



# U.S. Geological Survey

## Mission

The U.S. Geological Survey (USGS) monitors, analyzes, and predicts current and evolving Earth-system interactions and delivers actionable science at scales and timeframes relevant to decision makers. USGS provides science about natural hazards, energy and mineral resources, ecosystems and environmental health, and water resources.

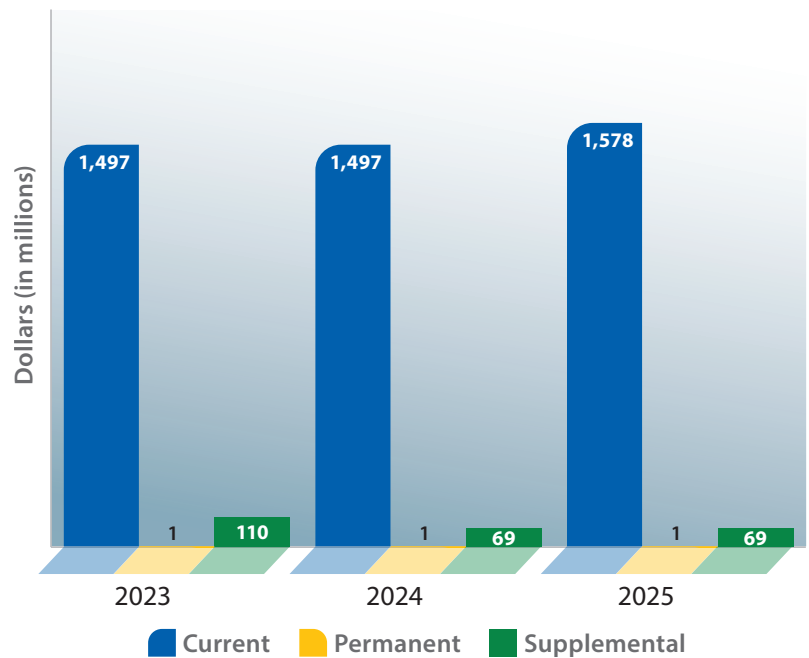
## Budget Overview

The 2025 USGS budget is \$1.6 billion, an increase of \$81.1 million above the 2024 continuing resolution (CR) level; USGS estimates staffing is 8,000 full-time equivalents. The budget prioritizes science focusing on protection of health and human safety and climate change research to inform balanced decisions regarding resources and ensure the economic growth and well-being of the Nation.

## Ecosystems Programs

Ecosystems programs total \$326.1 million in the 2025 budget, \$18.9 million above the 2024 CR level. These programs provide the science to help ensure the Nation's ecosystems are managed sustainably and biological resources in wild and urban spaces are conserved now and into the future. Scientists examine the consequences of climate and environmental change; effects of management actions on communities, lands, and species; and risks of and solutions to harmful invasive species, wildlife diseases, and contaminants in the environment.

## USGS Funding



The Environmental Health Program is funded at \$32.0 million, \$1.5 million more than the 2024 CR amount. The budget includes \$13.3 million for Contaminant Biology and \$18.8 million for Toxic Substances Hydrology. Species Management Research is funded at \$66.9 million, \$2.9 million over the 2024 CR level. Land Management Research is funded at \$60.6 million, \$5.7 million over the 2024 CR amount, with an increase to support wildlife migration corridor mapping for big game populations, and an increase to accelerate the development of tools for drought assessment and response decisions. Included in this increase is \$3.5 million for migration corridor mapping work to fund a full inventory of existing migrations (i.e., elk, mule deer, pronghorn, moose, and bison) and science-delivery architecture to make migration maps viewable, publicly available, and actionable for conservation. The Biological Threats and Invasive Species Research Program is funded at \$45.5 million, \$1.2 million below the 2024 CR amount. USGS will continue addressing invasive carp, including activities to prevent the entry of bighead, black, and silver carp to the Great Lakes. Cooperative Research Units

- USGS was founded by an Act of Congress in 1879.
- USGS is a primary Federal source of science-based information available to the public, providing data and analysis on ecosystems, energy and mineral resources, natural hazards, water use availability and quality, and updated mapping and images of the Earth’s land surface and subsurface.
- Since its establishment, USGS has published more than 165,000 scientific documents.
- USGS protects human health and safety by operating more than 3,900 earthquake sensors and by monitoring approximately 70 volcanoes in the United States and more than 11,800 streamgages for advanced flood warnings.
- Since 2018, USGS has cooperated with 11 Western States, Tribes, and other Federal agencies to produce maps and movement details for 152 herds, including mule deer, elk, and pronghorn.
- The Landsat series of Earth observation satellites, operated by USGS in cooperation with the National Aeronautics and Space Administration, have continuously acquired images of the Earth’s land surface for more than 50 years, providing uninterrupted data to help land managers and policymakers make informed decisions about natural resources and the environment.

are funded at \$29.8 million, \$1.6 million above the 2024 CR amount. The Ecosystem Change Research Program is funded at \$22.2 million, \$2.1 million above the 2024 CR level. The National and Regional Climate Adaptation Science Centers are funded at \$69.3 million, \$6.2 million above the 2024 CR level. The request supports both actionable science to help natural resource managers address regional priorities and interdisciplinary research to better understand the patterns, processes, and impacts of changes in climate, environment, and land use.

*Energy and Mineral Resources Programs*

For Energy and Mineral Resources programs, the 2025 budget includes \$120.3 million, an increase of \$16.1 million over the 2024 CR level. USGS conducts research and assessments on the location, quantity, and quality of mineral and energy resources, including the economic and environmental effects of extracting and using those resources. The Nation depends on energy resources to power homes and businesses and mineral resources to manufacture products, such as cell phones, laptops, cars, and components of renewable energy technologies. The Energy Resources Program is funded at

\$39.5 million, \$6.1 million above the 2024 CR, with an increase to support assessments of geothermal energy. The request also includes increases to better understand the Nation’s subsurface storage capacity and work with coal mine operators on the impacts of coal mine operations on methane emissions. The Mineral Resources Program is funded at \$80.8 million, an increase of \$10.0 million more than the 2024 CR, with an increase to



The Hawaiian Volcano Observatory is using continuous data from new instrumentation and infrastructure to effectively respond to the 2020 Kilauea eruption. *USGS Photo.*

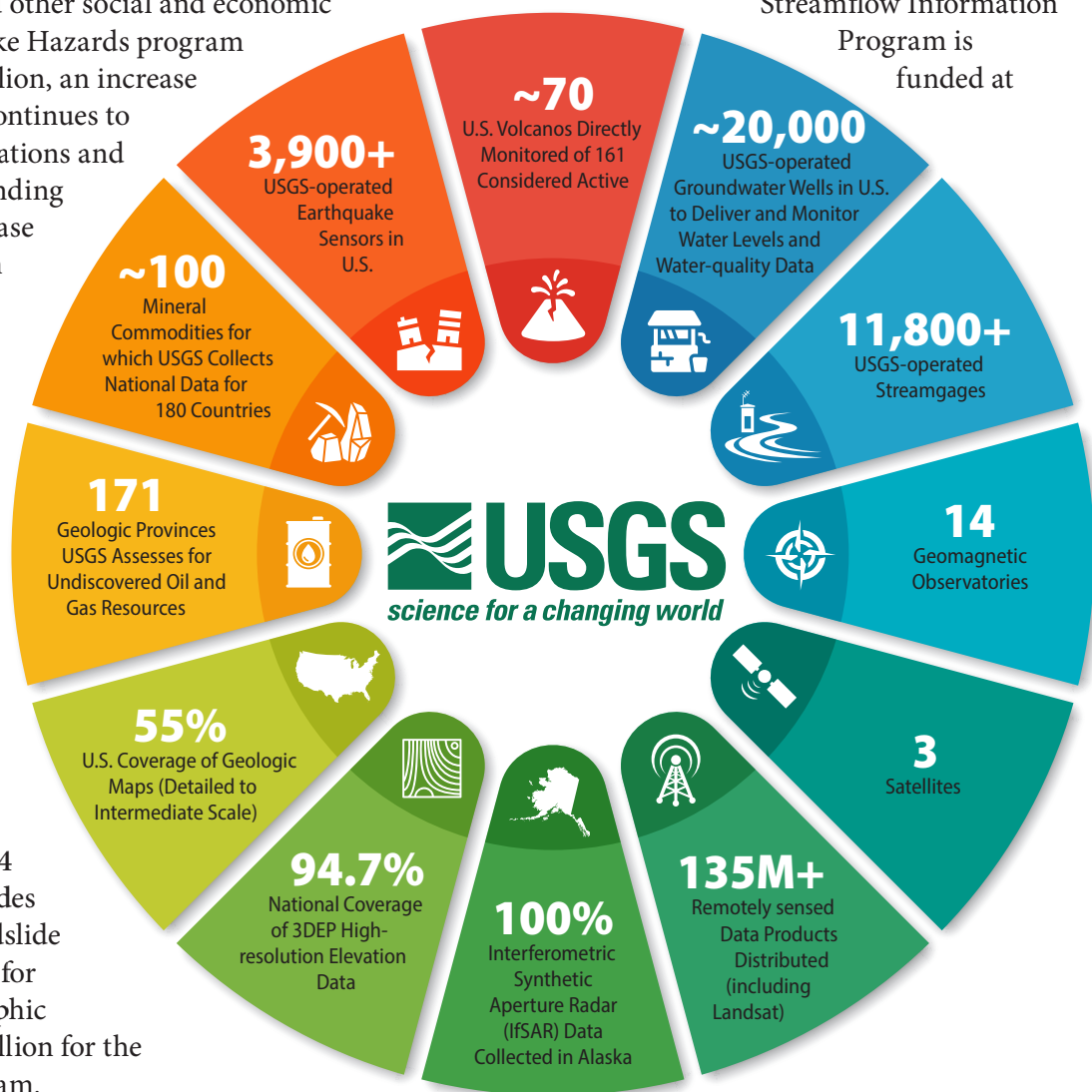
support supply chain research related to critical minerals. Mine waste research and assessments that support reclamation and potential mineral recovery and research and assessments of potential new sources of critical minerals will continue. This work builds on the Bipartisan Infrastructure Law (BIL) investment in the Earth Mapping Resources Initiative’s foundational geoscience data collection, interpretation, and delivery.

### Natural Hazards Programs

Totalling \$210.6 million, the 2025 budget request for Natural Hazards programs is \$10.4 million above the 2024 CR level. These programs provide information and tools to prepare for and respond to hazards such as volcanoes, earthquakes, coastal storms, solar flares, and landslides to enable greater resilience and reduce potential fatalities, injuries, property damage, and other social and economic effects. The Earthquake Hazards program is funded at \$94.9 million, an increase of \$2.2 million, and continues to fund ShakeAlert operations and maintenance. This funding also includes an increase to support subduction zone science to better understand catastrophic earthquakes. The budget for the Coastal and Marine Hazards and Resources program is \$49.2 million, an increase of \$6.0 million. The Volcano Hazards program is funded at \$39.7 million, \$2.2 million above the 2024 CR. The request includes \$14.0 million for Landslide Hazards, \$7.4 million for the Global Seismographic Network, and \$5.4 million for the Geomagnetism program.

### Water Resources Programs

The 2025 budget includes \$309.6 million for Water Resources, an increase of \$5.1 million over the 2024 CR. These programs work with partners to monitor, assess, conduct targeted research on, and deliver information on a wide range of water resources conditions and issues, including streamflow, groundwater, water quality, and water availability and use. Across the Water Resources mission area, the budget supports delivering Integrated Water Availability Assessments, advancing USGS water observing systems, and building integrated water prediction capabilities. The Water Availability and Use Science Program is funded at \$82.0 million, \$7.7 million above the 2024 CR level, with increases for integrated science to understand drought and deliver national and regional water availability assessments. The Groundwater and Streamflow Information Program is funded at





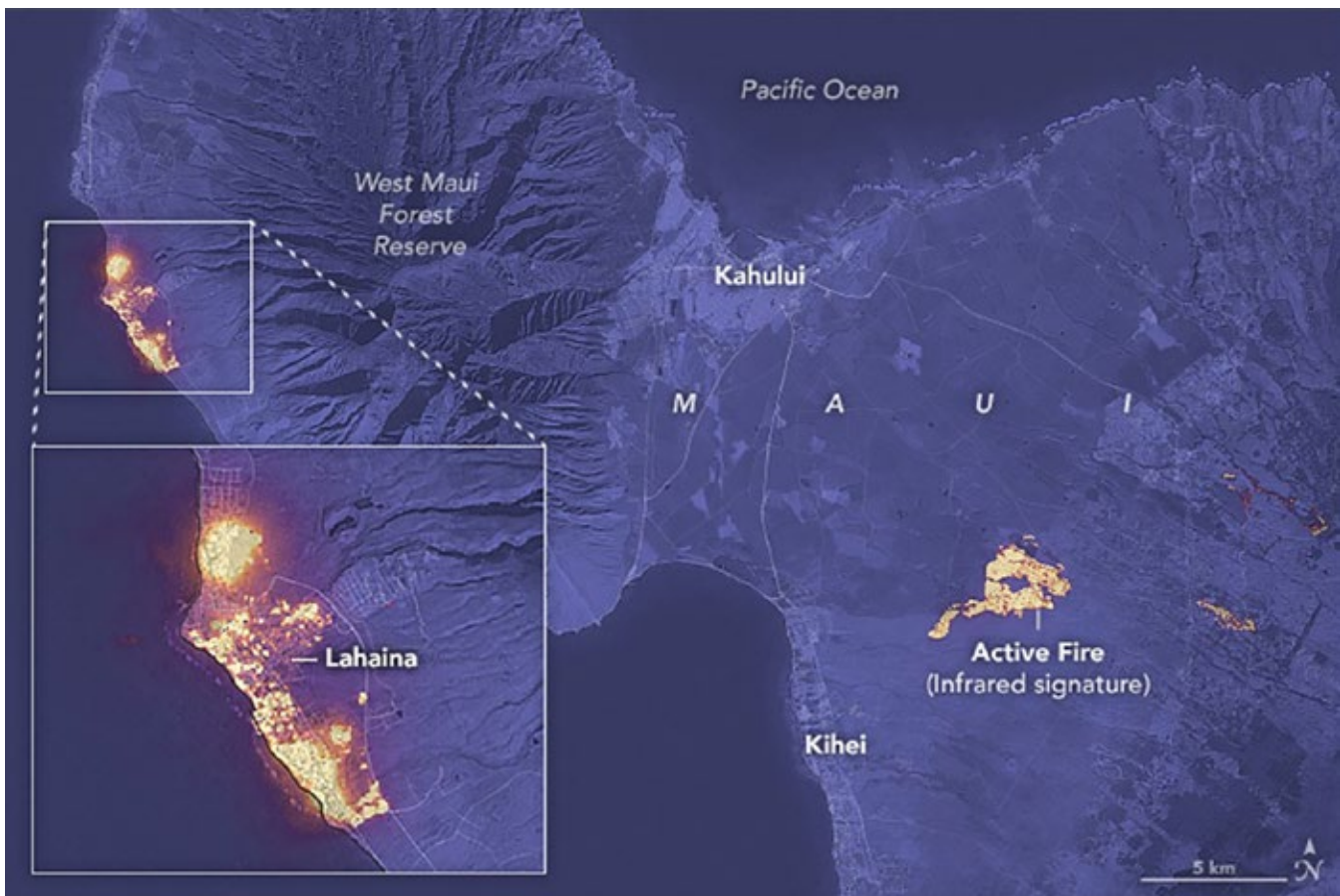
\$121.4 million, \$6.8 million over the 2024 CR, including an increase to expand the Federal Priority Streamgauge Network. The National Water Quality Program is funded at \$106.2 million, \$6.1 million above the 2024 CR. This additional funding will be used to improve the capacity to forecast impacts of climate change and land use on water availability and ecosystem health through increased water-quality sampling and monitoring.

### Core Science Systems Programs

With an increase of \$28.4 million above the 2024 CR, the budget request for Core Science Systems totals \$313.0 million. These programs provide the Nation with access to science, information, data, imagery, and geospatial frameworks to improve natural resource management, support infrastructure planning, and prepare for and respond to natural hazards. The Science Synthesis,

Analysis, and Research Program is funded at \$36.7 million, \$6.2 million above the 2024 CR level, and includes a \$2.0 million investment in high-performance computing/supercomputing systems and data storage to provide timely and accurate Earth systems forecasting for drought, weather, land management, wildland fires, landslides, and volcanoes. The request also includes \$2.5 million to lead the development of the American Conservation and Stewardship Atlas, which will be used by the Department and the Nation to support land and water conservation, stewardship, and restoration.

National Land Imaging is funded at \$143.8 million, \$27.9 million more than the 2024 CR amount, and includes \$110.5 million in Satellite Operations, which supports Landsat 7, 8, and 9 ground and flight operations and funds both the development of Landsat Next and a pilot program that will augment



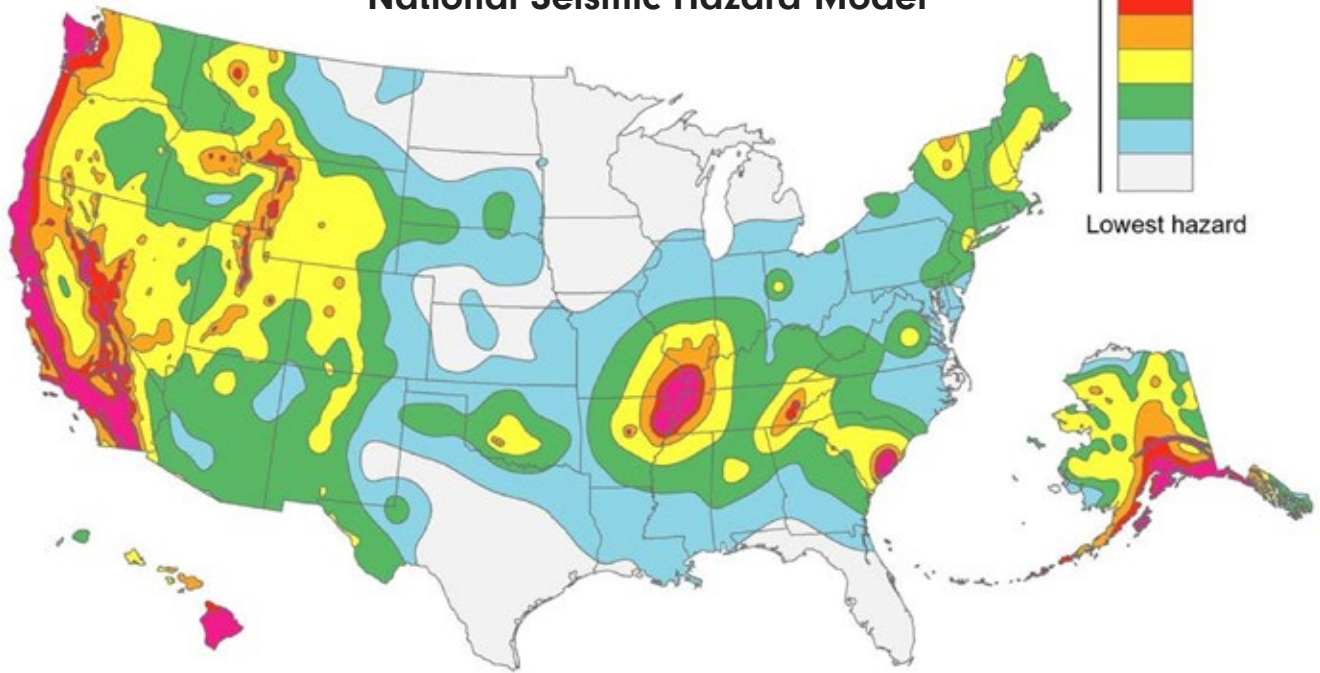
### Devastation in Maui

On August 8, 2023 a fast-moving wildfire devastated the historic town of Lahaina on Maui, Hawaii's second-largest island. The image above shows the signature of the fire at 10:25 p.m. local time on August 8, 2023, as observed by the **Operational Land Imager (OLI) on the Landsat 8 satellite**. Much of Lahaina, a town with a resident population of nearly 13,000 people, appeared to be on fire at the time of the image. Another large fire burned northeast of Kihei. The image was composed from OLI observations of shortwave infrared light (band 6). Infrared observations are useful for distinguishing the locations of active fires, shown here in yellow. The shortwave infrared data were overlaid on a natural-color mosaic image based on Landsat 8 observations for added geographic detail.

USGS Photo.



## National Seismic Hazard Model



Seismic hazard maps integrate information about earthquake sources, crustal deformation, active faulting, and ground shaking. This information is translated into a form that can be used to reduce the risk from earthquakes and to improve public safety and are improved and updated on a periodic basis by incorporating new information. The USGS maps are the basis for seismic provisions in building codes and for risk models used by insurance companies. *USGS Map.*

Landsat data with commercially available satellite data. As proposed, Landsat Next’s capabilities would substantially improve Landsat data, making them more useful for science and operational applications across the Federal government and for the next generation of Landsat users. Research and Investigations in the 2025 budget is funded at \$33.3 million, \$9.6 million above the 2024 CR, and includes increases for enhancing landscape measurements, data, and analysis; national land use data products; and natural capital accounting. At \$86.2 million, \$7.4 million below the 2024 CR, the budget for the National Geospatial Program includes a \$1.0 million increase to integrate USGS elevation and hydrography data into 3D models for infrastructure and hazard modeling applications. The National Cooperative Geologic Mapping Program is funded at \$46.3 million, \$1.8 million above the 2024 CR, continuing geologic mapping in partnership with State Geological Surveys.

### *Science Support Programs*

For Science Support programs, the 2025 budget includes \$118.2 million, \$11.9 million above the 2024 CR amount. These programs provide the necessary business services and IT management to operate USGS science programs. The budget includes \$93.0 million in Administration and Management, \$10.8 million over the 2024 CR level, and strengthens scientific integrity efforts across the Department. To transition the USGS fleet of vehicles to cleaner, electric vehicles, the budget includes an increase of \$964,000. Information Services is funded at \$25.2 million, an increase of \$1.1 million over the 2024 CR level, including funding to support, deliver, and protect USGS science with improved security products and services, high-performance computing and cloud access, and other IT for the data-intensive needs of a modern science organization.



## Bipartisan Infrastructure Law Funding: Earth Mapping Resources Initiative—Earth MRI

Earth MRI is a partnership between USGS and State Geological Surveys to develop new geologic maps and perform geochemical sampling and geophysical, topographic, and hyperspectral surveys. The BIL provided funding that has accelerated this work in areas with potential for critical-mineral resources, both still in the ground and in material left over after mining. Some critical-mineral commodities, such as rare earth elements, are known to occur alongside more commonly mined minerals. Because of this realization, mine-waste sites are now being revisited to see if the waste has potential for critical-mineral commodities that were not a primary product of the original mining. Understanding what is in these waste materials also helps identify potential hazards of reprocessing mine wastes and opportunities for remediation. Overall, the BIL provides a \$320 million investment to USGS for the Earth MRI program.

In 2023, Earth MRI put a strong focus on Tribal engagement efforts, seeking to address Tribal communities' geoscience data needs in areas where Earth MRI can support Tribal land management decisions regarding natural resources (e.g., minerals, geothermal energy, groundwater), infrastructure, and geologic hazards issues.

In 2023, the Mineral Resources Program's Earth MRI flew high-resolution airborne geophysical surveys in 26 States; conducted geologic mapping in 16 States and geochemical reconnaissance surveys in 12 States; flew lidar surveys in 4 States; and flew hyperspectral surveys in 3 States. Altogether, Earth MRI has flown geophysical surveys for an area the size of Montana and Texas combined.

### National Geological and Geophysical Data Preservation Program

USGS provides competitive grants to State Geological Surveys and funds projects executed by USGS and other Department of the Interior bureaus to preserve, modernize, and make publicly available geological and geophysical data and assets. The BIL provides funding to leverage the existing National Geological and Geophysical Data Preservation Program (NGGDPP) to provide competitive grants to States quickly and efficiently.

In 2023, NGGDPP funded State Geological Surveys and about 25 DOI bureau projects for data preservation activities that will make historical data and physical samples publicly available.

### Facilities

The 2025 budget provides \$180.4 million for Facilities, \$7.7 million below the 2024 CR amount. Funding includes \$105.7 million for Rental Payments and Operations and Maintenance, \$7.5 million below the 2024 CR level, and \$74.7 million for the Facilities Maintenance, Modernization, and Restoration Program, \$151,000 below the 2024 CR level.

### Fixed Costs

Fixed costs of \$8.8 million are fully funded. The request also includes \$46.4 million for baseline capacity, which reflects the incremental amount needed to cover the fixed costs associated with mission operations in 2024. This request in combination with the 2025 fixed costs will allow USGS to meet must-pay requirements without affecting program activities.



A USGS Cascades Volcano Observatory field team finishes the installation of the combined seismic/GPS station at Mount Hood, OR.

USGS Photo.

## SUMMARY OF BUREAU APPROPRIATIONS <sup>1/</sup>

(dollar amounts in thousands)

### Comparison of 2025 Request with 2024 CR

	2024 CR		2025 Request		Change	
	FTE	Amount	FTE	Amount	FTE	Amount
<b>Current</b>						
Surveys, Investigations, and Research .....	4,640	1,565,833	4,709	1,646,953	+69	+81,120
Subtotal, Current .....	4,640	1,565,833	4,709	1,646,953	+69	+81,120
<b>Permanent</b>						
Surveys, Investigations, and Research .....	0	67	0	68	0	+1
Contributed Funds .....	4	508	4	507	0	-1
Subtotal, Permanent .....	4	575	4	575	0	0
<b>Allocation and Reimbursable</b>						
Allocation .....	52	0	52	0	0	0
Reimbursable .....	3,235	0	3,235	0	0	0
Subtotal, Allocation and Reimbursable .....	3,287	0	3,287	0	0	0
<b>TOTAL, U.S. GEOLOGICAL SURVEY .....</b>	<b>7,931</b>	<b>1,566,408</b>	<b>8,000</b>	<b>1,647,528</b>	<b>+69</b>	<b>+81,120</b>

<sup>1/</sup> Current funding amounts include supplemental appropriations and transfers. For further details, see Highlights of Budget Changes tables for each account.

## HIGHLIGHTS OF BUDGET CHANGES

By Appropriation Activity/Subactivity

### APPROPRIATION: Surveys, Investigations, and Research

	2023 Actual	2024 CR	2025 Request	Change
<b>Ecosystems</b>				
<b>Environmental Health</b>				
Contaminant Biology .....	12,528	12,528	13,252	+724
Toxic Substances Hydrology .....	17,929	17,929	18,752	+823
Species Management Research .....	63,904	63,904	66,850	+2,946
Land Management Research .....	54,806	54,806	60,551	+5,745
<b>Biological Threats and</b>				
Invasive Species Research .....	46,622	46,622	45,466	-1,156
Cooperative Research Units .....	28,206	28,206	29,773	+1,567
<b>Climate Adaptation Science Center and Land Change Science</b>				
Climate Adaptation Science Center .....	63,115	63,115	0	-63,115
Land Change Science .....	20,066	20,066	0	-20,066
Ecosystems Change Research Program .....	0	0	22,181	+22,181
<b>National and Regional Climate Adaptation Science Centers</b> .....	0	0	69,300	+69,300
Subtotal, Ecosystems .....	307,176	307,176	326,125	+18,949

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

	2023 Actual	2024 CR	2025 Request	Change
<b>Energy and Mineral Resources</b>				
Mineral and Energy Resources				
Mineral Resources.....	70,855	70,855	0	-70,855
Energy Resources.....	33,365	33,365	0	-33,365
Subtotal, Energy and Mineral Resources.....	104,220	104,220	0	-104,220
<b>Energy and Mineral Resources</b>				
Mineral Resources Program				
National Minerals Information Center.....	0	0	25,123	+25,123
Mineral Resources Research, Surveys and Assessment.....	0	0	55,719	+55,719
Energy Resources Program				
Renewable Energy Resources.....	0	0	4,153	+4,153
Geologic Energy Resources.....	0	0	35,338	+35,338
Subtotal, Energy and Mineral Resources.....	0	0	120,333	+120,333
<b>Natural Hazards</b>				
Earthquake Hazards.....	92,651	92,651	94,866	+2,215
Volcano Hazards.....	37,500	37,500	39,684	+2,184
Landslide Hazards.....	14,432	14,432	14,037	-395
Global Seismographic Network.....	7,273	7,273	7,436	+163
Geomagnetism.....	5,251	5,251	5,444	+193
Coastal/Marine Hazards and Resources.....	43,149	43,149	49,174	+6,025
Subtotal, Natural Hazards.....	200,256	200,256	210,641	+10,385
<b>Water Resources</b>				
Water Availability and Use Science Program.....	74,296	74,296	82,012	+7,716
Groundwater and Streamflow Information Program.....	114,558	114,558	121,390	+6,832
National Water Quality Program.....	100,080	100,080	106,152	+6,072
Water Resources Research Act Program.....	15,500	15,500	0	-15,500
Subtotal, Water Resources.....	304,434	304,434	309,554	+5,120
<b>Core Science Systems</b>				
National Land Imaging Program				
Satellite Operations.....	92,184	92,184	110,507	+18,323
Research and Investigations.....	14,881	14,881	24,437	+9,556
Land Cover Monitoring and Assessments.....	8,856	8,856	8,856	0
Science Synthesis, Analysis, and Research Program.....	30,480	30,480	36,652	+6,172
National Cooperative Geologic Mapping Program.....	44,556	44,556	46,317	+1,761
National Geospatial Program.....	93,650	93,650	86,247	-7,403
Subtotal, Core Science Systems.....	284,607	284,607	313,016	+28,409
<b>Science Support</b>				
Information Services.....	24,125	24,125	25,234	+1,109
Administration and Management.....	82,179	82,179	92,997	+10,818
Subtotal, Science Support.....	106,304	106,304	118,231	+11,927



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

	2023 Actual	2024 CR	2025 Request	Change
<b>Facilities</b>				
Rental Payments and Operations Maintenance .....	113,211	113,211	105,709	-7,502
Facilities Maintenance, Modernization, and Restoration Program .....	74,840	74,840	74,689	-151
Subtotal, Facilities .....	188,051	188,051	180,398	-7,653
Special Initiatives .....	2,130	2,130	0	-2,130
TOTAL APPROPRIATION <i>(w/o supplementals and transfer)</i> .....	1,497,178	1,497,178	1,578,298	+81,120
Bipartisan Infrastructure Law (P.L. 117-58) .....	+69,000	+69,000	+69,000	0
Disaster Relief Act, 2023 (P.L. 117-328) .....	+41,040	0	0	0
Transfer to OIG (P.L. 117-58) .....	-345	-345	-345	0
TOTAL APPROPRIATION <i>(w/ supplementals and transfer)</i> .....	1,606,873	1,565,833	1,646,953	+81,120

