151,037
Subtotal		305,397	286,998
Fund Balance with Treasury Not Covered by Budgetary Resources:			
Clearing and Deposit Accounts		5,435	7,731
Total Status of Fund Balance with Treasury	$	310,832	294,729

* Unfilled Customer Orders, Without Advance, were not included for FY 2008 as only funds available relate to the Fund Balance with Treasury. This is a prospective change to DOI's crosswalk.

Note 4 Accounts and Interest Receivable, Net

Accounts receivable consist of amounts owed to the USGS by other Federal agencies and the public. Unbilled accounts receivable represent amounts that have been earned but not yet billed to reimbursable customers. Unbilled accounts receivable function much like a "work-in-progress" record. Due to the nature of certain reimbursable agreements that require invoicing upon completion of the work, the USGS can bill customers years after the project was initiated. This procurement practice results in most accounts receivable being comprised of unbilled balances.

Accounts receivable are reduced to net realizable value by an allowance for doubtful accounts. The allowance for public receivables is estimated quarterly based on specific identification of delinquent receivables, an analysis of aged receivable activity and historical trends, as well as management's judgment regarding the debtor's willingness and ability to pay. Federal receivables are considered fully collectible.

Interest receivable represents interest income earned on outstanding receivables that has not yet been collected. Interest accrues on a daily basis beginning thirty days from the date the notice of amount due was sent. Interest is charged at the rate established by the Secretary of the Treasury.

Accounts and Interest Receivable from Public Agencies as of September 30, 2008 and 2007 are as follows:

		2008	2007
Accounts and Interest Receivable from the Public:			
Current	$	23,446	16,129
1 - 180 Days Past Due		5,867	7,585
181 - 365 Days Past Due		176	231
1 to 2 Years Past Due		90	103
Total Billed Accounts and Interest Receivable - Public		29,579	24,048
Unbilled Accounts and Interest Receivable - Public		41,810	41,072
Total Accounts and Interest Receivable - Public		71,389	65,120
Allowance for Doubtful Accounts - Public		(203)	(436)
Total Accounts and Interest Receivable - Public, Net of Allowance	$	71,186	64,684

Notes to the Financial Statements—As of September 30, 2008 and 2007 (in thousands)

Accounts and Interest Receivable from Federal Agencies as of September 30, 2008 and 2007 are as follows:

		2008	2007
Accounts and Interest Receivable from Federal Agencies:			
Billed	$	285	189
Unbilled		50,724	45,201
Total Accounts and Interest Receivable - Federal	$	51,009	45,390

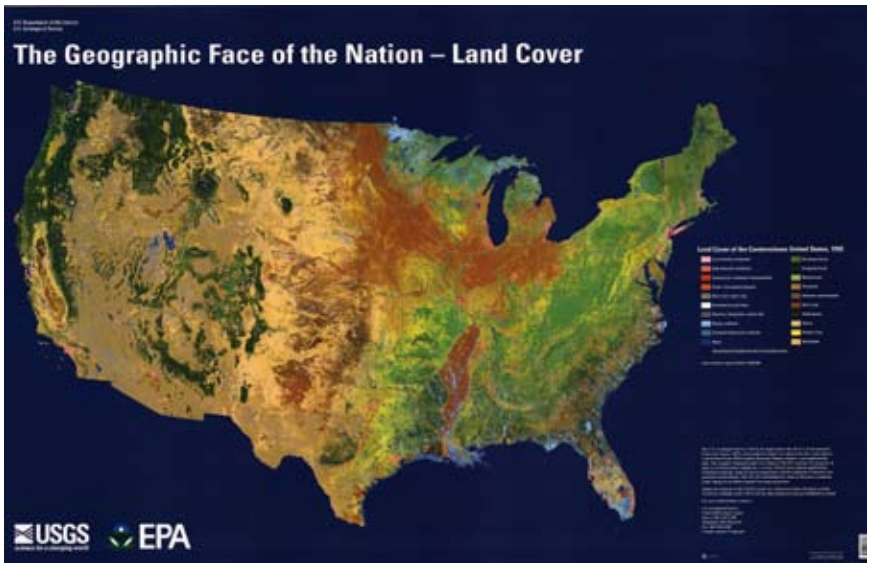
Note 5 Inventory and Related Property, Net

Inventory as of September 30, 2008 and 2007 is as follows:

		2008	2007
Inventory:			
Published Maps Held for Sale	$	7,770	7,378
Allowance for Obsolescence		(7,285)	(6,889)
Net Inventory and Related Property	$	485	489

The USGS disseminates earth, water, and biological science information through various media, including maps, reports, digital data sets, and general interest publications of the USGS and other Federal agencies. Maps and map products are located at the USGS Rocky Mountain Mapping Center in Denver, Colorado, and at several Earth Science Information Centers across the United States. The USGS maintains an inventory of maps and map products that are available to respond to national emergencies and resource management needs, as well as governmental requests.

Below are examples of maps included in inventory available for sale.



Notes to the Financial Statements—As of September 30, 2008 and 2007 (in thousands)

Note 6 General Property, Plant, and Equipment, Net

Property, plant, and equipment as of September 30, 2008 is as follows:

		Acquisition Cost	Accumulated Depreciation	Net Book Value
Land and Land Improvements	$	300	-	300
Buildings		105,010	77,566	27,444
Structures and Facilities		13,340	10,819	2,521
Leasehold Improvements		24,534	13,600	10,934
Construction in Progress - General		3,362	-	3,362
Equipment and Vehicles		348,009	266,706	81,303
Internal Use Software:				
In Use		11,870	8,962	2,908
In Development		127	-	127
Total Property, Plant, and Equipment	$	506,552	377,653	128,899

Property, plant, and equipment as of September 30, 2007 is as follows:

		Acquisition Cost	Accumulated Depreciation	Net Book Value
Land and Land Improvements	$	300	-	300
Buildings		104,678	75,369	29,309
Structures and Facilities		13,340	10,437	2,903
Leasehold Improvements		30,344	13,649	16,695
Construction in Progress - General		3,227	-	3,227
Equipment and Vehicles		342,972	267,182	75,790
Internal Use Software:				
In Use		10,783	7,717	3,066
In Development		750	-	750
Total Property, Plant, and Equipment	$	506,394	374,354	132,040

Depreciation and amortization expense amounted to approximately $16 million and $18 million, for the years ended September 30, 2008 and 2007 respectively.

Notes to the Financial Statements—As of September 30, 2008 and 2007 (in thousands)

Note 7 Liabilities Not Covered by Budgetary Resources

Liabilities not covered by budgetary or other resources represent amounts owed in excess of available Congressional appropriated funds or other amounts. The liquidation of liabilities not covered by budgetary or other resources is dependent on future Congressional appropriations or other funding source.

Liabilities as of September 30, 2008 is as follows:

	Covered by Budgetary Resources	Not Covered by Budgetary Resources		
	Current	**Current**	**Non-Current**	**2008**
Intragovernmental Liabilities:				
Accounts Payable	$ 5,052	-	-	5,052
Other:				
Advances and Deferred Revenue	1,645	-	-	1,645
Deposit Funds	-	68	-	68
Accrued Employee Benefits	7,562	237	3,304	11,103
Unfunded FECA Liability	-	2,710	4,066	6,776
GSA Tenant Improvement Loans	-	2,771	6,982	9,753
Other Miscellaneous Liabilities	55	157	-	212
Total Other Intragovernmental Liabilities	9,262	5,943	14,352	29,557
Total Intragovernmental Liabilities	14,314	5,943	14,352	34,609
Public Liabilities:				
Accounts Payable	40,407	-	-	40,407
Federal Employee and Veterans' Benefits:				
FECA Actuarial Liability	-	-	35,780	35,780
Total Federal Employee Veterans' Benefits	-	-	35,780	35,780
Environmental and Disposal Liabilities	-	510	-	510
Other:				
Unfunded Annual Leave	-	3,090	58,709	61,799
Abandoned Sites Liabilities	-	976	21,146	22,122
Grants Payable	20,440	-	-	20,440
Other Liabilities:				
Accrued Payroll and Benefits	31,085	-	-	31,085
Advances and Deferred Revenue	1,803	67	-	1,870
Deposit Funds	-	5,367	-	5,367
Contract Holdbacks	133	-	4,299	4,432
Total Other Liabilities	33,021	5,434	4,299	42,754
Total Other Public Liabilities	53,461	9,500	84,154	147,115
Total Public Liabilities	93,868	10,010	119,934	223,812
Total Liabilities	$ 108,182	15,953	134,286	258,421

118 Notes to the Financial Statements—As of September 30, 2008 and 2007 (in thousands)

Liabilities as of September 30, 2007 is as follows:

	Covered by Budgetary Resources	Not Covered by Budgetary Resources		
	Current	**Current**	**Non-Current**	**2007**
Intragovernmental Liabilities:				
Accounts Payable	$ 6,400	-	-	6,400
Other:				
Advances and Deferred Revenue	809	-	-	809
Deposit Funds	-	1,252	-	1,252
Accrued Employee Benefits	5,985	214	3,056	9,255
Unfunded FECA Liability	-	2,741	4,112	6,853
GSA Tenant Improvement Loans	-	4,021	11,852	15,873
Other Miscellaneous Liabilities	72	102	-	174
Total Other Intragovernmental Liabilities	6,866	8,330	19,020	34,216
Total Intragovernmental Liabilities	13,266	8,330	19,020	40,616
Public Liabilities:				
Accounts Payable	39,765	-	-	39,765
Federal Employee and Veterans' Benefits:				
FECA Actuarial Liability	-	-	35,644	35,644
Total Federal Employee Veterans' Benefits	-	-	35,644	35,644
Environmental and Disposal Liabilities	-	-	108	108
Other:				
Unfunded Annual Leave	-	2,981	56,641	59,622
Abandoned Sites Liabilities	-	915	19,842	20,757
Grants Payable	20,194	-	-	20,194
Other Liabilities:				
Accrued Payroll and Benefits	25,036	-	-	25,036
Advances and Deferred Revenue	2,327	285	-	2,612
Deposit Funds	-	6,476	-	6,476
Contract Holdbacks	124	-	1,026	1,150
Total Other Liabilities	27,487	6,761	1,026	35,274
Total Other Public Liabilities	47,681	10,657	77,509	135,847
Total Public Liabilities	87,446	10,657	113,261	211,364
Total Liabilities	$ 100,712	18,987	132,281	251,980

Notes to the Financial Statements—As of September 30, 2008 and 2007 (in thousands)

Note 8 FECA Liabilities

The USGS recorded an estimated, unfunded liability for the expected future cost for death, disability, and medical claims under the Federal Employees' Compensation Act. This estimated liability is calculated by DOL using a method that considers historical benefit payment patterns, wage inflation factors, medical inflation factors, and other variables. These actuarially computed projected annual benefit payments are discounted to present value using the OMB's economic assumptions for 10-year Treasury notes and bonds. The USGS also recorded an estimated, unfunded liability for the expected future payments to the DOL in payment of outstanding workers compensation claims.

FECA liabilities for the years ended September 30, 2008 and 2007 are as follows:

		2008	2007
Department of Labor:			
FECA Actuarial Liability	$	35,780	35,644
FECA Workers Compensation Liability		6,776	6,853
Total FECA Liabilities	$	42,556	42,497

Note 9 Imputed Financing from Costs Absorbed by Others

Imputed financing sources are recorded in the financial statements for amounts paid or to be paid on behalf of the USGS by other Federal agencies. The OPM paid expenses relating to Federal employee pension and other future retirement benefits on behalf of the USGS. The intra-departmental imputed costs relate to expenses the Department of the Interior Solicitor's Office incurred on behalf of the USGS.

Imputed financing costs for the years ended September 30, 2008 and 2007 are as follows:

		2008	2007
Office of Personnel Management:			
Pension Expense	$	19,615	20,742
Federal Employees Health Benefits		36,962	39,584
Federal Employees Group Life Insurance Program		90	87
Total OPM		56,667	60,413
Intra-Departmental Imputed Costs		228	5,867
Non-Reimbursable Claims Paid by Treasury's Judgment Fund		39	66
Total Imputed Financing Costs	$	56,934	66,346

120 Notes to the Financial Statements—As of September 30, 2008 and 2007 (in thousands)

Note 10 Contingent and Environmental and Disposal Liabilities

The USGS has the responsibility to remediate sites with environmental contamination and is a party to various administrative proceedings, legal actions, environmental suits, and claims that may result in settlements or decisions adverse to the Federal government. The USGS accrued liabilities where losses are determined to be probable and the amounts can be estimated. In addition, the USGS disclosed liabilities where the conditions for liability recognition were not met but the likelihood of unfavorable outcome is more than remote.

Estimated contingent and environmental disposal liabilities as of September 30, 2008 and 2007 are as follows:

2008		Estimated Range of Loss	
	Accrued Liabilities	Lower End of Range	Upper End of Range
Contingent Liabilities			
Reasonably Possible	$ -	379	379
Environmental and Disposal Liabilities			
Probable	510	510	955

2007		Estimated Range of Loss	
	Accrued Liabilities	Lower End of Range	Upper End of Range
Contingent Liabilities			
Reasonably Possible	$ -	289	699
Environmental and Disposal Liabilities			
Probable	108	108	128

General Contingent Liability

General contingent liabilities consist of lawsuits and claims against the USGS which are awaiting adjudication. They typically relate to Federal Tort Claims Act administrative and judicial claims, contract related actions, and personnel and employment matters. At this time, the USGS has no contingent liabilities deemed to have a probable loss. However, the USGS does have two Equal Employment Opportunity actions that are deemed to have a reasonably possible loss.

Environmental and Disposal Liability

The USGS is subject to environmental laws and regulations regarding air, water, and land use, the storage and disposal of hazardous materials, and the operations and closure of facilities at which environmental contamination may be present. Responsible parties, which may include Federal agencies under certain circumstances, are required to remove releases of hazardous substances from facilities they own, operate, or at which they arranged for the disposal of such substances. At this time, the USGS has only one liability that relates to two monitoring wells which are deemed to have a probable loss.

Notes to the Financial Statements—As of September 30, 2008 and 2007 (in thousands)

Note 11 Stewardship Assets

The USGS serves the Nation by providing reliable scientific information to describe and understand the Earth. The USGS serves American citizens as a steward for a large, varied, and scientifically important body of heritage assets, and in conducting research and development that is critical to the health of our country and in understanding the Earth. In FY2008, the USGS reclassified heritage assets from Required Supplementary Information to basic information which is disclosed below, as required by SFFAS 29, *Heritage Assets and Stewardship Land*. Information relating to the condition of our heritage assets remains in the RSI.

Library Collections

The USGS considers its library collections to be heritage assets which provide scientific information needed by Interior researchers, as well as researchers of other government agencies, universities, and professional communities. Besides providing resources for the USGS scientific investigations, the library collections provide access to geographical, technical, and historical literature in paper and electronic formats for the general public and the industry. The USGS manages these assets to the standards set in the Survey Manual and uses the Environmental Guidelines for the Storage of Paper Records published by the National Information Standards Organization as a guide to maintaining their condition. The USGS utilizes a library classification system designed for earth science libraries.

The USGS library holdings, collected during more than a century of providing library services, are an invaluable legacy to the Nation. Congress established the library in the 1879 legislation that founded the USGS. The Act decreed that copies of reports published by the USGS should be given to the library to exchange for publications of State and national geological surveys and societies. The USGS Library built from this notable and cost-effective exchange program, plus purchases and gifts, has become the world's largest collection of earth science information. The library was originally located in Washington, D.C.; however, the library collection is now housed in four libraries across the country in Reston, VA, Menlo Park, CA, Denver, CO, and Flagstaff, AZ.

Library collections as of September 30, 2008 are as follows:

	10/1/2007	Additions	Withdrawals	9/30/2008
Library Collection Units:				
U.S. Geological Survey Facilities	4	-	-	4
Total	4	-	-	4

Museum Collections

The USGS also considers its museum collections, comprised of collections of natural history specimens and cultural objects, to be heritage assets. Natural history specimens are important as they contribute reliable scientific information to our research activities, while our cultural objects provide educational and informational services on the history of the bureau through museum and other exhibits of historical activities/events. The USGS endeavors to manage these assets to the standards set in the Departmental Manual 411, Policy and Responsibilities for Managing Museum Property, and other Federal authorities.

The USGS manages a widespread collection of natural history specimens and cultural objects that support the mission of the bureau in many science and administrative centers throughout the United States. These unique collections serve to illustrate important achievements and challenges to the Earth Sciences, to document the history of the USGS, and to enlighten those who use the collections. The collections also provide the public with an interpretive demonstration of the history and enterprise of the USGS.

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Museum collections as of September 30, 2008 are as follows:

	10/1/2007	Additions	Withdrawals	9/30/2008
Museum Collection Units:				
Held at Interior Bureau Facilities	6	-	-	6
Held at Non-Interior Bureau Facilities	2	-	-	2
Total	8	-	-	8

Note 12 Leases and Occupancy Agreements

The USGS has many cancelable occupancy agreements with the GSA, primarily for office space. Some of these agreements do not have a stated expiration. The USGS also has many operating leases, primarily for storage and housing for employees working on location, with public entities. There were no personal property lease agreements with the public exceeding one year as of September 30, 2008.

The USGS has estimated its future minimum liability for GSA occupancy agreements by adding OMB approved inflationary rate increases per year to the FY2008 lease rental expense. Public operating leases were calculated based on lease agreement terms.

Future estimated minimum operating lease payments as of September 30, 2008 are as follows:

		Real Prop		Personal Prop	
		Federal	Public	Federal	Total
FY2009	$	66,128	2,196	7,122	75,446
FY2010		61,180	1,878	7,300	70,358
FY2011		56,705	1,850	7,483	66,038
FY2012		37,663	1,781	7,670	47,114
FY2013		18,447	1,699	7,862	28,008
Thereafter		86,929	2,005	-	88,934
Total Future Operating Lease Payments	$	327,052	11,409	37,437	375,898

Rental expenses for occupancy agreements, operating leases, and exhibit hall space during FY2008 and FY2007 were approximately $79 and $78 million, respectively.

In some cases, the USGS secures funds from GSA's building fund to finance improvements made to space where the USGS is the tenant. Because these improvements are made to convert the existing structures into workable space tailored to USGS needs, the USGS is required to repay GSA the cost of the improvements over the term of the occupancy agreement, which is incorporated into the total rent payments billed to the USGS by GSA. The principal loan balance of approximately $10 and $16 million at September 30, 2008 and 2007, respectively, is recorded as a liability and the corresponding leasehold improvements are recorded in Property, Plant & Equipment, which are amortized over the period of the occupancy agreements.

Notes to the Financial Statements—As of September 30, 2008 and 2007 (in thousands)

Note 13 Statement of Net Cost by Segment

The USGS' Statement of Net Cost is summarized into a format that aligns with the Department of the Interior's primary mission areas, as outlined in the DOI Strategic Plan. The USGS further displays its net cost under the Department's end outcome goals, a level of detail one layer beneath the primary mission areas.

The USGS reported five responsibility segments in its FY2007 Consolidating Schedule of Net Cost. This represented the major operating segments by which the USGS' missions and goals were measured. These responsibility segments were Water, Geology, Geography, Biology, and Geospacial Information Office (GIO). Based on the USGS' FY2008 enacted budget, a sixth responsibility segment, Global Change, was added to the FY2008 Consolidating Schedule of Net Cost. Dollars appropriated to Global Change will continue to increase in the coming fiscal years.

The following table reflects USGS' net cost by responsibility segment for the year ended September 30, 2008:

Consolidating Schedule of Net Cost

For the Year Ended September 30, 2008
(in thousands)

	Water	Geology	Geography	Biology	GIO	Global Change	Eliminations	Total
Improve the Understanding of National Ecosystems and Resources								
Intragovernmental Costs	$ 196,293	29,566	18,783	74,237	18,362	3,188	(55,009)	285,420
Public Costs	468,605	96,431	102,327	247,266	55,601	2,640	-	972,870
Total Costs	664,898	125,997	121,110	321,503	73,963	5,828	(55,009)	1,258,290
Intragovernmental Earned Revenue	146,021	11,858	23,713	72,516	14,247	245	(55,009)	213,591
Public Earned Revenue	184,323	6,826	2,735	7,168	12,774	3	-	213,829
Total Earned Revenue	330,344	18,684	26,448	79,684	27,021	248	(55,009)	427,420
Net Costs	334,554	107,313	94,662	241,819	46,942	5,580	-	830,870
Improve the Understanding of Energy and Mineral Resources								
Intragovernmental Costs	-	31,676	-	-	-	-	(3,005)	28,671
Public Costs	-	74,811	-	-	-	-	-	74,811
Total Costs	-	106,487	-	-	-	-	(3,005)	103,482
Intragovernmental Earned Revenue	-	8,555	-	-	-	-	(3,005)	5,550
Public Earned Revenue	-	1,334	-	-	-	-	-	1,334
Total Earned Revenue	-	9,889	-	-	-	-	(3,005)	6,884
Net Costs	-	96,598	-	-	-	-	-	96,598
Improve the Understanding, Prediction, and Monitoring of Natural Hazards								
Intragovernmental Costs	-	27,430	-	-	-	-	(1,189)	26,241
Public Costs	-	104,628	-	-	-	-	-	104,628
Total Costs	-	132,058	-	-	-	-	(1,189)	130,869
Intragovernmental Earned Revenue	-	9,546	-	-	-	-	(1,189)	8,357
Public Earned Revenue	-	2,276	-	-	-	-	-	2,276
Total Earned Revenue	-	11,822	-	-	-	-	(1,189)	10,633
Net Costs	-	120,236	-	-	-	-	-	120,236
Total								
Intragovernmental Costs	196,293	88,672	18,783	74,237	18,362	3,188	(59,203)	340,332
Public Costs	468,605	275,870	102,327	247,266	55,601	2,640	-	1,152,309
Total Costs	664,898	364,542	121,110	321,503	73,963	5,828	(59,203)	1,492,641
Intragovernmental Earned Revenue	146,021	29,959	23,713	72,516	14,247	245	(59,203)	227,498
Public Earned Revenue	184,323	10,436	2,735	7,168	12,774	3	-	217,439
Total Earned Revenue	330,344	40,395	26,448	79,684	27,021	248	(59,203)	444,937
Net Cost of Operations	$ 334,554	324,147	94,662	241,819	46,942	5,580	-	1,047,704

The following table reflects USGS' net cost by responsibility segment for the year ended September 30, 2007:

Consolidating Schedule of Net Cost

For the Year Ended September 30, 2007
(in thousands)

	Water	Geology	Geography	Biology	GIO	Eliminations	Total
Improve the Understanding of National Ecosystems and Resources							
Intragovernmental Costs	$ 198,397	32,875	28,931	78,335	14,242	(60,930)	291,850
Public Costs	446,603	93,289	120,948	237,639	34,448	-	932,927
Total Costs	645,000	126,164	149,879	315,974	48,690	(60,930)	1,224,777
Intragovernmental Earned Revenue	142,295	11,388	26,587	73,972	8,810	(60,930)	202,122
Public Earned Revenue	168,017	9,579	3,674	6,342	12,083	-	199,695
Total Earned Revenue	310,312	20,967	30,261	80,314	20,893	(60,930)	401,817
Net Costs	334,688	105,197	119,618	235,660	27,797	-	822,960
Improve the Understanding of Energy and Mineral Resources							
Intragovernmental Costs	-	30,600	-	-	-	(2,983)	27,617
Public Costs	-	71,640	-	-	-	-	71,640
Total Costs	-	102,240	-	-	-	(2,983)	99,257
Intragovernmental Earned Revenue	-	7,926	-	-	-	(2,983)	4,943
Public Earned Revenue	-	1,042	-	-	-	-	1,042
Total Earned Revenue	-	8,968	-	-	-	(2,983)	5,985
Net Costs	-	93,272	-	-	-	-	93,272
Improve the Understanding, Prediction, and Monitoring of Natural Hazards							
Intragovernmental Costs	-	29,317	-	-	-	(2,145)	27,172
Public Costs	-	98,741	-	-	-	-	98,741
Total Costs	-	128,058	-	-	-	(2,145)	125,913
Intragovernmental Earned Revenue	-	8,991	-	-	-	(2,145)	6,846
Public Earned Revenue	-	1,238	-	-	-	-	1,238
Total Earned Revenue	-	10,229	-	-	-	(2,145)	8,084
Net Costs	-	117,829	-	-	-	-	117,829
Total							
Intragovernmental Costs	198,397	92,792	28,931	78,335	14,242	(66,058)	346,639
Public Costs	446,603	263,670	120,948	237,639	34,448	-	1,103,308
Total Costs	645,000	356,462	149,879	315,974	48,690	(66,058)	1,449,947
Intragovernmental Earned Revenue	142,295	28,305	26,587	73,972	8,810	(66,058)	213,911
Public Earned Revenue	168,017	11,859	3,674	6,342	12,083	-	201,975
Total Earned Revenue	310,312	40,164	30,261	80,314	20,893	(66,058)	415,886
Net Cost of Operations	$ 334,688	316,298	119,618	235,660	27,797	-	1,034,061

Note 14 Budgetary Resources

The USGS receives budgetary resources from appropriations, offsetting receipts, and reimbursable activities. At September 30, 2008 and 2007, respectively, approximately $427 and $382 million of the budgetary resources were unobligated. These amounts include expired budget authority of $16 and $21 million at September 30, 2008 and 2007, respectively. The expired funds remain available for up to five years to pay expenses against obligations incurred. Recoveries of prior year obligations are comprised of canceled or downward adjustments of obligations incurred in prior years that were not subsequently disbursed. Undelivered orders as of September 30, 2008 and 2007 totaled $221 and $218 million, respectively.

Apportionment categories of obligations incurred

Apportionments are categorized as either A, B, or C. Category A apportionments are those where OMB makes a distribution of budgetary resources by calendar quarters; category B apportionments are made by other specified time periods, programs, activities, projects, or combinations thereof; and category C represents budgetary resources that are not subject to apportionment. USGS obligations incurred during FY2008 and FY2007 were all category B and were subject to apportionment.

Obligations incurred balances as of September 30, 2008 and 2007 are as follows:

	Apportioned, Category B	
	2008	2007
Obligations Incurred:		
Direct	$ 992,029	999,058
Reimbursable	528,040	488,582
Total Obligations Incurred	$ 1,520,069	1,487,640

Permanent Indefinite Appropriations

Permanent indefinite appropriations refer to the appropriations that come from permanent public laws, which authorize the USGS to retain certain receipts rather than a specific annually appropriated amount. These funds do not require annual appropriation action by Congress as they are subject to the authorities of the permanent law. The USGS has three permanent indefinite appropriations. The majority of funding is from the "Surveys, Investigations, and Research" appropriation used to conduct operations in topography, geology, hydrology, biology, and mineral resources.

Appropriations Received

Appropriations received on the Statement of Changes in Net Position differ from that reported on the Statement of Budgetary Resources because appropriations received on the Statement of Budgetary Resources do not include available receipt funds.

Legal Arrangements Affecting Use of Unobligated Balances

Unobligated balances whose period of availability has expired are not available to fund new obligations but are available to pay for adjustments to obligations incurred prior to expiration. For a no-year account, the unobligated balance is carried forward indefinitely until (1) specifically rescinded by law; or (2) the head of the agency concerned or the President determines that the purposes for which the appropriation was made have been carried out and disbursements have not been made against the appropriation for 2 consecutive years.

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For a fixed appropriation account, the balance can be carried forward for five fiscal years after the period of availability ends. At the end of the fifth fiscal year, the account is closed and any remaining balance is canceled. Canceled authority is returned to the U.S. Treasury at the end of the 5th year of availability for annual and multi-year funds under Public Law 101-510. Resources permanently not available were adjusted pursuant to Public Law 114 Stat 2763A-214, SEC 1403.

Explanation of Differences between the Statement of Budgetary Resources and the Budget of the United States Government

The Statement of Budgetary Resources (SBR) has been prepared to coincide with the President's Budget (PB), the Budget of the United States Government. The FY2008 actual amounts as shown on the FY2010 President's Budget were not available at the time the financial statements were prepared. The FY2010 President's Budget is expected to be available in February 2009 and will be located at http://www.whitehouse.gov/omb.

The USGS had differences that existed between the FY2007 Statement of Budgetary Resources and the FY2007 actual amounts reported in the President's FY2009 budget request. These amounts include expired amounts and canceled authority, working capital fund obligation balances, and offsetting collections.

Below is a table with significant differences and explanations between the FY2007 Statement of Budgetary Resources and the FY2007 actual amounts reported in the President's FY2009 budget request.

		Amount per PB	Amount per SBR as Restated	Expected Differences	
Unobligated Balance, Beginning of Fiscal Year	$	100	367	267	(A) (B)
Recoveries of Prior Year Unpaid Obligations	$	(3)	8	11	(A)
Unobligated Balance Available and Not Available	$	116	382	266	(A) (B)
Offsetting Collections	$	(394)	(521)	127	(A)

(A) Amount of expired authority included in the SBR but not in the PB.

(B) Prior period adjustment to the SBR but not included in the PB.

Notes to the Financial Statements—As of September 30, 2008 and 2007 (in thousands)

Note 15 Reconciliation of Net Cost of Operations to Budget

SFFAS Number 7 requires a reconciliation of proprietary and budgetary information. The objective of this information is to provide an explanation of the differences between budgetary and financial (proprietary) accounting. This is accomplished by a reconciliation of budgetary obligations and non-budgetary resources available to the USGS with its net cost of operations.

The following table contains the Reconciliation of Net Cost of Operations to Budget (formerly, the Statement of Financing) for the years ended September 30, 2008 and September 30, 2007.

		2008	Restated 2007
Resources Used to Finance Activities			
Current Year Gross Obligations	$	1,520,069	1,487,640
Budgetary Resources from Offsetting Collections:			
Spending Authority from Offsetting Collections:			
Earned:			
Collected		(515,000)	(523,393)
Change in Receivable from Federal Sources		(12,304)	17,224
Change in Unfilled Customer Orders		(23,993)	1,778
Recoveries of Prior Year Unpaid Obligations		(6,373)	(7,802)
Offsetting Receipts		(1,796)	(2,401)
Other Financing Resources:			
Transfers In/Out Without Reimbursement		167	95
Donations/Forfeitures of Property		1,670	1,408
Imputed Financing Sources		56,934	66,346
Total Resources Used to Finance Activity		1,019,374	1,040,895
Resources Used to Finance Items Not Part of the Net Cost of Operations			
Budgetary Obligations and Resources not Part of the Net Cost of Operations:			
Change in Unfilled Customer Orders		23,993	(1,778)
Change in Undelivered Orders		(2,385)	(3,461)
Current Year Capitalized Purchases		(19,733)	(18,693)
Offsetting Receipts that do not Affect Net Cost of Operations		1,796	2,401
Other Resources/Adjustments that do not Affect Net Cost of Operations		(57,320)	(66,569)
Components of the Net Cost of Operations which do not Generate or Use Resources in the Reporting Period			
Revenues Without Current Year Budgetary Effect:			
Change in Off-Budget Receivables		158	88
Costs Without Current Year Budgetary Effect:			
Depreciation and Amortization		16,116	17,535
Disposition of Assets		1,292	1,252
Future Funded Expenses		7,410	(711)
Imputed Costs		56,934	66,346
Bad Debt Expense		27	18
Other Expenses Not Requiring Budgetary Resources		42	(3,262)
Net Cost of Operations	$	1,047,704	1,034,061

128 Notes to the Financial Statements—As of September 30, 2008 and 2007 (in thousands)

Note 16 Earmarked Funds

Earmarked funds are financed by specifically identified revenues, are required by statute to be used for designated activities or purposes, and must be accounted for separately from the Government's general revenues. The following funds have been designated as earmarked funds:

14X5055— Quarters

5 U.S.C. 591 allows the USGS to provide an employee stationed in the United States with quarters and facilities when conditions of employment or the availability of quarters warrant the action. In 1985, 5 U.S.C. 591 was amended to allow for rental rates for the provided quarters to be collected into a special fund. The collections are then available until expended for the maintenance and operation of the quarters. The collections are accounted for as offsetting receipts that do not affect the net cost of operations.

14X8562— Contributed funds

43 U.S.C. 36C allows the USGS to accept lands, building, equipment, and other contributions from public and private sources and to participate in projects in cooperation with other agencies, Federal, State, or private. Contributions come from donations received from private individuals, Technical Assistance Agreements, and Consortiums for Cooperative Research and Development Agreements. The contributions received via agreement are dedicated to specific projects and are accounted for as offsetting receipts that do not affect the net cost of operations.

Earmarked funds as of September 30, 2008 are as follows:

		Contributed Fund	Quarters Fund	2008
Balance Sheet				
Assets				
Fund Balance with Treasury	$	1,352	125	1,477
Accounts Receivable, Net		67	-	67
General Property, Plant, and Equipment, Net		1,344	-	1,344
Total Assets	$	2,763	125	2,888
Liabilities				
Accounts Payable	$	112	9	121
Other Liabilities		184	-	184
Total Liabilities		296	9	305
Net Position				
Cumulative Results of Operations		2,467	116	2,583
Total Net Position		2,467	116	2,583
Total Liabilities and Net Position	$	2,763	125	2,888
Statement of Net Cost				
Gross Costs		2,443	97	2,540
Earned Revenue		-	(82)	(82)
Net Cost of Operations	$	2,443	15	2,458
Statement of Changes in Net Position				
Net Position, Beginning Balance	$	2,333	133	2,466
Other Financing Sources				
Donations and Forfeitures of Cash and Cash Equivalents		2,617		2,617
Transfers In/(Out) Without Reimbursement		(40)	(2)	(42)
Net Cost of Operations		(2,443)	(15)	(2,458)
Change in Net Position		134	(17)	117
Net Position, Ending Balance	$	2,467	116	2,583

Notes to the Financial Statements—As of September 30, 2008 and 2007 (in thousands)

Earmarked funds as of September 30, 2007 are as follows:

		Contributed Fund	Quarters Fund	2007
Balance Sheet				
Assets				
Fund Balance with Treasury	$	1,225	133	1,358
Accounts Receivable, Net		284	-	284
General Property, Plant, and Equipment, Net		1,344	-	1,344
Total Assets	$	2,853	133	2,986
Liabilities				
Accounts Payable	$	71	-	71
Other Liabilities		449	-	449
Total Liabilities		520	-	520
Net Position				
Cumulative Results of Operations		2,333	133	2,466
Total Net Position		2,333	133	2,466
Total Liabilities and Net Position	$	2,853	133	2,986
Statement of Net Cost				
Gross Costs		2,794	92	2,886
Earned Revenue		-	(98)	(98)
Net Cost of Operations	$	2,794	(6)	2,788
Statement of Changes in Net Position				
Net Position, Beginning Balance	$	2,421	127	2,548
Other Financing Sources				
Donations and Forfeitures of Cash and Cash Equivalents		2,709	-	2,709
Transfers In/(Out) Without Reimbursement		(3)	-	(3)
Net Cost of Operations		(2,794)	6	(2,788)
Change in Net Position		(88)	6	(82)
Net Position, Ending Balance	$	2,333	133	2,466

Notes to the Financial Statements—As of September 30, 2008 and 2007 (in thousands)

Note 17 Restatement

Unfilled Customer Orders

In prior years, the USGS recorded the authority for multi-year reimbursable agreements into our financial management system based on projected current year obligations and expenditures rather than the full amount of the agreements. At the end of the fiscal year, these reimbursable agreements were drawn down to equal the corresponding actual obligations and expenditures. Per OMB Circular A-11, *Preparing, Submitting, and Executing the Budget,* the USGS should have recorded authority for the entire amount of the agreement and the remaining balance at the end of the fiscal year should not have been drawn down unless the funds expired.

To correct the misstatement of the FY2007 Statement of Budgetary Resources, the USGS recorded an adjusting entry that increased the Budgetary Resources beginning balance by $244 million and decreased the Change in Unfilled Customer Orders by $2 million. The effect of this adjustment increased the Budgetary Resources ending balance, the Unobligated Balance Available, and the Status of Budgetary Resources ending balance by $246 million respectively.

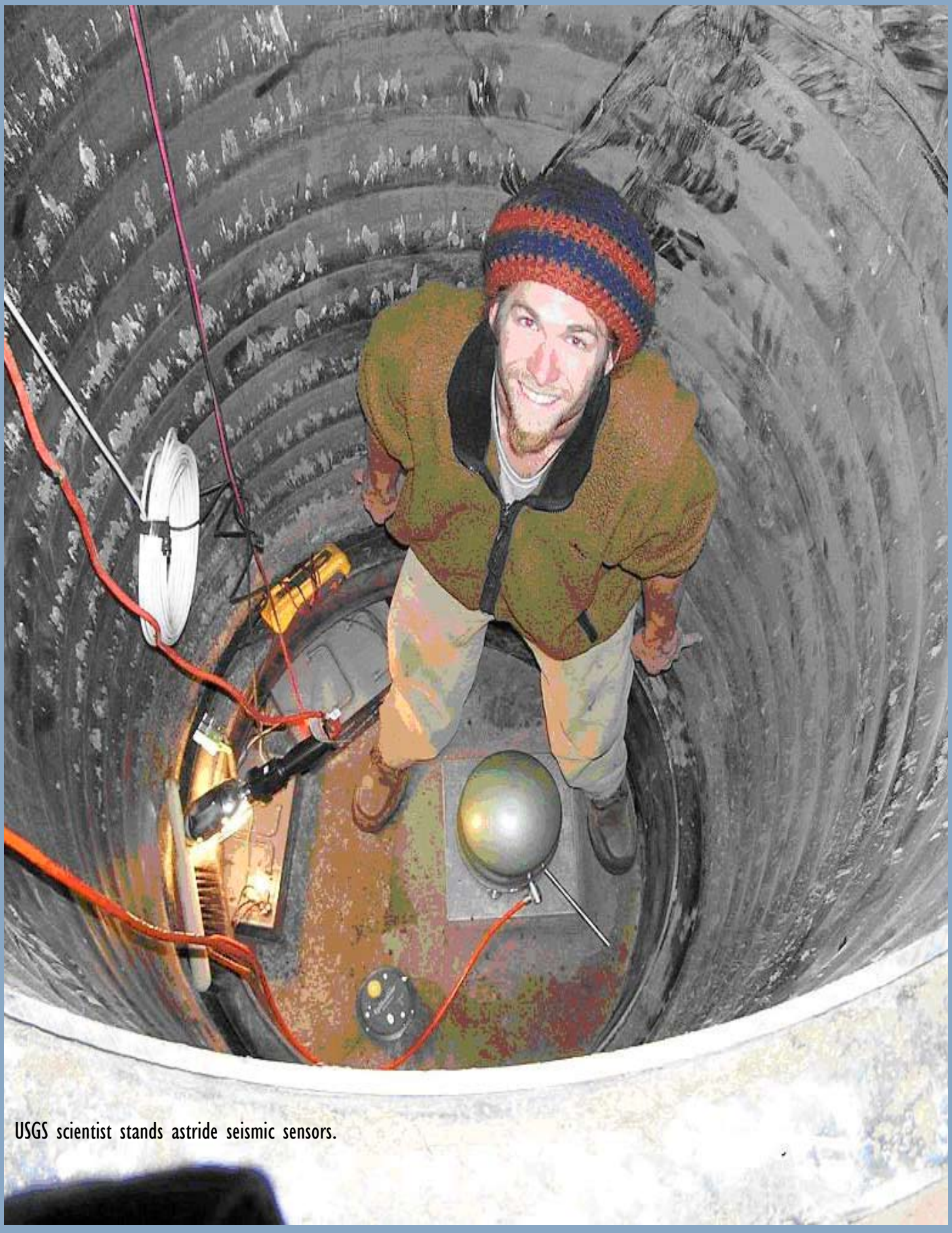
No other financial statements were changed by this adjusting entry, however, it did cause a $2 million decrease to Change in Unfilled Customer Orders in Note 15, Reconciliation of Net Cost of Operations to Budget. This line changed from $4 million to $2 million. In addition, this adjusting entry changed the reconciliation of the FY2007 SBR to the President's Budget in Note 14, Budgetary Resouces. The reconciling difference for both Unobligated Balance, Beginning of Fiscal Year and Unobligated Balance Available and Not Available increased by $244 million. The reconciling difference for Unobligated Balance Beginning of Fiscal Year was $23 million, now it is $267 million. The reconciling difference for Unobligated Balance Available and Not Available was $22 million, now it is $266 million.

The following table shows the financial statement impact of the adjusting entry for Unfilled Customer Orders:

		2007 SBR as Previously Reported	Correction	2007 SBR Restated
Budgetary Resources:				
Unobligated Balance, Beginning of Fiscal Year	$	123,303	244,092	367,395
Change in Unfilled Customer Orders, Without Advance from Federal Sources		(2,015)	2,244	229
Total Budget Authority		1,493,006	2,244	1,495,250
Total Budgetary Resources	$	1,623,601	246,336	1,869,937
Status of Budgetary Resources:				
Unobligated Balance Available, Apportioned		115,236	246,336	361,572
Total Status of Budgetary Resources	$	1,623,601	246,336	1,869,937
Obligated Balance:				
Uncollected Customer Payments from Federal Sources, Brought Forward, Beginning of Fiscal Year		(181,376)	(244,092)	(425,468)
Total Unpaid Obligated Balances, Net, Beginning of Fiscal Year		124,409	(244,092)	(119,683)
Change in Uncollected Customer Payments from Federal Sources		19,239	(2,244)	16,995
Total, Unpaid Obligated Balance, Net, End of Fiscal Year	$	151,037	(246,336)	(95,299)
Obligated Balance, Net, End of Period - by Component:				
Uncollected Customer Payments from Federal Sources		(162,138)	(246,336)	(408,474)
Total, Unpaid Obligated Balance, Net, End of Fiscal Year	$	151,037	(246,336)	(95,299)

Upon learning of the misinterpretation of OMB Circular A-11, the USGS informed personnel of this issue and notified them of future guidance that will be issued to meet the Circular requirements and of corresponding training that will take place in FY2009.

132 Notes to the Financial Statements—As of September 30, 2008 and 2007 (in thousands)



USGS scientist stands astride seismic sensors.

Required Supplementary Information

(Unaudited; see Independent Auditors' Report)

This part of the Section III *Financial Information* contains our required supplementary information disclosures.

Contents include:

Surveys, Investigations, and Research (SIR) (Treasury Symbol (0804):

The USGS is primarily funded by the SIR appropriation. The SIR appropriation is for expenses necessary for the USGS to perform surveys, investigations, and research covering topography, geology, hydrology, biology, and the mineral and water resources of the United States, its territories and possessions, and other areas authorized by law; classify lands as to their mineral and water resources; give engineering supervision to power permittees and FERC licensees; administer the minerals exploration program; and to conduct inquiries into the economic conditions affecting mining and materials processing industries and related purposes as authorized by law; and to publish and disseminate data relative to the foregoing activities. [Department of the Interior, Environment, Related Agencies Appropriations Act, 2008]

The following activities are funded by the SIR appropriation: Geographic Research, Investigations, and Remote Sensing; Geologic Hazards, Resources, and Processes; Water Resources Investigations Activity; Biological Research; Enterprise Information; Science Support; and Facilities. The following paragraphs describe each activity.

Geographic Research, Investigations and Remote Sensing

The Geographic Research, Investigations, and Remote Sensing activity seeks to observe the earth at various scales using remote sensing to understand the human and environmental dynamics of land change. The Geography Program also provides scientific information to describe and interpret America's landscape by mapping the terrain, monitoring changes over time, and analyzing how and why these changes have occurred. The knowledge gained through these activities is used to model the processes of change and to forecast future changes.

The Geographic Research, Investigations, and Remote Sensing activity has two subactivities: Land Remote Sensing and Geographic Analysis and Monitoring.

Geologic Hazards, Resources, and Processes

The Geologic Hazards, Resources, and Processes activity provides the Earth science information needs for a wide variety of partners and customers, including Federal, State, and local agencies, non-government organizations, industry, and academia. This information is used by the USGS and its partners, cooperators, and customers in evaluating resource potential, defining and mitigating risks associated with natural hazards, and characterizing the potential impact of natural geologic processes on human activity, the economy, and the environment.

The USGS programs improve the safety of the United States from natural disasters and include efforts to (1) increase the USGS ability to rapidly determine the location, size, and depth of large earthquakes, (2) discriminate kinds of earthquakes and geologic areas of the Pacific and Caribbean likely to cause tsunamis, (3) improve landslide models, assessments, and alert systems, (4) improve monitoring of the most dangerous volcanoes, and (5) work with Federal, local, and foreign partners to improve coordination, ensure timely warnings can be issued for all geologic hazards, and provide information so that informed community response plans can be developed and put in place.

The Geologic Hazards, Resources, and Processes activity includes three subactivities: Geologic Hazard Assessments, Geologic Landscape and Coastal Assessments, and Geologic Resource Assessments.

Water Resources Investigations Activity

The Water Resources Investigations activity funds work on issues related to water availability, water quality, and flood hazards. Over 4,000 scientific and support staff in offices located in every State support and/or perform work involving collection, management, and dissemination of hydrologic data; analysis of hydrologic systems through modeling or statistical methods; and research and development leading to new methods and new understanding.

The USGS programs involve operating streamgages that measure the flow of rivers and provide data that are used in resource planning and dispute resolution, performing water-quality studies that have a strong connection to human health issues, and collecting

and providing data that enables citizens, communities, businesses, and local emergency-response agencies to make the best possible decisions about protecting lives and property in floods. The Water Resources Investigations activity supports three subactivities: Hydrologic Monitoring, Assessments, and Research, Cooperative Water Program, and the Water Resources Research Act Program.

Biological Research

The Biological Research activity generates and distributes information needed in the conservation and management of the Nation's biological resources. Biological Research activities contribute to achieving improved management of the Nation's water resources, availability of maps and map data, and improved decision making regarding land and water use.

The USGS programs provide scientific information through research, inventory, and monitoring investigations, and increase the quantity of biological information available by improving access to and interactions with biological data. The USGS biologists and information scientists, in partnership with many others, provide the scientific understanding and technologies necessary to support sound management and conservation of the Nation's biological resources. Biological studies develop new methods and techniques to identify, observe, and manage fish and wildlife, including invasive species, and their habitats; inventory populations of animals, plants, and their habitats; and monitor changes in abundance, distribution, and health of biological resources through time.

The Biological Research activity is broken down into three subactivities: Biological Research and Monitoring, Biological Information Management and Delivery, and Cooperative Research Units.

Support Services: Enterprise Information, Science Support, and Facilities

The Enterprise Information activity supports bureau-level activities and investments in the areas of information technology, information security, information management, information policy and standards, and information science. In 2007 a budget restructure moved the National Map from Geographic Research, Investigations, and Remote Sensing to Enterprise Information. The National Geospatial Program is focused on improving, geospatial data access, integration, and applications through implementation of the National Map and the National Spatial Data Infrastructure. Partnerships with other Federal, State, and local agencies and the private sector and academia are the keystone for accomplishing this mission. Enterprise Information is broken down into three subactivities: Enterprise Information Security and Technology, Enterprise Information Resources, and the National Geospatial Program.

The Science Support activity provides resources for the executive and managerial direction of the bureau and support services to all USGS scientific programs. Science Support is broken down into two subactivities: Bureau Operations and Payments to the National Business Center.

The Facilities activity provides workspace and facilities for accomplishing the bureau mission. The Facilities activity supports three subactivities: Rental Payments, Operations and Maintenance, and Deferred Maintenance and Capital Improvement.

Working Capital Fund (Treasury Symbol 4556):

The Working Capital Fund was established by law to provide the USGS with the ability to finance a continuing cycle of operations in two components: Investments and Fee-for-Service. The Investment Component provides funding for Telecommunications, Equipment, Facilities, and Publications. The fee-for-service component provides continuing funding for the National Water Quality Laboratory, the USGS Hydrologic Instrumentation Facility, Publications, bureau laboratories, the National Training Center, drilling, Landsat 7, and GSA delegated buildings.

Other Aggregated Accounts:

The USGS also receives a variety of other funding. Other funding includes donations and contributions, reimbursables, miscellaneous receipts, and operations and maintenance of quarters.

Combining Statement of Budgetary Resources
For the Year Ended September 30, 2008
(in thousands)

	Fund 0804	Fund 4556	Other Budgetary Accounts	2008
Budgetary Resources (Notes 14 and 17):				
Unobligated Balance:				
Beginning of Fiscal Year	$ 296,961	84,653	683	382,297
Recoveries of Prior Year Unpaid Obligations	5,772	548	53	6,373
Budget Authority:				
Appropriations Received	1,022,430	-	2,698	1,025,128
Spending Authority from Offsetting Collections:				
Earned:				
Collected	443,348	71,652	-	515,000
Change in Receivables from Federal Sources	12,304	-	-	12,304
Change in Unfilled Customer Orders:				
Advance Received	312	-	-	312
Without Advance from Federal Sources	23,681	-	-	23,681
Total Budget Authority	1,502,075	71,652	2,698	1,576,425
Nonexpenditure Transfers, Net	5,100	-	-	5,100
Permanently Not Available	(23,170)	-	-	(23,170)
Total Budgetary Resources	$ 1,786,738	156,853	3,434	1,947,025
Status of Budgetary Resources:				
Obligations Incurred:				
Direct	$ 989,399	-	2,630	992,029
Reimbursable	459,230	68,810	-	528,040
Total Obligations Incurrred	1,448,629	68,810	2,630	1,520,069
Unobligated Balance Available:				
Apportioned	322,285	88,043	804	411,132
Unobligated Balance Not Available	15,824	-	-	15,824
Total Status of Budgetary Resources	$ 1,786,738	156,853	3,434	1,947,025
Obligated Balance:				
Obligated Balance, Net:				
Unpaid Obligations, Beginning of Fiscal Year	$ 298,931	13,570	674	313,175
Less: Uncollected Customer Payments from Federal Sources, Beginning of Fiscal Year	(408,474)	-	-	(408,474)
Total unpaid obligated balances, net, beginning of fiscal year	(109,543)	13,570	674	(95,299)
Obligations Incurred	1,448,629	68,810	2,630	1,520,069
Less: Gross Outlays	(1,436,750)	(64,644)	(2,579)	(1,503,973)
Less: Recoveries of Prior Year Unpaid Obligations, Actual	(5,772)	(548)	(53)	(6,373)
Change in Uncollected Customer Payments from Federal Sources	(35,985)	-	-	(35,985)
Total, Unpaid Obligated Balance, Net, End of Fiscal Year	(139,421)	17,188	672	(121,561)
Obligated Balance, Net, End of Period - by Component:				
Unpaid Obligations	305,037	17,188	672	322,897
Less: Uncollected Customer Payments from Federal Sources	(444,458)	-	-	(444,458)
Total, Unpaid Obligated Balance, Net, End of Fiscal Year	(139,421)	17,188	672	(121,561)
Net Outlays:				
Gross Outlays	1,436,750	64,644	2,579	1,503,973
Less: Offsetting Receipts	(443,660)	(71,652)	-	(515,312)
Less: Distributed Offsetting Receipts	-	-	(1,796)	(1,796)
Net Outlays	$ 993,090	(7,008)	783	986,865

Combining Statement of Budgetary Resources
For the Year Ended September 30, 2007
(in thousands)

	Fund 0804	Fund 4556	Other Budgetary Accounts	Restated 2007
Budgetary Resources (Notes 14 and 17):				
Unobligated Balance:				
Beginning of Fiscal Year	$ 294,404	71,899	1,092	367,395
Recoveries of Prior Year Unpaid Obligations	7,018	769	15	7,802
Budget Authority:				
Appropriations Received	988,050	-	2,809	990,859
Spending Authority from Offsetting Collections:				
Earned:				
Collected	452,161	71,232	-	523,393
Change in Receivables from Federal Sources	(17,224)	-	-	(17,224)
Change in Unfilled Customer Orders:				
Advance Received	(2,007)	-	-	(2,007)
Without Advance from Federal Sources	229	-	-	229
Total Budget Authority	1,421,209	71,232	2,809	1,495,250
Nonexpenditure Transfers, Net	6,159	-	-	6,159
Permanently Not Available	(6,669)	-	-	(6,669)
Total Budgetary Resources	$ 1,722,121	143,900	3,916	1,869,937
Status of Budgetary Resources:				
Obligations Incurred:				
Direct	$ 995,825	-	3,233	999,058
Reimbursable	429,335	59,247	-	488,582
Total Obligations Incurrred	1,425,160	59,247	3,233	1,487,640
Unobligated Balance:				
Apportioned	276,236	84,653	683	361,572
Unobligated Balance Not Available	20,725	-	-	20,725
Total Status of Budgetary Resources	$ 1,722,121	143,900	3,916	1,869,937
Obligated Balance:				
Obligated Balance, Net:				
Unpaid Obligations, Beginning of Fiscal Year	$ 290,376	15,117	292	305,785
Less: Uncollected Customer Payments from Federal Sources, Beginning of Fiscal Year	(425,468)	-	-	(425,468)
Total Unpaid Obligated Balances, Net, Beginning of Fiscal Year	(135,092)	15,117	292	(119,683)
Obligations Incurred	1,425,160	59,247	3,233	1,487,640
Less: Gross Outlays	(1,409,588)	(60,025)	(2,836)	(1,472,449)
Less: Recoveries of Prior Year Unpaid Obligations, Actual	(7,018)	(769)	(15)	(7,802)
Change in Uncollected Customer Payments from Federal Sources	16,995	-	-	16,995
Total, Unpaid Obligated Balance, Net, End of Fiscal Year	(109,543)	13,570	674	(95,299)
Obligated Balance, Net, End of Period - by Component:				
Unpaid Obligations	298,931	13,570	674	313,175
Less: Uncollected Customer Payments from Federal Sources	(408,474)	-	-	(408,474)
Total, Unpaid Obligated Balance, Net, End of Fiscal Year	(109,543)	13,570	674	(95,299)
Net Outlays:				
Gross Outlays	1,409,588	60,025	2,836	1,472,449
Less: Offsetting Receipts	(450,154)	(71,232)	-	(521,386)
Less: Distributed Offsetting Receipts	-	-	(2,401)	(2,401)
Net Outlays	$ 959,434	(11,207)	435	948,662

The Office of Management Services (OMS) at the USGS provides for safe, functional, and high-quality workspace for accomplishing the bureau's science mission and ensuring that workspaces are maintained in compliance with applicable safety and other standards set by GSA and the Occupational Safety and Health Administration.

The USGS has key science facilities that are mission critical, including those that are fundamental to providing timely warnings of geologic hazards, as well as scientific understanding and technologies needed to support the sound management and conservation of the Nation's biological, energy, water, and mineral resources. The USGS is committed to improving the maintenance of existing facilities to ensure the health and safety of the public and employees, protection of cultural and natural resources, and compliance with building codes and standards.

The USGS developed a "Five-Year Deferred Maintenance and Capital Improvement Plan" to provide necessary up-keep on property and equipment and to provide facilities that will best fulfill our mission. Deferred maintenance is work that was not performed when it was or should have been scheduled, often because of funding or priority ranking of work, and was thus delayed to a future period. Capital improvements include the construction of new facilities or the alteration of an existing facility to accommodate a change of function or unmet programmatic need. All capital improvement components of projects were excluded from the estimate in this report.

The Five-Year Plan is re-evaluated annually pursuant to the budget process and is subject to adjustments at that time depending on funding levels and revised priorities.

Estimations on deferred maintenance are based on condition assessment surveys that are conducted every 5 years at each USGS site to determine the current condition of facilities and the estimated cost to correct deficiencies. These surveys are conducted by an independent architect/engineering firm and are supplemented by annual condition surveys performed by USGS personnel. These installation-wide, building specific assessments are the linchpin of the DOI program to establish core data on the condition of the Department's constructed assets.

The FY2010 budget formulation process was used to establish the base from which the FY2008 deferred maintenance priority listing was derived. OMS, which formulates the bureau's deferred maintenance budget, collected project proposals from regional and headquarters facilities projects for possible inclusion in the bureau plan for FY2009 – FY2013, which were then ranked to reflect the criticality of the health and safety deficiencies being addressed. A project that addressed a critical health and safety deferred maintenance need received a higher ranking than one addressing a critical mission deferred maintenance need. Teams of regional and headquarters facility and safety specialists reviewed the ranked proposals to confirm the accuracy of rankings and otherwise ensure the adequacy of the project proposals. Due to funding constraints, The USGS addresses the most critical maintenance and capital improvement needs first.

A summary of the USGS deferred maintenance estimate at September 30, 2008, is reflected below. The method used to calculate this estimate was modified in FY2008. The USGS now estimates deferred maintenance to an accuracy level of minus 15 percent to plus 25 percent of the facility maintenance backlog. This revision was directed by Interior management with input from OMB to ensure deferred maintenance is consistently estimated among Interior bureaus.

(in thousands)

		Low	High
Buildings	$	29,657	43,613
Other Structures		11,427	16,804
Total	$	41,084	60,417

The USGS serves the citizens of the United States as steward for a large, varied, and scientifically important body of heritage assets, and in conducting research and development that is critical to the health of our country and in understanding the Earth. Each year the USGS makes a substantial investment while fulfilling its stewardship responsibilities for the benefit of the Nation.

Costs associated with stewardship initiatives are treated as expenses in the financial statements in the year the costs are incurred. However, these investments in stewardship are intended to provide long-term benefits to the public and are included as Required Supplementary Information (RSI) reporting to highlight their long-term-benefit nature and to demonstrate our accountability over them. Stewardship resources are not required to be included in the assets reported in our financial statements; they are, however, important to understanding the operations and financial condition of USGS.

Stewardship assets often have physical properties that resemble those of the general property, plant, and equipment that is traditionally capitalized in the financial statements of Federal entities. However, due to the nature of these assets, valuation would be difficult and matching costs with specific periods would not be meaningful. Heritage assets have one or more of the following characteristics: historical or natural significance; special cultural, educational, or aesthetic value; or significant architectural characteristics.

USGS has heritage assets in two categories: museum collections and scientific library collections. The mission-related importance of these assets is described in the following pages.

Making science fun is the first requirement when communicating science to youngsters. Science Camp, a partnership between the USGS and Reston Association, offers 8-to-12-year-old children an opportunity to meet scientists, participate in science experiments, learn and practice new computer skills, create a newspaper, take field trips, and participate in swimming, boating, crafts, and sports. Science Camp demonstrates the many exciting scientific activities in which the USGS is involved. Meeting real scientists and specialists working at the USGS is a vital part of our camp program, providing opportunities for children to think about pursuing a career in science.

The USGS museum collections are intimately associated with the lands, cultural, and natural resources for which the USGS shares stewardship responsibilities as a bureau within the Department of the Interior. The USGS museum collections are divided into two major categories: historical and zoology.

Historical Collections:

The USGS manages hundreds of historical objects that are loaned to other institutions for exhibits and placed on exhibit in the USGS National Center in Reston, VA, hallways or lobbies in regional offices, and science centers around the country. These collections are evidence of the resources, events, and people associated with USGS activities, and are studied by historians and scientists alike.

Our collection includes many special objects related to the cultural history of the USGS, including a hat worn by geologist Levi Noble while attending the 3rd Pan-Pacific Science Congress held in Tokyo, Japan, in 1927; oil paintings of many historical figures; a 1930 Model A Ford (pictured below) used to successfully map the geology of California deserts through the 1960s; and the Lunar Rover used in the southwestern deserts to train astronauts in the lunar landing program through the 1970s. The USGS had previously loaned the lunar rover to NASA to conduct space suit ergonomic studies, fuel-cell power system studies, and vehicle operational capability studies in advance of NASA's planned Mars exploration.

Other interesting objects in the collection include John Wesley Powell's commission, one of the few documents signed by President James A. Garfield, appointing Powell as the second director of the USGS; an oak arm chair used by John Wesley Powell in his office when he served as the USGS director from 1881 to 1894; geologic field mapping equipment from Arnold Hague's late 19th Century expedition to map Yellowstone National Park; a field desk used in the American West shortly after the turn of the century; and Director Thomas Nolan's field equipment and academic robe from St. Andrew's University in Scotland.

1930 Model A Ford used to map the deserts of California

Zoology Collections:

Our zoology objects, which represent over 40,000 natural specimens, are housed at the Biological Research Arid Lands Field Station of the Fort Collins Science Center. These zoological specimens were collected to document the status of the environment on our public lands. A USGS wildlife research biologist and USGS zoology museum specialist stationed at the University of New Mexico's Museum of Southwestern Biology maintain this collection under a joint agreement between the USGS and the University of New Mexico at Albuquerque.

Of primary importance in our collection is the unique natural history collection of vertebrates that were used in support of food habit studies by researchers at the USDA's Food Habits Laboratory in Denver, CO. Transferred to Fort Collins in the mid-1970s and then to the University of New Mexico in the 1990s, this collection (pictured on next page) includes over 8,000 fluid-preserved specimens of amphibians and reptiles, as well as mammal and avian skeletons and skins. Specimens have continued to be acquired as a result of the research emphasis to document mammal species from public lands in the West.

Condition Evaluations:

Cataloging efforts have also been a priority within the USGS, as 100 percent of our museum collections have been catalogued. During the cataloging process, the USGS evaluates the condition of each collection object. "Good" is considered to show little or no sign of aging or wear; "fair" applies to objects that are showing signs of deterioration such as faded color of fabric or

Fluid-preserved amphibian and reptile specimans storage

wood, and "poor" objects that have missing parts or are extremely worn. Additions to the collection in the current year were transferred within the USGS. No deferred maintenance is necessary for our museum collections.

The USGS also evaluates the condition of the locations housing the collections in accordance with Departmental guidelines. The evaluation is based on a lengthy list of conditions. Regarding the non-storage facilities housing our collections, a good condition rating means it met more than 70% of standards in Departmental Manual Chapter 411, Museum Property. Per Department policy, the condition of storage facilities is not required to be assessed.

The following chart presents the condition assessments of the USGS facilities housing museum collections as of September 30, 2008:

Museum collections	Good	Fair	Poor	Unkn
Held at USGS facilities	3	-	-	3
Held at non-USGS facilities	2	-	-	-

Public Information:

The public has been granted access to view these collections through a new Web site (www.usgs.gov/aboutusgs/who_we_are/museum) and can visit the USGS facilities to see them on exhibit. During FY2008, the USGS responded to dozens of requests for information on our museum collections.

USGS personnel evaluating the condition of natural specimans

The USGS is steward to a large, unique, and diversified collection of library holdings. The library materials are acquired from extensive exchange agreements with institutions and agencies worldwide, from research projects, and purchases from a wide variety of publishers and institutions.

Since its beginning, the library has administered a major program of international and domestic exchange of earth science publications authorized by the legislation that established the USGS. The exchange program, with national and foreign geological surveys and research organizations, has enabled the library to collect materials published in small numbers, never widely distributed, and never reprinted.

The reception desk at the National Center Library in Reston, Virginia.

While responding to the current and anticipated subject interests of USGS researchers, such as those in ecology, geology, hydrology, health, and biology, the library maintains its heritage collection of core science publications dating back to the 17th century, providing a unique historical record of the progress of natural science. Besides providing resources for scientific investigations, the library's multi-disciplinary collection provides access to geographical, technical, and historical literature in paper and electronic formats for the general public and industry.

Library users bring their questions to the library daily, in person or by phone or e-mail, and expert librarians assist them in using the wealth of well-organized information to find answers.

During a century of collecting, the library has acquired many treasures such as the George F. Kunz collection. George F. Kunz was a former employee of the USGS, a vice-president of Tiffany & Co., and one of the world's preeminent gem experts at the time of his death in 1932. The Kunz collection includes rare books on gemology, the lapidary arts, the folklore of gemstones through history, and archival gem trade records, including the original provenance of the Hope diamond.

Another unusual acquisition was the group of books and maps known as the Heringen collection. These military geology texts and maps were looted by the Nazis from European libraries, including Russia, and hidden in a potash mine in Heringen, Heese, Germany. At the end of World War II they were transported by the U.S. military to the United States and are now part of the USGS library.

The map collections include an archival and working collection of USGS topographical maps, plus thematic and topographical maps of the United States and the World. These maps have provided invaluable aid to authorities and scientists in times of disasters and military interventions. Maps, photographs, and literature in the USGS library have provided evidence to solve boundary disputes and water rights litigation, to trace geographic names, and to research natural and man-made changes in an area over time.

Our Field Records collection in Denver includes items such as field notes, field maps and sketches, and project-related correspondence created or collected by USGS scientists during official project work. The Photographic Archive provides the public with access to over 19,000 photographs and original sketches dating from 1868 to the present. Additionally, the USGS maintains a collection of over 500,000 photographs taken during geologic studies of the U.S. and its territories dating from 1868 to present. Some photographs have been used to illustrate publications, but most have never been published.

The Library supports the research of the DOI and other government agencies, universities, and professional communities. Libraries throughout the world, including the largest and most renowned, borrow from our library's unique collection. The USGS library has loaned

scientific publications and objects to thousands of libraries in every State and in over 37 foreign countries that were public, State, Federal, nonprofit, company, and academic libraries. Although not defined by Congress as a national library, the library is recognized as the premier national collection of geologic and hydrologic publications, supplementing the Nation's large library collections in major universities and government agencies.

Condition Evaluations:

Careful consideration is given to assessing the condition of the facilities housing the USGS library collections. The USGS evaluates the condition of the facilities in accordance with Departmental guidelines. Those guidelines require the use of the national Information Standards Organization's "Environmental Guidelines for the Storage of Paper Records" (NISO TR01-1995) as the official standards for the measurement of the physical condition of our facilities. The standards address four primary considerations in the storage of paper documents; temperature and relative humidity, exposure to light, gaseous contaminants, and particulates. Acceptable levels in each of the four areas are specified as well as overall condition assessment ratings when the four areas are combined. A Fair rating is achieved when 50% of the standards are met. Under these guidelines all four of the USGS library facilities are reported as Fair. No deferred maintenance is necessary for our library collections.

The following chart presents the condition assessments of the USGS library facilities as of September 30, 2008:

Library Facilities	Good	Fair	Poor
National Center	-	1	-
Denver Branch	-	1	-
Flagstaff Branch	-	1	-
Menlo Park Branch	-	1	-

Map collection at the National Center Library in Reston, Virginia.

USGS scientists conducting a geophysical survey on the Dunard Creek in Pennsylvania.

Required Supplementary Stewardship Information

(Unaudited; see Independent Auditors' Report)

This part of the Section III *Financial Information* contains our required supplementary stewardship information disclosures.

Contents include:

The USGS is the earth and natural science research bureau of the Department and the only integrated natural science bureau in the Federal government. By combining biology, geology, hydrology, and geography in one agency, the USGS is uniquely positioned to provide science information and conduct scientific research that ensures an integrated approach to advance scientific knowledge and utilize the latest technologies to provide timely answers and products, and improve the quality of life for the communities we serve. The USGS research and data products support the Department's resource and land management needs and provide the science information needed by other Federal, State, Tribal, and local government agencies to guide planning, management, and regulatory programs.

The USGS reviews Research and Development (R&D) investments and weighs the value of existing programs against changing needs and priorities. The Director prioritizes new initiatives on the basis of the following criteria: interdisciplinary science; collaboration and partnerships with Department bureaus, other government agencies, and universities (**relevance**, first of OMB's three R&D investment criteria); results of program evaluations; and demonstration of progress toward meeting the Department's **performance** (second of three OMB R&D criteria) goals and objectives. The Director then selects from among the prioritized initiatives those that can be accommodated within the funding target.

Peer review has been the **quality** (third OMB R&D criteria) standard for USGS scientific publications and a documented component of USGS policy throughout our 129-year history. Our programs are cyclically evaluated to ensure the quality and timeliness of our science. The evaluations not only improve the accountability and quality of programs, but also identify and address gaps in programs; redirect or reaffirm program directions; identify and provide guidance for development of new programs; and review and (or) motivate managers and scientists. All of USGS programs evaluated by OMB's PART process have received a "moderately effective" rating or better.

Investments in research and development are expenses incurred to support the search for new or refined knowledge and ideas, the application or use of such knowledge and ideas, and the development of new or improved products or processes with the expectation of maintaining or increasing national economic productive capacity or yielding other future benefits.

In accordance with OMB Circular No. A-11, USGS research activities are classified as basic, applied, or developmental research. A definition of each of the categories is below.

Basic – defines activities as systematic studies directed toward fuller knowledge or understanding of the fundamental aspects of phenomena and of observable facts without specific applications toward processes or products in mind.

Applied – defines activities as systematic studies to gain knowledge or understanding necessary for determining the means by which a recognized and specific need may be met.

Developmental – defines activities as systematic application of knowledge or understanding, directed toward the production of useful materials, devices, and systems or methods, including design, development, and improvement of prototypes and new processes to meet specific requirements.

Our science is being used more and more in decision making, and this is essential to our success in demonstrating relevance. That doesn't mean that all of what we do needs to be applied; as former Director Walter C. Mendenhall said, "There can be no applied science unless there is science to apply."

Research and development activities are a vital part of work performed in accomplishing our mission.

Summary Information:

Total research and development investments were $765 and $755 million during FY2008 and FY2007, respectively.

A summary table reflecting R&D stewardship investments by GPRA goal is presented at right.

DOI Mission Areas, End Outcome Goals, and R&D Type		2004	2005	2006	2007	2008
Resource Protection						
Improve the understanding of National ecosystems and resources through integrated interdisciplinary assessment	$					
Basic research			60	54	33	46
Applied research			550	489	487	519
Developmental research			51	61	68	45
Total Resource Protection			661	604	588	610
Resource Use						
Improve the understanding of energy and mineral resources to promote responsible use and sustain the Nation's dynamic economy						
Basic research			15	14	16	16
Applied research			63	58	64	66
Developmental research			1	-	1	1
Total Resource Use			79	72	81	83
Serving Communities						
Improve the understanding, prediction, and monitoring of natural hazards to inform decisions by civil authorities and the public to plan for, manage, and mitigate the effects of hazard events on people and property						
Basic research			4	4	14	3
Applied research			45	42	67	43
Developmental research			20	20	5	26
Total Serving Communities			69	66	86	72
Total research and development						
Basic research		71	79	72	63	65
Applied research		740	658	589	618	628
Developmental research		72	72	81	74	72
Total	$	883	809	742	755	765

Data not available by GPRA end outcome goals.

Below are output and outcome examples of how our research and development activities demonstrate results that are consistent with their intended purpose, and highlights from each science discipline's FY2008 research and development activities describing the research program.

Additional outputs and outcomes demonstrating results that are consistent with the intended research program purpose beyond the examples provided are presented in Section II: Performance Data and Analysis – Performance Measure Results.

Basic Research Outputs and Outcomes

Geologic Framework of Rio Grande Basins

USGS geologic and geophysical studies in basins of the Rio Grande rift of New Mexico and Colorado provide important information for scientific management of natural resources in several locations. South of Albuquerque, N.Mex., a new 1:50,000-scale geologic map provides natural resource information for environmental officers for management of Tribal lands of the Isleta Pueblo (http://pubs.usgs.gov/sim/2913/). In the Espanola basin near Santa Fe, N.Mex., USGS geophysicists and geologists developed three-dimensional geology models of the southern Espanola basin in collaboration with scientists from the New Mexico Bureau of Geology and Mineral Resources and Los Alamos National Laboratory. These geology models have been incorporated into ground-water management models developed by consulting firms (CDM, Interra) for the City and the County of Santa Fe. In southern Colorado, new reports and geologic maps provide information defining ancient Lake Alamosa within the San Luis basin (http://pubs.usgs.gov/sim/2963/). Results of the studies, presented at a February 2008 Colorado Field Institute lecture series at Alamosa, Colo., garnered strong interest from local residents, as well as from academic researchers and land management agencies, such as the BLM and NPS.

USGS, the Source of Environmental Information on New Contaminants

As part of continuing efforts to provide information on new and understudied contaminants to resource managers, regulators, and the public, USGS scientists are developing new lab methods to measure environmental levels of contaminants and applying these methods to provide information on their environmental occurrence and behavior that is key to assessment of potential health effects and establishment of priorities for additional research. USGS scientists: (1) developed methods to measure the pharmaceutical antidepressants called Selective Seronin Reuptake Inhibitors (SSRIs); (2) developed methods to measure the fungicide chlorothalonil and three of its environmental degradation byproducts in sediments, and then applied these methods to field studies in Texas and Oklahoma; and (3) measured the occurrence of pyrethroid insecticides in bed and suspended stream sediments in California. The publications presenting this information, as well as information on other new methods and environmental data, are available on the Internet at http://toxics.usgs.gov.

The National Atlas Delivers the World

The USGS staff of The National Atlas of the United States of America® has compiled new, more detailed sets of basic digital cartographic data covering America. These new frameworks (fundamental map information) serve as the basis of an innovative suite of geospatial information products that promote national self-awareness and greater geographic understanding through nationalatlas.gov. All of this new data directly facilitates national, continental, even worldwide investigations and specifically supports all aspects of the USGS Science Strategy.

These new data were compiled for use in national, continental, and global applications at a scale of 1:1,000,000. They replace earlier frameworks that had been produced at 1:2,000,000-scale. These data satisfy a United States obligation to the International Steering Committee for Global Map and serve as fundamental layers in a new Atlas of North America. The Global Map assists resource managers, environmental planners, and public policy decisionmakers as they seek solutions to global sustainability and environmental challenges.

The data sets include revised: surface waters, roads, railroads, airports, population centers, national boundaries, international boundaries, and county

boundaries. These were produced to specifications of the National Atlas, the Atlas of North America, and the Global Map. Specific products include the following:

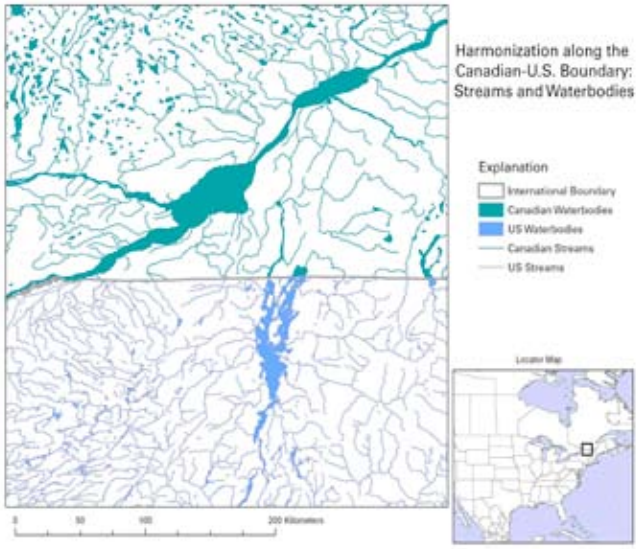
- individual shapefiles (a common format supported by desktop mapping and geographic information systems) for all map layers to meet Atlas and Global Map standards;
- trilingual documentation that adheres to international and Federal Geographic Data Committee standards;
- Web map services that comply with Open Geospatial Consortium standards for openness and access;
- a separate, fully networked cartographic database of America's surface waters that retains information about streamflow and direction; and
- another new dataset at 1:10,000,000 scale that delineates the watersheds of North America.

The USGS has bilateral agreements in place with Mexico's National Institute of Statistics, Geography, and Informatics and with the Atlas of Canada to collaboratively produce an atlas of North America. The Bureau's initial data offerings were compiled and documented at a scale of 1:10,000,000. Completion of these new frameworks enables the creation of a new continental dataset of much greater detail. In 1996, the United States made a commitment to support the international global map effort, wherein each nation would produce digital cartographic frameworks using a single, shared set of specifications, also at 1:1,000,000 scale. The National Atlas of the United States® assumed responsibility for this endeavor in 2007 and delivered all new data in 2008.

National Atlas of the United States® and The National Atlas of the United States of America® are registered trademarks of the United States Department of the Interior.

USGS Supports Geographic Names Projects

The USGS provides Secretariat and staff support to the interagency U.S. Board on Geographic Names, and its Domestic Names, and Antarctic Names Advisory Committees. This entails overall guidance on policy matters, research on individual feature name proposals, leading the U.S. delegation at International



Early efforts to align U.S. surface-water features with Canadian streams and water bodies. Source: National Atlas of the United States®.

Conferences on applied toponymy, and all aspects of conducting the various monthly and quarterly meetings.

In 2008, the USGS concluded a 4-year contract to collect administrative features, buildings, and structures within the footprints of the top 46 of 133 urban areas, with over 70,000 new feature names being added to the Geographic Names Information System (GNIS), the names layer of The National Map, helping enhance homeland security and emergency response.

In 2008, the USGS completed a project with the U.S. Census Bureau to verify, synchronize, and recode incorporated places and populated places, thereby providing a link between GNIS and the Tiger file for those records for harmonizing current and future standardization efforts and maintenance.

Interagency Cooperation in support of using the USGS National Hydrography Dataset, the USGS has developed a tool called ICWater (Incident Command Tool for Protecting Drinking Water) that quickly provides incident commanders with critical information for directing first responders to protect the public during spill emergencies. The tool covers all 50 States at 1:100,000 scale and draws on EPA's inventory of all public drinking-water intakes that use surface water. This tool integrates the RiverSpill tool,

initially developed by EPA, with the USGS' Real-time Streamgaging Network, called NWISWeb (http://waterdata.usgs.gov/nwis). ICWater rapidly analyzes the downstream flow of hazardous materials and produces maps and reports that are readily usable by a broad range of incident responders. The tool contains a database of levels of concern for over 300 chemical, biological, and radioactive toxic agents and predicts the path that contaminants will follow downstream from a spill to surface water. Drinking-water intakes are identified, and the time-of-travel to the intakes is calculated. The tool also estimates the concentration of the contaminant at the intake and compares it with the level of concern for human consumption. The tool uses a special form of the NHD called the NHDPlus, which contains value-added attributes providing estimated streamflow and velocity estimates. ICWater is being distributed to Federal, State, and local government agencies by the Defense Threat Reduction Agency (DTRA), which also sponsors training courses on its use.

An Improved Understanding of National Geothermal Resource Potential

In 2006, in support of the Energy Policy Act of 2005 (P.L. 109-58 §226), the USGS began a 3-year project to produce a new national assessment of geothermal resources capable of producing electric power, with a focus on the western United States, including Alaska and Hawaii. (For more information on USGS science in response to the Energy Policy Act of 2005, please visit the following Web site: http://energy.usgs.gov/energypolicyact2005). A partnership with the DOE, BLM, National Laboratories, universities, State agencies, and a consortium of the geothermal industry underpins the USGS geothermal resource assessment.

The USGS geothermal resource assessment is focused on the moderate and high temperature geothermal resources capable of generating electricity and will highlight geothermal energy resources located on public lands. The USGS geothermal assessment will include a detailed estimate of electrical-power-generation potential and an evaluation of the major technological challenges and environmental effects of increased geothermal development. A summary report of the assessment findings was delivered to Congress in 2008. Support products include online geospatial databases of regional and system-specific geological, geophysical, geochemical, and hydrological information relevant to geothermal resources, as well as research publications.

This information resulting from this assessment effort will be utilized by energy agencies, Federal and State land and resource managers, industry and academia, and also the international energy community, as this assessment will also satisfy one of the U.S. Government pledges ("geothermal resource studies") made to the Secretariat of REN21 (Renewable Energy Policy Network for the 21st Century (REN21), available on the Internet at http://www.ren21.net/wiap/detail.asp?id=151, a global policy network that provides a forum for international leadership on renewable energy.

Applied Research Outputs and Outcomes

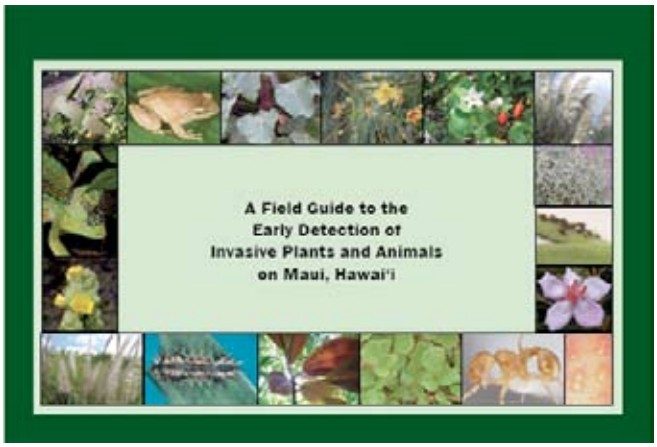
Maui County Invasive Pest Early Detection Project Goes Public

The Hawaiian Islands are in the midst of an attack of invasive species that threaten the State's unique plants and animals, costs millions in agricultural and tourism losses, as well as pose a threat to human health. As part of a comprehensive statewide plan to address invasive pest issues, the early detection of new infestations of known invasive plants and animals before they become established is considered a critical step to preventing costly long-term management problems. A new tool (http://pbin.nbii.gov/reportapest/maui/) has been introduced to help support countywide teams of individuals to search for new invaders. The online tool and supporting Web site allows the public and other collaborators to learn about the most threatening, incipient pests to be on the alert for, to submit reports of pests found, and to have those findings assessed and passed on to the appropriate agency for rapid response.

The USGS is collaborating with the Hawaii Invasive Species Council and the Maui Invasive Species Committee to engage the public in the search for plants and animals that are known to negatively impact neighboring islands. In 2008, 15 community pest-identification workshops and educational presentations were held, and a 60 page full-color field guide, Web site, and an online system for reporting suspect

organisms have been created to support the flourishing early detection network in Maui County. Statewide partners are using this educational outreach to engage the public as "the eyes and ears of Maui." The online reporting database acts as a conduit for reports among interagency entities involved in invasive species management throughout the State. A 2008 gap analysis of statewide early detection programs will further guide efforts in 2009 to implement similar approaches in other Hawaiian counties (islands).

Statewide partners are using this educational outreach tool to engage the public as "the eyes and ears of Maui." Fifteen workshops and a 60-page pamphlet assist the public in the identification and reporting of target species (defined by the Maui County Invasive Species Committee as species of high risk). Soon after the first workshop, the first two alien species reports were received and appropriate rapid response was conducted. These efforts led to the eradication of the last known occurrence of Macaranga mappa (Bingabing) on Maui. The online reporting database acts as a conduit for reports among interagency entities involved in invasive species management throughout the State. The State is interested in expanding the system to other Hawaiian counties to create a statewide system beginning in 2009.



All certified pest busters receive a Maui invasive pest field guide.

Science for CERCLA: USGS Contributions to DOI Damage Assessment and Restoration Program

The DOI Natural Resource Damage Assessment and Restoration Program authorized under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), restores DOI trust resources that were injured as a result of oil spills or the release of hazardous substances into the environment. In partnership with State, tribal, and Federal trustee agencies (including FWS, NPS, BLM, BOR, and BIA), USGS scientists have been and are currently involved in over 50 cases. Settlement funds from NRDAR cases provide trustees with the ability to restore populations and habitat. For example, in 2008, scientists from the Columbia Environmental Research Center and the Patuxent Wildlife Research Center provided expert witness and rebuttal reports that were instrumental in reaching successful resolution of two cases. The expert testimony and reports were based on scientific information on the exposure and effects of contaminants on DOI trust species, developed in USGS laboratories and at the sites. DOI will use settlements in excess of $85 million to restore natural resources in the Southeast Missouri Mining District and Tristate Mining District of Oklahoma, Missouri, and Kansas.

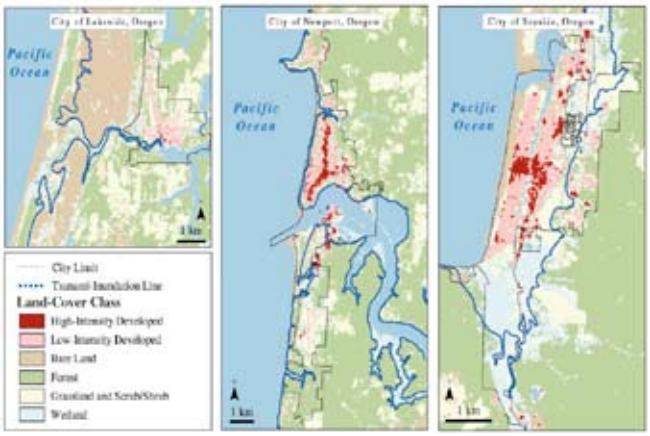
Cooperative Water Program – Aquifer Storage and Recovery Projects

USGS scientists recharged water through 400 feet of Mojave Desert soil to demonstrate the feasibility of using deep ground-water basins to help ensure the long-term sustainability of regional water supplies. The new findings, published in the May 2008 issue of the scientific journal "Ground Water," demonstrated that aquifer storage and recovery techniques could be applied to these deep ground-water basins previously thought unavailable for municipal water storage. A Victorville, California Council Member noted that "recharging our basins is critical to our future. We have to think beyond traditional answers and take advantage of scientific strategies to provide the needed water for our growing region." The Mojave Aquifer Storage and Recovery (ASR) project is just one example of numerous ASR studies that the USGS is jointly conducting with municipalities and regional water authorities to provide the scientific information needed to assess the feasibility of this innovative water-supply strategy. ASR, also commonly called "water reuse," typically entails injecting or infiltrating surplus surface water into ground-water aquifers where it is stored for withdrawal during periods of water shortage. ASR is often a cost-effective and environmentally sound alternative to building dams and reservoirs for water

storage, and ASR allows communities the ability to store water in areas where dam sites are unavailable. USGS science is important for understanding the physical and chemical characteristics of both the source water and the regional aquifer system to assess the feasibility and optimal design of an ASR project.

Assessing Societal Vulnerability to Tsunamis

As the 2004 Indian Ocean disaster demonstrated, tsunamis are significant threats to the safety, economic well-being, and natural resources of coastal communities. Although high-hazard areas have been identified for tsunamis in many parts of the United States, little is known on potential impacts of these tsunamis to coastal communities. Understanding societal vulnerability to tsunamis is critical if public- and private-sector decisionmakers are to reduce risks and increase the resilience of threatened coastal communities. Through innovative uses of GIS technology and workshops, USGS researchers are helping local and State managers and the public understand community vulnerability to tsunamis. Results from this applied research indicate that there are tens of thousands of people who live, work, and play in areas prone to tsunami inundation from various seismic sources. These areas also contain critical infrastructure and significant portions of local and regional economies. These studies are the first in the Nation to summarize regional variations in community vulnerability to tsunamis. USGS researchers have worked in collaboration with State emergency-management offices to provide geographic information that helps local officials make informed and realistic decisions on mitigation, outreach, preparedness, response, and recovery strategies for increasing community resilience to tsunami threats. USGS researchers have briefed local and State managers and State-level tsunami working groups in Hawaii, Oregon, and Washington. Results of the Oregon study were featured in an article in The Oregonian (Portland daily newspaper) and are being used by city, county, and State emergency managers and land managers to develop mitigation plans and to develop emergency operation plans. For example, results of the Hawaii study were incorporated into the recently updated State of Hawaii Hazard Mitigation Plan. Developing and applying new approaches for understanding community vulnerability to natural hazards helps the Nation improve its ability to reduce risk and increase resilience.



Land-cover maps (NLCD 2001) showing tsunami-inundation zones for the (A) City of Lakeside, (B) City of Newport, and (C) City of Seaside, Oregon.

Improving the Understanding of Global Petroleum Resources – the Circum-Arctic Petroleum Resource Appraisal

An improved understanding of the potential resources of the Arctic, an area of tremendous resource potential, environmental sensitivity, technological risk, and geological uncertainty, is critical to the understanding of natural resources and of future energy supplies for the United States and the world. A large part of remaining global oil and gas resources is thought to exist in the high northern latitudes of Russia, Norway, Greenland, United States, and Canada. However, the quality, quantity, and distribution of these resources are insufficiently known and understood in many areas. The primary objective of the current USGS Circum-Arctic petroleum Resource Appraisal (CARA) effort, conducted in collaboration with several U.S. and international entities, is to produce a new comprehensive, unbiased probabilistic estimate of undiscovered petroleum resources in the high northern latitudes.

For the first time, in 2008, the USGS CARA provided an estimate of the undiscovered petroleum resources of the Circum-Arctic in the public domain. The approach used in the CARA study is compatible with that utilized in the USGS World Petroleum Assessment 2000 and subsequent petroleum assessments, and will augment the understanding of the global petroleum resource

endowment. The USGS has completed and released separate assessments for several geologic provinces from the CARA study, including the East Greenland Rift Basins Province, the Laptev Sea Shelf Province, North and East Margins of the Siberian Craton, and the West Greenland, East Canada Province. These results and more information on the USGS CARA study are available at http://energy.usgs.gov/arctic/. This information is and will be used in energy forecasts, in international and domestic energy policy, and by land and resource managers of Arctic resources.

Developmental Research Outputs and Outcomes

Achieving Efficiencies in Seismic Monitoring

To improve the efficiency and performance of the California Integrated Seismic Network (a regional network within the Advanced National Seismic System), the network has begun shifting away from data transmission using older, more costly Internet-based technologies to transmission using commercial cellular-phone networks. To improve the performance of the network, monitoring equipment is also being modernized at network sites. In particular, newly available instrumentation allows more data processing to be done more quickly at individual network sites, and for data to be transmitted more quickly to central processing sites. This new instrumentation will improve the overall performance of the network, and solve formerly significant logistical barriers to the development of effective early warning systems. The USGS upgraded and added stations close to active strands of the Southern San Andreas Fault System in order to improve delivery of ShakeMap (a product of the USGS Earthquake Hazards Program) to rapidly growing urban areas, obtain crucial data on ground-shaking, and lay groundwork for a prototype early warning system.

Improved Caribbean Earthquake and Tsunami Warnings

In December 2007, the USGS completed a 3-year project to establish a modern earthquake monitoring network across the Caribbean region. The 2004 Sumatra-Andaman earthquake led to development of a Presidential initiative to enhance earthquake and tsunami monitoring in the Caribbean through the installation of seismic stations, Deep Ocean Assessment of Reporting Tsunamis (DART) buoys, and tide gauges. These stations extend existing coverage provided by the Global Seismographic Network (GSN). With additional stations installed in 2008 in Spain, Mexico, and Kirabati, the GSN will reach its design goal of 150 stations worldwide. The USGS also installed the first "next generation" data acquisition systems at GSN sites in California and New Mexico. This kicked off a multiyear process of refreshing the technology of the network, to support reliable earthquake alerts in future decades.

ShakeCast System Enables Users to Define Earthquake Impacts to Their Facilities

The USGS released ShakeCast Version 2, which offers improved capabilities for users to overlay USGS ShakeMaps with their own inventories of buildings, infrastructure, and other facilities. The California Department of Transportation (Caltrans) has been widely promoting ShakeCast as a post-earthquake response tool for utilities, resulting in several key, new utility users in California. Caltrans is working on an expanded scope for ShakeCast by funding the USGS to do further development for allowing liquefaction and landslide assessment within ShakeCast. Many other new users include national and international business, education, responders, and other agencies. To help new users, ShakeCast now imports facility-vulnerability data directly from Rapid Observation of Vulnerability and Estimate of Risk (ROVER), a new software and tablet PC system by the Applied Technology Council that implements FEMA guidelines for pre-earthquake building inspection. A single inspector can quickly assess numerous buildings per day, providing a ShakeCast user with vulnerability assessments for their inventory.

Northern Diamondback Terrapin found while performing a gravity survey near Cape Charles, VA.

Section IV

Appendix

Contents

Appendix

AAG	American Association of Geographers
AAAS	American Association for Advancement of Science
ABC/M	Activity-Based Costing/Management
ACWI	Advisory Commitee on Water Council
ADCP	Acoustic Doppler Current Profile
ANSS	Advanced National Seismic System
APA	American Planning Association
APS	Administrative Policy and Services
A/R	Accounts Receivable
ASR	Aquifer Storage and Recovery
AVO	Alaska Volcano Observatory
BASIS+	Budget and Science Information System
BBS	Biology Breeding Survey
BFC	Big File Cabinet
BIA	U.S. Bureau of Indian Affairs
BLM	U.S. Bureau of Land Management
BMP	Best Management Practices
BNP	Biscayne National Park
BOR	U.S. Bureau of Reclamation
BRD	Biological Resources Discipline
BUR	Bureau specific measure
CA	Condition Assessment
CAP	Cooperative Agreements Program
CARA	Circum-Arctic petroleum Resource Appraisal
CBP	Chesapeake Bay Program
CD	Compact Disc
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERP	Comprehensive Everglades Restoration Plan
CIESIN	Center for International Earth Science Information Network
CINDI	Center for Integration of Natural Disaster Information
CISN	California Integrated Seismic Network
CLICK	Center for LIDAR Information Coordination & Knowledge
CMGP	Coastal and Marine Geology Program
COTS	Commercial Off-the-Shelf
CPIC	Capital Planning and Investment Control
CREW	Cascadia Regional Earthquake Workgroup
CSRS	Civil Service Retirement System
CTM	Cooperative Topographic Mapping
DCIA	Debt Collection Improvement Act
DHS	U.S. Department of Homeland Security
DNR	Department of Natural Resources
DOD	Department of Defense
DOE	Department of Energy
DOI	U.S. Department of the Interior
DOL	U.S. Department of Labor
DOT	U.S. Department of Transportation
DSS	Decision Support System
EFT	Electronic Funds Transfer
EHP	Earthquake Hazards Program
EMS	Environment Management Systems
EM	Energy Management
EO	Executive Order
EPA	U.S. Environmental Protection Agency
EPCA	Energy Policy and Conservation Act
ERA	Electronic Records Archive
EROS	Earth Resources Observation and Science Center
ERP	Energy Resources Program
ESN	Enterprise Services Network
ETM+	Enhanced Thematic Mapper Plus
FAIR	Federal Activities Inventory Reform
FASAB	Federal Accounting Standards Advisory Board
FBMS	Financial Business Management System
FBWT	Fund Balance with Treasury
FCI	Facilities Condition Index
FECA	Federal Employee Compensation Act
FEGLI	Federal Employees' Group Life Insurance
FEHB	Federal Employees' Health Benefit
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FERS	Federal Employees' Retirement System
FFMIA	Federal Financial Management Improvement Act of 1996
FGDC	Federal Geographic Data Committee
FICA	Federal Insurance Contributions Act
FISC	Florida Integrated Science Center
FISMA	Federal Information Security Management Act
FMFIA	Federal Managers' Financial Integrity Act of 1982
FMMS	Facilities Maintenance Management System
FMS	U.S. Treasury's Financial Management Service
FPPS	Federal Personnel Processing System
FRPC	Federal Real Property Council

FRPP	Federal Real Property Profile
FS	Forest Service
FTE	Full-Time Equivalent
FTP	File Transfer Protocol
FWS	U.S. Fish and Wildlife Service
FY	Fiscal Year
GAAP	Generally Accepted Accounting Principles
GAM	Geographic Analysis and Monitoring Program
GAO	Government Accountability Office
Gb	Gigabtye
GCP	Global Change Program
GIO	Geospatial Information Office
GIS	Geographic Information System
GNIS	Geographic Names Information System
GOS	Geospatial One Stop
GPRA	Government Performance and Results Act
GPS	Global Positioning Satellite
GSA	General Services Administration
GSN	Global Seismographic Network
HHS	U.S. Department of Health and Human Services
HVO	Hawaiian Volcano Observatory
HPAI	Highly Pathogenic Avian Influenza
HSPD	Homeland Security Presidential Directive-12
IAS	Inspection and Abatement System
IP	Investment Plan
IPANE	Invasive Plant Atlas of New England
IRIS	Incorporated Research Institutions for Seismology
InSAR	Interferometric Synthetic Aperture Radar
JWP	John W. Powell
KSAs	Knowledge, Skills, and Abilities
IT	Information Technology
LEED	Leadership Energy and Environment Design
LIDAR	Light Detecting and Ranging
LIMA	Landsat Image Mosaic of Antarctica
LHP	Landslide Hazard Program
LMV	Lower Mississippi Valley
LRS	Land Remote Sensing
LTRMP	Long-Term Resource Monitoring Program
LUPM	Land Use Portfolio Model
M	Million
MD&A	Management's Discussion and Analysis
MITS	Management Initiatives Tracking System
MMS	Minerals Management Service
MOE	Ministry of Energy and Mineral Resourcees
MRERP	Mineral Resources External Research Program
MRLC	Multi-Resolution Land Characteristics
MRP	Mineral Resources Program
NAIP	National Agriculture Imagery Program
NARA	National Archives and Records Administration
NASA	National Aeronautics and Space Administration
NAWQA	National Water Quality Assessment
NBC	Dept. of Interior - National Business Center
NBII	National Biological Information Infrastructure
NCGMP	National Cooperative Geologic Mapping Program
NHD	National Hydrography Dataset
NEIC	National Earthquake Information Center
NEHRP	National Earthquake Hazards Reduction Program
NGA	National Geospatial Intelligency Agency
NGIC	National Geomagnetic Information Center
NHSS	Natural Hazards Support System
NHWC	National Hydrologic Warning Council
NLCD	National Land Cover Database
NOAA	National Oceanic and Atmospheric Administration
NPS	U.S. National Park Service
NRC	National Research Council
NRCS	National Resouces Conservation Council
NRDAR	Natural Resource Damage Assessment and Restoration Fund
NSDI	National Spatial Data Infrastructure
NSF	National Science Foundation
NSIP	National Streamflow Information Program
NVEWS	National Volcano Early Warning System
NWIS	National Water Information System
NWQL	National Water Quality Laboratory
NWQLC	National Water Quality Monitoring Council
NWS	National Weather Service
OAFM	USGS Office of Accounting and Financial Management
OBP	USGS Office of Budget and Performance
OIG	Office of the Inspector General
OMB	Office of Management and Budget
OMS	Office of Management Services
ONSR	Ozark National Scenic Riverways Park

OPM	Office of Personnel Management
ORNL	Oak Ridge National Laboratory
PAR	Performance and Accountability Report
PAGER	Prompt Assessment for Global Earthquake Response System
PART	Program Assessment Rating Tool
PB	President's Budget
PGV	Peak Ground Velocity
P.L.	Public Law
PMA	President's Management Agenda
PP&E	Property, Plant, and Equipment
PTWC	Pacific Tsunami Warning Center
R&D	Research and Development
REX	Regional Executive
RMGSC	Rocky Mountain Geographic Science Center
RLA	Resource Lands Assessment
RSI	Required Stewardship Information
RSSI	Required Supplementary Stewardship Information
RTS	Reports Tracking System (Water Resources)
SAFOD	San Andreas Fault Observatory at Depth
SAIN	Southern Appalachian Information Node
SBR	Statement of Budgetary Resources
SBWG	Sustainable Buildings Work Group
SCEC	Southern California Earthquake Center
SES	Senior Executive Service
SETAC	Society of Environmental Toxicology and Chemistry
SFFAS	Statement of Federal Financial Accounting Standards
SFMP	Strategic Facilities Master Plan
SFWMD	South Florida Water Management District
SLC	Scan Line Corrector
SGL	Standard General Ledger
SIR	Surveys, Investigations, and Research
Sparrow	Spatially Referenced Regressions on Watershed Attributes
SPRESO	South Pole Remote Earth Science Observatory
SRTM	Shuttle Radar Topographic Mission
SSRIs	Selective Seronin Reuptake Inhibitors
SST	Science Strategy Team
STEP	Short-Term Earthquake Probability
TBLM	The Biotic Ligand Model
TCUs	Tribal Colleges and Universities
TES	Threatened and Endangered Species
TLSA	Teshekpuk Lake Special Area
TNM	The National Map
TRIP	The Road Indicator Project
TROR	Treasury Report on Receivables
TRPA	Tahoe Regional Planning Agency
TSP	Thrift Savings Plan
TWRA	Tennessee Wildlife Resources Agency
USCOE	U.S. Army Corp. of Engineers
USDA	U.S. Department of Agriculture
USFS	U.S. Forest Service
USGCRP	U.S. Global Change Research Program
USGS	U.S. Geological Survey
VAN	Volcano Activty Notices
VHP	Volcano Hazards Program
VPN	Virtual Private Network
V&V	Validation and Verification
VDAP	Volcano Disater Assistance Program
VONAs	Volcano Observatory Notifications for Aviation
WAN	Wide Area Network
WCF	Working Capital Fund
WMEDN	White Mountain Early Detection Network
WNV	West Nile Virus
WRD	Water Resources Discipline
WPA	World Petroleum Assessment 2000
WRIR	Water Resources Investigation Report
WSC	Water Science Center
YVO	Yellowstone Volcano Observatory

We Welcome Your Comments!

Thank you for your interest in the U.S. Geological Survey's FY2008 Performance and Accountability Report. We welcome your comments on how we can make this report a more informative document for our readers. We are particularly interested in your comments on the usefulness of the information and the manner in which it is presented. Please send your comments to:

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MAGIC ISLAND
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USGS
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