U.S. GEOLOGICAL SURVEY

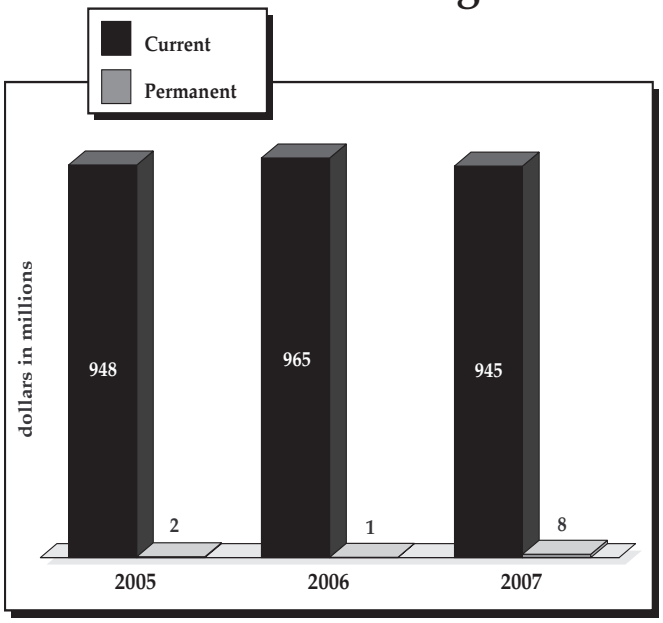
Mission — The mission of the U.S. Geological Survey is to provide reliable scientific information to: describe and understand the Earth; minimize loss of life and property from natural disasters; assist others in managing water, biological, and other natural resources; and enhance and protect the quality of life.

Program Overview — The USGS provides a broad range of expertise in geography, geology, hydrology, and biology. The USGS places a special emphasis on providing science to the land and resource management bureaus of the Interior Department. The USGS hazards programs produce information and enhance understanding of natural hazards, such as earthquakes, volcanoes, and landslides, which are used to reduce the impacts of these events on human life and the economy. The USGS is a primary Federal source of objective resource assessments and unbiased research on oil, gas, and alternative energy potential, production, consumption, and environmental effects. These investigations enable the Nation to make sound decisions regarding domestic energy production with an understanding of potential impacts on the environment.

The USGS analyses of water quality and quantity help water managers develop, regulate, and monitor management practices to ensure the continued availability of water resources for human consumption, agriculture, business, recreation, and fish and wildlife and habitat. Biological studies are used to help maintain healthy ecosystems and natural resources so that these habitats can continue to provide food, energy, medicine, transportation, and recreation. The USGS geography program is expanding its partnerships with Federal agencies and State and local governments to develop and promote use of the geographic data and mapping products that are important tools for States, local public and private entities, universities, and citizens for economic and community development, land and natural resource management, and health and safety services.

To deliver the most accurate, timely, and impartial science possible, USGS is seeking ways to integrate its diverse programs, capabilities, and talents to address those issues that require a multi-disciplinary solution. The USGS places great value on partnerships and is increasing customer involvement to work collaboratively on issue identification, resource needs, and science solutions. Natural and biological science supports informed decisionmaking by land and resource managers at Federal, State, and local levels; government program managers; industrial and agricultural corporations; scientists and academia; and the public.

USGS Funding



Management Excellence — The USGS continues to advance the President's management agenda for improving performance of the Federal government and practicing the Secretary's vision for citizen-centered management excellence. The 2007 budget supports the Department's unified strategic plan, specifically in relation to informing decisions through the application of science and advancing knowledge through scientific leadership.

The USGS will carry on its efforts to expand partnerships with other Interior bureaus; other Federal, State, and local agencies; academia; and the public sector to address diverse issues on the landscape. The effort to strengthen existing partnerships and build new ones,

especially with Interior bureaus, is enhanced through USGS regional offices, which work closely with their counterparts in other Interior bureaus. Regular meetings between USGS leadership and that of the Interior bureaus also enhance these efforts. Increased communication and the close proximity of USGS managers and scientists to Interior land and resource managers allow USGS to be more responsive to regional and local issues and provide the scientific expertise and leadership necessary to assist managers in solving their current problems and addressing their future science needs.

The USGS has been engaged in workforce analysis and workforce planning for the past few years, as the bureau looks towards the future. The USGS seeks to renew and restructure its workforce so that it can undertake new avenues of scientific research that currently are beyond its technical and organizational capabilities. These efforts will help USGS address future science needs and accommodate resources over the years to come. In 2006 and 2007, USGS will continue its restructuring efforts focusing on the National Geospatial Programs Office, the National Geospatial Technical Operations Center, water district offices, regional offices, the Columbia Environmental Research Center, and the Geology program. In 2007, USGS is planning to begin restructuring efforts associated with its regional structure. Future efforts will also include an analysis of the USGS headquarters functions.

As a result of buyouts and early outs associated with the workforce restructuring, by the end of 2005, 130 FTEs were reduced in the geography discipline, library service functions, and Colorado Water Science Center. These workforce restructures have resulted in over $13.0 million in salary savings that were reinvested in high priority science programs within USGS, including science partnerships. For example, savings stemming from the workforce restructure of the National Map were primarily reinvested back into partnership funding for the National Map.

In 2006, USGS estimates that at least 154 FTE will accept buyout and early out offers, producing savings in 2007 that will be re-invested in USGS science programs to meet operational costs and help fund important new and expanded science initiatives, such as the new multi-hazards initiative proposed in 2007.

As part of the 2007 budget process, the National Cooperative Geologic Mapping program and activities in biological research, monitoring, and information collection and dissemination were reviewed using the Performance Assessment Rating Tool. All of the programs were found to be moderately effective.

Budget Overview — The 2007 USGS budget request is $944.8 million in current appropriations, a decrease of $20.6 million below the 2006 enacted level, excluding the hurricane supplemental. The 2007 budget continues to focus research on the highest research priorities of today, while ensuring that USGS builds the expertise it needs to continue answering the complex research questions that arise tomorrow. The budget adds $40.1 million in new programs and fixed costs, which are offset by redirecting $50.7 million from lower priority activities and eliminating $10.0 million in earmarked funding.

Partnerships — Partnerships are a crucial part of USGS science efforts. The USGS works in close cooperation with more then 2,000 Federal, State, tribal, and local governmental agencies, private sector companies, and non-profit organizations across the country. Partnerships provide highly effective means to leverage resources among many contributors, bringing a greater wealth of knowledge, expertise, and capability for important land and resource management issues.

Geography — The 2007 request of $76.6 million in Geography supports a strong role for USGS in land remote sensing and geographic research. The request level is $52.7 million below 2006 due to the transfer of the Cooperative Topographic Mapping program to Enterprise Information, as part of a proposed restructure. The restructure is necessary to allow USGS to better focus efforts on developing geographic research and applications activities within the Geographic Analysis and Monitoring and Land Remote Sensing programs. The restructure also allows USGS to bring the geospatial data coordination, standards, partnerships, and policy development efforts for the Federal Geographic Data Committee, Geospatial One-Stop, and the National Map together in one organization.

Increases to the Geography program budget include $16.0 million in land remote sensing to complete the design and begin building ground station capabilities to collect, archive, and distribute Landsat data from the new Landsat 8 satellite, which is to be built by the National Aeronautics and Space Administration and is currently estimated to launch in January 2010. Once the satellite is launched, USGS will take over its operations, as it did with Landsats 5 and 7. Landsat 8 will replace both Landsats 5 and 7, both of which are now experiencing problems. Landsat 7, which was launched in April of 1999 and continues to collect data, has had a failure of its scan line corrector, resulting in declined data utility as the resulting images now have blank swaths that run through about 25 percent of the image. Additionally, in November 2005, Landsat 5, which has performed far beyond its projected three-year life span since its launch

in 1984, is now experiencing problems that could limit its utility. The rotation of the solar array drive, which maintains the proper pointing angle between the solar array and the sun, has become sporadic, and is not able to continuously provide the power needed to charge the batteries without manual manipulations of the satellite by USGS. Maintaining power to the batteries is critical to sustain proper operation of the spacecraft.

The Geography program budget includes decreases of $3.0 million for the America View project and $2.3 million for lower priority geographic research.

Geology — The 2007 budget proposes $217.4 million for geology activities, which is $17.9 million below the 2006 level. This funding level includes increases in support of the Energy Policy Act of 2005, including $500,000 for gas hydrate research in cooperation with activities in BLM and MMS and $500,000 to complete an oil shale assessment. The budget also provides an additional $1.0 million to begin an effort to collect and preserve vital geological and geophysical energy data.

The Geology program budget also includes $700,000 of the requested $2.2 million for a multi-hazards pilot initiative. The remaining funding is in geographic research (+$300,000), water resources (+$200,000), biological research (+$200,000), and enterprise information (+$680,000). The initiative will enhance research and assessments on the causes and consequences of natural hazards and improve community responses to hazard events. The initiative will also focus on improved communication as it merges information about different high risk hazards into integrated products to support local community efforts in land-use planning, hazards mitigation, and emergency response.

The 2007 budget also includes decreases for the Geology program totaling $23.6 million, $838,000 of which was provided for unrequested earmarks. The budget includes a proposal to refocus the mineral resources program on activities that are inherently governmental. The minerals resources program is reduced by $22.9 million.

Water Resources — The Water Resources program is funded at $204.0 million in the 2007 budget request, including an increase of $2.3 million for streamgaging activities. This increased funding will enable USGS to increase the number of streamgages reporting real-time by 30, and allow USGS to continue operations at high priority sites. The 2007 budget also includes decreases of $846,000 for the Long Term Estuary Assessment Group, $940,000 in technical support funding associated with the National Water Quality Assessment program, and $2.0 million in cooperative water studies that are coming to an end. The Cooperative Water program will initiate an estimated $6.0 million in new water studies in 2007. The proposed funding level for the Water Resources program also includes reductions of $4.0 million in unrequested earmarks and $6.4 million for the Water Resources Research Institutes that have been generally successful in generating funds from non-USGS sources and could be self-supporting.

Biological Research — The 2007 budget requests $172.6 million in biological research. The budget includes an increase of $1.0 million to support the activities of the NatureServe system and to contribute to the broader strategy of improving delivery and access to information needed to support Interior bureaus in the management of natural resources. Also included in this funding level are decreases of $2.0 million in the National Biological Information Infrastructure program and $7.3 million in discontinued lower priority studies and unrequested earmarks in biological research. The budget also includes the continuation of the $3.2 million for avian influenza, which reflects a reduction of $400,000. The reduction is for a one-time purchase of research equipment in 2006.

Science Support, Enterprise Information, and Facilities — The 2007 budget requests $274.1 million for these activities. This funding level includes an increase of $64.8 million in Enterprise Information associated with the proposed transfer of the Cooperative Topographic Mapping program from Geography to Enterprise Information. The budget for these activities also includes reductions of $3.0 million for efficiencies associated with geospatial data integration and enterprise operations; $3.9 million in one-time Landsat costs appropriated in 2006; and $540,000 in space savings.

Fixed Costs — The 2007 budget request includes an increase of $20.7 million for non-discretionary fixed cost increases, of which $15.2 million are budgeted and $5.5 million are absorbed.

SUMMARY OF BUREAU APPROPRIATIONS
(all dollar amounts in thousands)

Comparison of 2007 Request with 2006 Enacted:

	2006 Enacted		2007 Request		Change from 2006	
	FTE	Amount	FTE	Amount	FTE	Amount
Appropriations						
Surveys, Investigations, & Research *(w/o h. supp)*	5,905	965,345	5,562	944,760	-343	-20,585
Hurricane Supplemental	0	5,300	0	0	0	-5,300
Surveys, Investigations, & Research *(w/ h. supp)*	5,905	970,645	5,562	944,760	-343	-25,885
Permanents and Other						
Operations and Maintenance of Quarters	0	60	0	50	0	-10
Contributed Funds	0	1,295	0	1,394	0	+99
Working Capital Fund	179	0	179	0	0	0
Spectrum Relocation Activities	0	0	0	6,159	0	+6,159
Subtotal, Permanents, Trust Funds, and Others	179	1,355	179	7,603	0	+6,248
Transfers and Reimbursables	2,673	0	2,655	0	-18	0
TOTAL, U. S. GEOLOGICAL SURVEY *(w/o h. supp)*	**8,757**	**966,700**	**8,396**	**952,363**	**-361**	**-14,337**
TOTAL, U. S. GEOLOGICAL SURVEY *(w/ h. supp)*	**8,757**	**972,000**	**8,396**	**952,363**	**-361**	**-19,637**

HIGHLIGHTS OF BUDGET CHANGES
By Appropriation Activity/Subactivity

APPROPRIATION: Surveys, Investigations, and Research

	2005 Actual	2006 Enacted	2007 Request	Change from 2006 Enacted
Mapping, Remote Sensing, and Geographic Investigations				
Cooperative Topographic Mapping	71,393	68,855	0	-68,855
Land Remote Sensing	32,730	45,713	61,754	+16,041
Geographic Analysis/Monitoring	14,628	14,705	14,860	+155
Subtotal, Mapping	118,751	129,273	76,614	-52,659
Geologic Hazards, Resource, and Processes				
Geologic Hazards Assessments	84,079	81,000	82,396	+1,396
Geologic Landscape/Coastal Assess	76,253	77,752	78,106	+354
Geologic Resource Assessments	77,014	76,534	56,916	-19,618
Subtotal, Geologic Hazards	237,346	235,286	217,418	-17,868
Water Resources Investigations				
Hydrologic Monitoring, Assess, & Rsch	142,454	142,527	141,876	-651
Cooperative Water Program	62,337	62,833	62,171	-662
Water Resources Rsch Act Program	6,409	6,404	0	-6,404
Subtotal, Water Resources	211,200	211,764	204,047	-7,717
Biological Research				
Biological Research/Monitoring	133,130	140,086	135,692	-4,394
Biological Info Mgmt/Delivery	23,999	23,794	21,967	-1,827
Cooperative Research Units	14,570	14,664	14,938	+274
Subtotal, Biological Research	171,699	178,544	172,597	-5,947

	2005 Actual	2006 Enacted	2007 Request	Change from 2006 Enacted
Enterprise Information				
Enterprise Info Security and Tech.....	22,714	24,866	25,972	+1,106
Enterprise Information Resources	16,989	16,900	16,636	-264
National Geospatial Program.....	4,670	4,628	68,622	+63,994
Subtotal, Enterprise Information	44,373	46,394	111,230	+64,836
Science Support	65,584	69,302	67,382	-1,920
Facilities.....	94,611	94,782	95,472	+690
Net Transfers.....	4,000	0	0	0
TOTAL APPROPRIATION *(w/o h. supps.)*..	947,564	965,345	944,760	-20,585
Hurricane Supplementals	1,000	5,300	0	-5,300
TOTAL APPROPRIATION *(w/ h. supps.)*....	948,564	970,645	944,760	-25,885

Highlights of Budget Changes

	Amount
Fixed Costs	[+20,724]

Mapping, Remote Sensing, and Geographic Investigations

Cooperative Topographic Mapping -68,855

The budget proposes a budget restructure (-$68,855) that moves geospatial data coordination functions of the Cooperative Topographic Mapping subactivity to a new subactivity, the National Geospatial program, in the Enterprise Information Activity. National Land Cover Data functions are moved to the Land Remote Sensing subactivity and landscape analysis functions are moved to the Geographic Analysis and Monitoring subactivity.

Land Remote Sensing +16,041

The budget proposes an increase (+$15,950) to fund Landsat 8 development, a Landsat Data Continuity Mission partnership of NASA and USGS, that continues the 30-year legacy of obtaining global earth observation data via the aging Landsat satellites 5 and 7. A decrease eliminates funding for AmericaView (-$2,970) . The proposed budget restructure moves funding (+$2,768) for the National Land Cover Data functions to this subactivity from the Cooperative Topographic Mapping subactivity. Fixed costs total $418, of which $293 are budgeted and $125 are absorbed.

Geographic Analysis and Monitoring +155

A proposed increase (+$300) supports a bureauwide multi-hazards demonstration project that integrates information about multiple hazards to enhance local community preparations for and recovery from natural disasters. A proposed decrease (-$2,300) reduces lower priority geographic research. The proposed budget restructure moves funding (+$1,786) for landscape analysis functions to this subactivity from the Cooperative Topographic Mapping subactivity. Fixed costs total $527, of which $369 are budgeted and $158 are absorbed.

Geologic Hazards, Resources, and Processes

Geologic Hazard Assessments +1,396

Proposed increases (Earthquakes +$300; Landslides +$200) support a bureauwide multi-hazards demonstration project that integrates information about multiple hazards to enhance local community preparations for and recovery from natural disasters. Fixed costs total $1,282, of which $896 are budgeted and $386 are absorbed.

Geologic Landscape and Coastal Processes +354

The budget proposes a decrease (-$247) to reduce an unrequested earmark for studies of the impact of African dust on U.S. ecosystems. A proposed increase (+$200 in Coastal and Marine Geology) supports a bureauwide multi-hazards demonstration project that integrates information

	Amount
about multiple hazards to enhance local community preparations for and recovery from natural disasters. A proposed decrease (-$591) eliminates an unrequested earmark to support geological and environmental characterization of the inner shelf region of Florida. Fixed costs total $1,418, of which $992 are budgeted and $426 are absorbed.	
Geologic Resource Assessments	-19,618
The budget proposes a decrease (-$22,943) for the Mineral Resources program that will discontinue or reduce global mineral resource assessments of mineral commodities; research on industrial minerals; research on inorganic toxins; materials flow analyses; the Mineral Resources External Research program; and data collection and analysis for 100 mineral commodities in 180 countries outside the United States. The program will focus on activities that are inherently governmental. A proposed increase (+$500) will expand work to the Energy Resources program for a study of gas hydrates on the North Slope of Alaska. Proposed increases would be used to meet mandates in the Energy Policy Act of 2005, including a national assessment of oil shale resources (+$500) and the preservation of geologic and geophysical data (+$1,000). Fixed costs total $1,891, of which $1,325 are budgeted and $566 are absorbed.	
Water Resources Investigations	
Hydrologic Monitoring, Assessments, and Research	-651
Proposed decreases in ground-water resources will eliminate unrequested earmarks for studies of the Memphis (-$493) and Ozark (-$227) aquifers. A proposed decrease (-$940) in National Water-Quality Assessment will reduce national technical support and training activities for the USGS's geographically distributed water-quality studies. Proposed decreases in Toxic Substances Hydrology will eliminate an unrequested earmark study of the Roubidoux Aquifer (-$1,231) and a lower priority project that addresses petroleum-related contamination of the Nation's water resources (-$227). A proposed decrease in Hydrologic Research and Development will eliminate funding (-$846) for the Long-Term Estuary Assessment Group and two unrequested earmarks: a fish mortality study in Hood Canal, Washington (-$99) and USGS participation in the interagency San Pedro Partnership (-$296).	
A proposed increase (+$200) in the National Streamflow Information program supports a bureauwide multi-hazards demonstration project that integrates information about multiple hazards to enhance local community preparations for and recovery from natural disasters. An additional increase in the National Streamflow Information program (+$2,325) will increase the number of streamgages by 30, giving USGS the flexibility to continue operations at high-priority sites and enabling USGS to invest in technological improvements that will make the entire network more cost-efficient in the long term. Proposed decreases in Hydrologic Networks and Analysis will eliminate unrequested earmarks for expanded water-quality monitoring for mercury and other substances in Lake Champlain (-$291), reduce expanded monitoring of water resources in Hawaii (-$444), and discontinue the collection of hydrologic data to detect future changes in surface water quality related to extraction of coalbed methane in the Tongue River watershed of Montana (-$887). Fixed costs total $4,004, of which $2,805 are budgeted and $1,199 are absorbed.	
Cooperative Water Program	-662
The proposed decrease will reduce the number of interpretive water studies conducted in cooperation with State and local agencies (-$2,000), focusing in areas where projects are scheduled to end during 2006. Fixed costs total $1,912, of which $1,338 are budgeted and $574 are absorbed.	
Water Resources Research Act Program	-6,404
The proposed decrease (-$6,404) eliminates USGS funding for the 54 State Water Resources Research Institutes that have been generally successful in generating non-Federal sources of funding and should be able to support themselves.	
Biological Research	
Biological Research and Monitoring	-4,394
A proposed increase (+$300) supports a bureauwide multi-hazards demonstration project that integrates information about multiple hazards to enhance local community preparations for and recovery from natural disasters. An increase (+$1,000) for NatureServe will support the continued collection of information about rare and endangered species and threatened ecosystems. Decreases are proposed for unrequested earmarks and lower priority studies for the Pacific Northwest	

	Amount
Forest program (-$1,000); biological assistance to the National Water-Quality Assessment program (-$594); wildlife, terrestrial, and endangered resources (-$509); molecular biology (-$788) and multidisciplinary water studies (-$197) at Leetown Science Center; Mark Twain National Forest lead mining (-$345); pallid sturgeon (-$345); diamondback terrapins (-$197); grizzly bear population in Montana (-$394); Great Lakes Science Center boat dock (-$1,409); equipment at the Anadromous Fish Laboratory (-$148); Tunison Lab Atlantic salmon research (-$247); Potomac snakehead program (-$172); Upper Midwest Environmental Sciences Center (-$197); Science Excellence with FWS (-$197); ivory-billed woodpecker survey equipment (-$394); and Wetland Ecology Center with the University of Missouri (-$197). The reduction in Avian Influenza (-$400) is due to the one-time purchase of testing equipment in 2006. Fixed costs total $2,910, of which $2,036 are budgeted and $874 are absorbed.	
Biological Information Management and Delivery	-1,827
The budget proposes a decrease (-$2,000) for the National Biological Information Infrastructure. Fixed costs total $246, of which $173 are budgeted and $73 are absorbed.	
Cooperative Research Units	+274
Fixed costs total $391 of which $274 are budgeted and $117 are absorbed.	
Enterprise Information	
Enterprise Information Security and Technology	+1,106
The budget proposes an increase (+$1,297) for projects funded through the Working Capital Fund including consolidation of diverse, separate messaging systems onto one enterprise system; a contracted effort to eliminate, over three years, the Department's backlog of nearly 2,000 appeals to Freedom of Information Act requests; the creation of an enterprise system that will improve the effective use of geographic information; and the Enterprise Services Network that became operational in 2005 and provides access to the Internet, a Department wide intranet, and a technical support center. The budget proposes a decrease (-$500) based on operational efficiencies. Fixed costs total $441, of which $309 are budgeted and $132 are absorbed.	
Enterprise Information Resources	-264
The budget proposes an increase (+$11) for the USGS component of Departmentwide information technology enhancements. The budget proposes a decrease (-$500) based on operational efficiencies. Fixed costs total $321, of which $225 are budgeted and $96 are absorbed.	
National Geospatial Program	+63,994
The budget proposes a budget restructure (+64,301) that moves geospatial data coordination functions from the Cooperative Topographic Mapping subactivity to a new subactivity, the National Geospatial program. The budget proposes an increase (+$680) for a disaster.gov project and in coordination with a bureauwide multi-hazards demonstration project that integrates information about multiple hazards to enhance local community preparations for and recovery from natural disasters. The budget proposes an additional increase (+$150) for the USGS component of Department wide information technology enhancements. The budget proposes a decrease for geospatial data integration (-$2,000). Fixed costs total $1,235, of which $863 are budgeted and $372 are absorbed.	
Science Support	-1,920
The budget proposes a decrease (-$3,941) to eliminate a one-time appropriation received in 2006 for support of Landsat 7. The budget proposes an additional decrease (-$69) that will reduce funding for operating expenses in the Director's Office, Administrative Policy and Services, Human Capital, and regional offices. Fixed costs total $2,453, of which $2,090 are budgeted and $363 are absorbed.	
Facilities	+690
The budget proposes a decrease (-$540) based on space management savings. Fixed costs total $1,275, of which $1,230 are budgeted and $45 are absorbed.	