U.S. Geological Survey

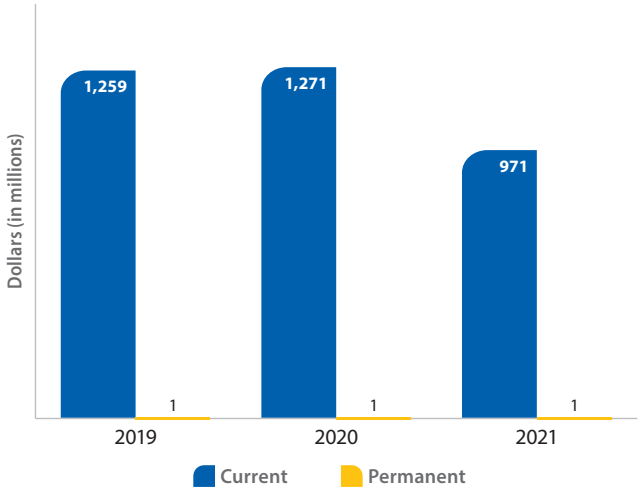
Mission—The U.S. Geological Survey (USGS) serves the Nation by providing scientific information to describe and understand the Earth; minimize loss of life and property from natural disasters; manage water, biological, energy, and mineral resources; and enhance and protect quality of life.

Budget Overview—The 2021 current budget is $971.2 million. The budget supports energy security, critical mineral independence, natural hazard monitoring, and research to inform resource management. The budget supports nationwide networks of more than 8,400 streamgages and more than 3,000 earthquake sensors. It also supports the ground systems development for the launch of Landsat 9 in 2021. USGS estimates the budget will support staffing of 6,779 full-time equivalents.

Program Overview—USGS delivers information to identify hazards and predict damage from those hazards, guide transportation planning, and inform natural resource management. Research on energy resources, global mineral commodities, and water supports national security and provides information to manage resources. USGS helps to inform stewardship of the Nation's lands and provides digital land-surface images for research, monitoring, and management of lands and water, agricultural production, and benchmarking for commercial geospatial products and services. USGS characterizes the Nation's water resources, develops tools for water management, and provides information to minimize loss from hazards.

Budget Structure Changes—The budget proposes structure changes to better address stakeholder priorities.

USGS Funding



Within the Ecosystems activity, the restructure consolidates research spread across five existing programs into three, aligns similar disciplines of research, and focuses on the most pressing resource management issues of Interior and partners. Research from two Land Resources programs is consolidated into the Climate Adaptation Science Center. Species Management Research consolidates science on the recovery of threatened and endangered species, trust species, and species of management concern. Land Management Research consolidates place-based research to support land management decisions. Biological Threats Research consolidates research to combat invasive species, fish diseases, and wildlife diseases that threaten the Nation's economy and biodiversity.

Within the Water Resources activity, the restructure aligns resources to integrate observation, understanding, prediction, and delivery of water science and information. The Water Resources Availability

U.S. GEOLOGICAL SURVEY Facts

- **The U.S. Geological Survey was founded by an Act of Congress in 1879.**
- **It is the Nation's largest water, earth, and biological science and civilian mapping agency.**
- **USGS employs more than 8,000 scientists, technicians, and support staff working in more than 400 locations throughout the United States.**
- **USGS is a primary Federal source of science-based information available to the public, providing data about ecosystem science, energy and mineral resources, natural hazards, water use and availability, and updated maps and images for the Earth's features.**
- **The USGS archives provide free, direct access to air photos dating to 1939 and more than 100 other satellite, cartographic, and topographic datasets characterizing the Earth's surface.**

program will conduct water availability assessments, measure and estimate water budgets, develop models, and conduct interpretive studies related to water quality and availability. The Water Observing Systems program will include groundwater and streamflow monitoring to monitor water quantity and observational networks to monitor sediment, nutrients, and other contaminants that affect water quality.

The budget proposes to shift National Land Imaging, including Landsat satellites and ground systems, to Core Science Systems. It moves land cover monitoring and assessment activities from Land Change Science into the Science Synthesis, Analysis, and Research Subactivity within Core Science Systems.

Ecosystems—The 2021 budget includes $127.3 million for programs focused on invasive species and wildlife disease, conservation and recovery of species, and biological resource management. The request includes $40.0 million for Species Management Research to inform Flyway Council harvest allocations; for conflict reduction between wildlife and energy development; and for science supporting species recovery. It provides $28.5 million for Biological Threats Research, which includes $5.6 million for Asian carp research. It also includes $37.9 million for Land Management Research that helps Interior and other land managers better understand habitat management. The budget includes $20.9 million for the Climate Adaptation Science Center for research with application to natural resource management, community safety, and economic development. The budget does not request funding for projects that have provided sufficient scientific information to meet Interior's land and species management responsibilities.

Energy and Mineral Resources—The 2021 budget includes $91.2 million for Energy and Mineral Resources research and assessments. The budget provides $60.7 million to collect data and conduct research on non-fuel mineral resources, including critical minerals important to economic stability and national security. Critical mineral commodities have important uses in manufacturing and technology, are primarily developed outside the United States, and have no viable substitutes, leaving the Nation vulnerable to disruptions in supplies. The budget supports topographic, geologic, and geophysical data collection to locate critical mineral resources in the United States and inform management of private-sector domestic development. This funding includes $10.6 million to continue national-scale data acquisition needed to identify critical mineral resources. The budget also includes $30.5 million to provide assessments of undiscovered, technically recoverable domestic and international energy resources and to understand the potential to diversify the national energy portfolio. This includes work to update assessments of Alaska North Slope oil and gas resource potential.

Natural Hazards—The 2021 budget includes $138.0 million for scientific information and tools to

USGS assessments locate domestic supplies of critical minerals.

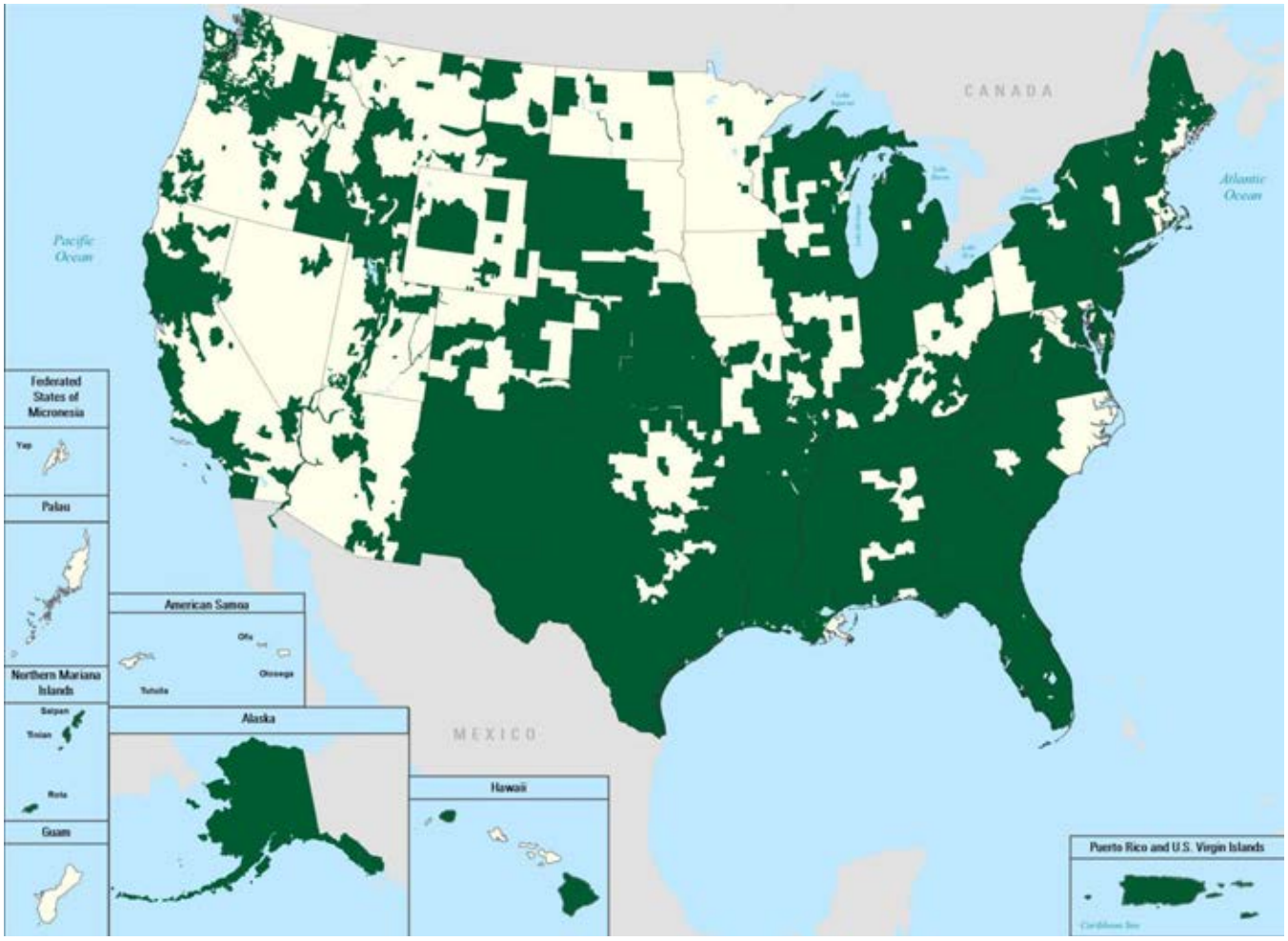
understand and respond to hazards such as volcanoes, earthquakes, and landslides to ultimately reduce potential fatalities, injuries, and property damage. The Earthquake Hazards program is funded at $60.3 million and prioritizes robust earthquake monitoring and reporting capabilities, including $8.4 million for operations and maintenance of the existing ShakeAlert Earthquake Early Warning system, in conjunction with State and local partners. The Volcano Hazards program is funded at $27.6 million to monitor the Nation's volcanoes, provide information about eruptions, and support decisions about evacuations and aircraft diversions due to volcanic ash. It includes $4.1 million to enhance understanding of the Earth's magnetic field and the effects of electromagnetic pulses and to continue a magnetotelluric survey to provide useful information for energy and mineral development, groundwater management, and electrical grid resiliency. In addition, the budget includes $5.4 million to operate and maintain the Global Seismographic Network and $3.6 million for the Landslide Hazards program, which supports debris-flow hazard assessments, research, and early warning capabilities. The budget also includes $36.9 million to improve assessments of coastal and marine hazards and resources and potential impacts on offshore operations, coastal communities, and infrastructure.

Water Resources—The 2021 budget includes $180.8 million to collect and deliver hydrologic data, model hydrologic systems, and identify new methods to gather water data. The Water Observing Systems program is funded at $109.0 million to monitor and analyze water quality samples from the Nation's streams and rivers, maintain the National Streamgage Network, and develop and improve data and tools. Included in this amount is $5.5 million for Next Generation Water Observing Systems to provide real-time data on water quantity and quality in ways not currently possible with existing monitoring networks. The budget includes $71.9 million for the Water Resources Availability program to

assess water availability and use, develop models, and examine how water quality affects water availability. That amount includes $3.6 million to conduct research addressing Harmful Algal Blooms that affect water supply and recreation opportunities. Within both programs, the budget provides $58.2 million in cooperative matching funds.

Core Science Systems—The 2021 budget provides $212.0 million for Core Science Systems, including $85.9 million for National Land Imaging. That amount includes $73.4 million for satellite operations, of which $32.0 million is for development of the Landsat 9 ground system and follow-on satellite activities in collaboration with the National Aeronautics and Space Administration (NASA). Landsat 9 continues a multidecade mission to provide continuous land imaging to support natural resource management and other important uses. The budget includes $80.1 million for the National Geospatial Program for high-resolution topographic and hydrographic data needed to manage energy resources, plan transportation and energy infrastructure projects, and improve flood prediction, emergency response, and hazard mitigation. The request continues the collection of high-resolution elevation and hydrography data, including modernization of maps for Alaska and achieving national high-resolution elevation data coverage by 2025. The budget includes $21.8 million for geologic mapping, in partnership with States, which is needed to support infrastructure development, resource management, and hazard mitigation; and $24.3 million to support other scientific activities, including land cover monitoring and assessments, high-performance computing, libraries, and analytics.

Science Support—The 2021 budget request includes $94.2 million for Science Support activities. This



Green reflects areas where high-resolution elevation data were developed through FY 2019.

funding supports the USGS executive, managerial, and accounting activities; information management and technology; and support services. Funding includes $69.6 million for administration and management and $24.6 million for information services. Within information services, the budget includes $2.5 million for modern video teleconferencing to improve the ability of USGS to collaborate across science centers and to work with partners.

Facilities—The 2021 budget includes $127.6 million to support rent requirements; continue relocating activities at the Menlo Park, CA, campus to Moffett Field, CA; and relocate certain laboratories and personnel in Lakewood, CO, to the Colorado School of Mines campus. These relocations facilitate collaboration with partners, provide access to modern research facilities, and, in the case of Moffett Field, avoid future rent increases.

Management Reforms—The 2021 budget helps to advance several significant management reforms. The budget supports the Administration's priority workforce goal to incentivize employee performance to better recognize high-performing employee contributions to mission achievement across the bureau. In 2021, the Department proposes to consolidate all agency ethics staffing and funding within the Departmental Ethics Office in the Office of the Solicitor. The 2021 budget therefore assumes a transfer of $1.1 million and 7 FTEs associated with current bureau ethics activities. The budget also supports operations and maintenance of an enterprisewide grants management and tracking system, GrantSolutions.

Fixed Costs—Fixed costs of $14.3 million are fully funded.

SUMMARY OF BUREAU APPROPRIATIONS

(all dollar amounts in thousands)

Comparison of 2021 Request with 2020 Enacted

	2020 Enacted		2021 Request		Change	
	FTE	Amount	FTE	Amount	FTE	Amount
Current						
Surveys, Investigations, and Research	4,581	1,270,957	3,754	971,185	-827	-299,772
Subtotal, Current	4,581	1,270,957	3,754	971,185	-827	-299,772
Permanent						
Surveys, Investigations, and Research	0	47	0	47	0	0
Contributed Funds	2	1,097	2	1,097	0	0
Subtotal, Permanent	2	1,144	2	1,144	0	0
Allocation and Reimbursable						
Allocation	20	0	20	0	0	0
Reimbursable	3,003	0	3,003	0	0	0
Subtotal, Reimbursable, Allocation, and Other	3,023	0	3,023	0	0	0
Total, U.S. Geological Survey	**7,606**	**1,272,101**	**6,779**	**972,329**	**-827**	**-299,772**

HIGHLIGHTS OF BUDGET CHANGES

By Appropriation Activity/Subactivity

APPROPRIATION: Surveys, Investigations, and Research

	2019 Actual	2020 Enacted	2021 Request	Change
Ecosystems *(new structure)*				
Species Management Research	[74,409]	[77,209]	39,993	+39,993
Land Management Research	[60,473]	[56,681]	37,937	+37,937
Biological Threats Research	[31,449]	[36,149]	28,541	+28,541
Climate Adaptation Science Center	[44,488]	[57,488]	20,866	+20,866
Subtotal, Ecosystems	[210,819]	[227,527]	127,337	+127,337
Ecosystems *(old structure)*				
Status and Trends	18,373	16,706	0	-16,706
Fisheries Program	19,136	22,136	0	-22,136
Wildlife Program	45,257	45,957	0	-45,957
Environments Program	36,415	38,415	0	-38,415
Invasive Species Program	19,330	23,330	0	-23,330
Cooperative Research Units	18,371	24,000	0	-24,000
Subtotal, Ecosystems	156,882	170,544	0	-170,544
Land Resources *(old structure)*				
National Land Imaging Program	98,894	98,894	0	-98,894
Land Change Science	34,070	29,045	0	-29,045
National and Regional Climate Adaptation Science Centers	25,335	38,335	0	-38,335
Subtotal, Land Resources	158,299	166,274	0	-166,274
Mineral and Energy Resources *(new structure)*				
Mineral Resources	[58,969]	[59,869]	60,664	+60,664
Energy Resources	[29,972]	[30,172]	30,517	+30,517
Subtotal, Mineral and Energy Resources	[88,941]	[90,041]	91,181	+91,181
Energy and Mineral Resources and Environmental Health *(old structure)*				
Mineral and Energy Resources				
Mineral Resources	58,969	59,869	0	-59,869
Energy Resources	29,972	30,172	0	-30,172
Environmental Health				
Contaminant Biology	10,197	10,397	0	-10,397
Toxic Substances Hydrology	12,598	13,098	0	-13,098
Subtotal, Energy and Mineral Resources and Environmental Health	111,736	113,536	0	-113,536
Natural Hazards				
Earthquake Hazards	83,403	84,903	60,310	-24,593
Volcano Hazards	30,266	30,266	27,611	-2,655
Landslide Hazards	3,538	4,038	3,607	-431
Global Seismographic Network	6,653	7,153	5,397	-1,756
Geomagnetism	1,888	4,000	4,139	+139
Coastal/Marine Hazards and Resources	40,510	40,510	36,935	-3,575
Subtotal, Natural Hazards	166,258	170,870	137,999	-32,871

APPROPRIATION: Surveys, Investigations, and Research *(continued)*

	2019 Actual	2020 Enacted	2021 Request	Change
Water Resources *(new structure)*				
Water Resources Availability Program	[98,763]	[102,792]	71,857	+71,857
Water Observing Systems Program	[121,045]	[121,328]	108,952	+108,952
Subtotal, Water Resources	[219,808]	[224,120]	180,809	+180,809
Water Resources *(old structure)*				
Water Availability and Use Science Program	45,487	47,487	0	-47,487
Groundwater and Streamflow Information Program	82,673	84,173	0	-84,173
National Water Quality Program	91,648	92,460	0	-92,460
Water Resources Research Act Program	6,500	10,000	0	-10,000
Subtotal, Water Resources	226,308	234,120	0	-234,120
Core Science Systems *(new structure)*				
National Land Imaging Program	[106,865]	[106,865]	85,913	+85,913
Science Synthesis, Analysis, and Research Program	[25,972]	[25,972]	24,264	+24,264
National Cooperative Geologic Mapping Program	[24,397]	[34,397]	21,757	+21,757
National Geospatial Program	[69,454]	[79,454]	80,115	+80,115
Subtotal, Core Science Systems	[226,688]	[246,688]	212,049	+212,049
Core Science Systems *(old structure)*				
Science Synthesis, Analysis, and Research Program	24,051	24,051	0	-24,051
National Cooperative Geologic Mapping Program	24,397	34,397	0	-34,397
National Geospatial Program	69,454	79,454	0	-79,454
Subtotal, Core Science Systems	117,902	137,902	0	-137,902
Science Support				
Information Services	21,947	21,947	24,617	+2,670
Administration and Management	80,881	74,881	69,556	-5,325
Subtotal, Science Support	102,828	96,828	94,173	-2,655
Facilities				
Rental Payments and Operations Maintenance	105,219	104,719	116,062	+11,343
Deferred Maintenance and Capital Improvements	15,164	76,164	11,575	-64,589
Subtotal, Facilities	120,383	180,883	127,637	-53,246
Supplemental	98,500	0	0	0
TOTAL APPROPRIATION	1,259,096	1,270,957	971,185	-299,772

APPROPRIATION: Surveys, Investigations, and Research *(continued)*

Detail of Budget Changes

	2021 Change from 2020 Enacted
TOTAL APPROPRIATION	-299,772
Surveys, Investigations, and Research	-299,772
Ecosystems *(new structure)*	+127,337
Species Management Research	+39,993
Transfers	
from Ecosystems *(old structure)*, Status and Trends	+11,090
from Ecosystems *(old structure)*, Fisheries	+13,250
from Ecosystems *(old structure)*, Wildlife	+24,208
from Ecosystems *(old structure)*, Environments	+5,166
from Environmental Health *(old structure)*	+23,495
Arctic	-3,600
Environmental Health Programs	-23,295
Great Lakes	
Assessment Tools and Technology	-3,000
Deepwater Monitoring	-2,200
Harmful Algal Blooms	+500
Integrated Sensor Grants	-250
Museum Collections	-500
Species-Specific Projects	-5,886
Fixed Costs	+1,015
Land Management Research	+37,937
Transfers	
from Ecosystems *(old structure)*, Status and Trends	+5,616
from Ecosystems *(old structure)*, Fisheries	+5,540
from Ecosystems *(old structure)*, Wildlife	+12,276
from Ecosystems *(old structure)*, Environments	+33,249
California Bay-Delta	-1,679
Chesapeake Bay	-5,700
Colorado Plateau	-406
Contaminants	-1,316
Everglades	-5,850
Habitat Projects	-1,329
Land and Water Management Projects	-1,695
Platte River	-199
Wyoming Landscape Conservation Initiative	-1,297
Fixed Costs	+727
Biological Threats Research	+28,541
Transfers	
from Ecosystems *(old structure)*, Fisheries	+3,346
from Ecosystems *(old structure)*, Wildlife	+9,473
from Ecosystems *(old structure)*, Invasive Species	+23,330
Asian Carp	-5,000
Chronic Wasting Disease	-1,000
Coral Disease	-400
Greater Everglades Invasive Species	-821
White Nose Syndrome	-904
Fixed Costs	+517
Climate Adaptation Science Center	+20,866
Transfers	
from Land Resources *(old structure)*, Land Change Science Program	+19,153
from Land Resources *(old structure)*, National & Regional Climate Adaptation Science Centers	+38,335
Arctic	-528
Climate Research and Development	-6,125
Landscape Science	-2,213
Midwest Climate Science Center	-4,000
Realign Climate Adaptation Science Centers	-23,806
Tribal Climate Adaptation Science	-500
Fixed Costs	+550
Ecosystems *(old structure)*	-170,544
Status and Trends	-16,706
Transfers	
to Ecosystems *(new structure)*, Land Management Research	-5,616
to Ecosystems *(new structure)*, Species Management Research	-11,090
Fisheries	-22,136
Transfers	
to Ecosystems *(new structure)*, Biological Threats Research	-3,346
to Ecosystems *(new structure)*, Land Management Research	-5,540
to Ecosystems *(new structure)*, Species Management Research	-13,250
Wildlife	-45,957
Transfers	
to Ecosystems *(new structure)*, Biological Threats Research	-9,473
to Ecosystems *(new structure)*, Land Management Research	-12,276

Detail of Budget Changes

	2021 Change from 2020 Enacted
to Ecosystems *(new structure)*, Species Management Research ...	-24,208
Environments	-38,415
Transfers	
to Ecosystems *(new structure)*, Land Management Research	-33,249
to Ecosystems *(new structure)*, Species Management Research ...	-5,166
Invasive Species	-23,330
Transfer to Ecosystems *(new structure)*, Biological Threats Research	-23,330
Cooperative Research Units	-24,000
Land Resources *(old structure)*	-166,274
National Land Imaging	-98,894
Transfer to Core Science Systems *(new structure)*, National Land Imaging	-98,894
Land Change Science	-29,045
Transfers	
to Core Science Systems *(new structure)*, National Land Imaging	-7,971
to Core Science Systems *(new structure)*, Science Synthesis, Analysis, and Research	-1,921
to Ecosystems *(new structure)*, Climate Adaptation Science Center	-19,153
National and Regional Climate Adaptation Science Centers	-38,335
Transfer to Ecosystems *(new structure)*, Climate Adaptation Science Center	-38,335
Mineral and Energy Resources *(new structure)*	+91,181
Mineral Resources	+60,664
Transfer from Energy and Mineral Resources and Environmental Health *(old structure)*, Mineral Resources	+59,869
Fixed Costs	+795
Energy Resources	+30,517
Transfer from Energy and Mineral Resources and Environmental Health *(old structure)*, Energy Resources	+30,172
Fixed Costs	+345
Energy and Mineral Resources and Environmental Health *(old structure)*	-113,536
Mineral Resources	-59,869
Transfer to Mineral and Energy Resources *(new structure)*, Mineral Resources	-59,869
Energy Resources	-30,172
Transfer to Mineral and Energy Resources *(new structure)*, Energy Resources	-30,172
Environmental Health	-23,495
Transfer to Ecosystems *(new structure)*, Species Management Research	-23,495
Natural Hazards	-32,871
Earthquake Hazards	-24,593
Advanced National Seismic System Deferred Maintenance	-2,000
Staffing	-1,200
Earthscope Stations	-3,000
Seismic Networks	-1,800
ShakeAlert	-17,229
Fixed Costs	+636
Volcano Hazards	-2,655
Cooperative Agreement Awards	-476
Next Generation Lahar Detection System	-2,145
Volcanic Ash Models	-463
Fixed Costs	+429
Landslide Hazards	-431
Hazards Assessment	-484
Fixed Costs	+53
Global Seismographic Network	-1,756
Station Upgrades	-1,792
Fixed Costs	+36
Geomagnetism	+139
Observatory Operations	+114
Fixed Costs	+25
Coastal/Marine Hazards and Resources	-3,575
Characterizing Marine Hazards and Resources	-1,967
Data Delivery	-490
Ecosystem Health and Sustainability Assessment	-1,657
Fixed Costs	+539
Water Resources *(new structure)*	+180,809
Water Resources Availability Program *(new structure)*	+71,857
Transfers	

Detail of Budget Changes

	2021 Change from 2020 Enacted
from Water Resources *(old structure)*, Groundwater and Streamflow Information	+1,500
from Water Resources *(old structure)*, National Water Quality Program	+53,805
from Water Resources *(old structure)*, Water Availability and Use Science	+47,487
Aquifer Assessments	
Mississippi Alluvial Plain	-6,000
U.S.-Mexico Transboundary	-1,000
Cooperative Matching Funds	
Base Awards	-606
Water Use Research	-1,000
Harmful Algal Blooms	-1,348
National Park Service Water-Quality Partnership	-1,743
Regional Groundwater Evaluations	-303
Regional Water Quality Assessments	-4,100
Shallow and Fractured Bedrock Groundwater Research	-300
Transboundary Rivers Water Quality Assessment	-1,500
Water Quality Trends	-458
Water Science Research and Development	-12,368
Water Use Data and Research	-1,500
Fixed Costs	+1,291
Water Observing Systems Program	+108,952
Transfers	
from Water Resources *(old structure)*, Groundwater and Streamflow Information	+82,673
from Water Resources *(old structure)*, National Water Quality Program	+38,655
Cooperative Matching Funds	-2,365
Groundwater Quality Monitoring Networks	-930
High Plains Aquifer Assessment	-80
National Atmospheric Deposition Program	-1,576
National Groundwater Monitoring Network	-2,395
Next Generation Water Observing System	-2,960
U.S.-Canada Transboundary Streamgages	-1,500
Water Science Research and Development	-2,102
Fixed Costs	+1,532
Water Resources *(old structure)*	-234,120
Water Availability and Use Science	-47,487
Transfer to Water Resources *(new structure)*, Water Resources Availability Program	-47,487
Groundwater and Streamflow Information	-84,173
Transfers	
to Water Resources *(new structure)*, Water Observing Systems Program	-82,673
to Water Resources *(new structure)*, Water Resources Availability Program	-1,500
National Water Quality Program	-92,460
Transfers	
to Water Resources *(new structure)*, Water Observing Systems Program	-38,655
to Water Resources *(new structure)*, Water Resources Availability Program	-53,805
Water Resources Research Act Program	-10,000
Core Science Systems *(new structure)*	+212,049
National Land Imaging	+85,913
Transfers	
from Land Resources *(old structure)*, Land Change Science	+7,971
from Land Resources *(old structure)*, National Land Imaging	+98,894
Land Cover Monitoring Assessment Projects	-1,629
Remote Sensing State Grants	-1,215
Research and Investigations	-7,556
Satellite Operations	-10,905
Fixed Costs	+353
Science Synthesis, Analysis, and Research	+24,264
Transfers	
from Core Science Systems *(old structure)*, Science Synthesis, Analysis, and Research	+24,051
from Land Resources *(old structure)*, Land Change Science	+1,921
USGS Library	-1,930
Fixed Costs	+222

APPROPRIATION: Surveys, Investigations, and Research *(continued)*

Detail of Budget Changes

	2021 Change from 2020 Enacted
National Cooperative Geologic Mapping	+21,757
Transfer from Core Science Systems *(old structure)*, National Cooperative Geologic Mapping	+34,397
Projects	-2,928
Phase 3 of National Geologic Map Database	-10,000
Fixed Costs	+288
National Geospatial Program	+80,115
Transfer from Core Science Systems *(old structure)*, National Geospatial Program	+79,454
Fixed Costs	+661
Core Science Systems *(old structure)*	-137,902
Science Synthesis, Analysis, and Research	-24,051
Transfer to Core Science Systems *(new structure)*, Science Synthesis, Analysis, and Research	-24,051
National Cooperative Geologic Mapping Program	-34,397
Transfer to Core Science Systems *(old structure)*, National Cooperative Geologic Mapping	-34,397
National Geospatial Program	-79,454
Transfer to Core Science Systems *(new structure)*, National Geospatial Program	-79,454
Science Support	-2,655
Information Services	+2,670
Virtual Telecommunications Modernization	+2,500
Fixed Costs	+170
Administration and Management	-5,325
Program Operations	-5,572
Transfer Ethics Program to Solicitor	-1,094
Fixed Costs	+1,341
Facilities	-53,246
Rental Payments and Operations and Maintenance	+11,343
Rent Costs	+8,602
Fixed Costs	+2,741
Deferred Maintenance and Capital Improvements	-64,589
Facilities Modernization and Recapitalization	-64,500
Projects	-3,689
Space Consolidation and Modernization at the Colorado School of Mines	+3,600
Subtotals for Changes Across Multiple Subactivities	
Fixed Costs	[+14,266]