BUDGET JUSTIFICATIONS

The United States Department of the Interior

and Performance Information
Fiscal Year 2027

U.S. GEOLOGICAL SURVEY

NOTICE: These budget justifications are prepared for the Interior, Environment and Related Agencies Appropriations Subcommittees.

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Executive Summary

Introduction

The USGS monitors, analyzes, and predicts current and evolving Earth-system interactions. Through these activities, in Fiscal Year (FY) 2027, the USGS will continue to play an integral role in the Trump Administration's priorities related to the energy emergency, restoring U.S. mineral dominance, and safeguarding life and property across the U.S. The FY 2027 budget maintains key core capabilities within the bureau that will allow the USGS to continue to deliver reliable and actionable scientific information at scales and timeframes relevant to decision making. It will maintain support for domestic energy and mineral industries through extensive research and assessments of various resources and reduce dependency on foreign minerals by providing high-resolution geospatial data. Additionally, USGS activities like the Earth Mapping Resources Initiative (Earth MRI) and Federal Priority Streamgage Network will continue to support the identification of new mineral sources and enhance flood forecasting and response, respectively. The USGS's comprehensive mapping efforts will continue to provide accurate topographic and hydrographic data that is readily available for infrastructure planning and hazard prediction, ultimately bolstering public safety, economic growth, and national security. Furthermore, the FY 2027 budget's focus on expanding high-priority water monitoring and providing geologic hazard assessments equips communities and agencies with the necessary tools to effectively prepare for and respond to natural disasters, fostering resilience and informed decision-making.

Mission Statement

The USGS, the scientific arm of the Department of the Interior (Interior), was established in 1879 (43 U.S.C. 31) for "the classification of the public lands and examination of the geological structure, mineral resources, and products of the national domain." The USGS monitors, analyzes, and predicts current and evolving Earth-system interactions. Through these activities, the USGS delivers reliable and actionable scientific information at scales and timeframes relevant to decision making on critical mineral resources and energy development, minimizing loss of life and property from natural disasters, managing water, and promoting economic growth. The USGS is key to the President's ongoing commitment to scientific discovery and innovation that supports a robust economy and decision making related to critical mineral and energy needs.

Budget Overview

The FY 2027 budget request of $892.7 million and 4,736 FTE supports providing objective data that informs mineral and energy development across the country; delivering natural hazards information that protects public safety and property; supporting water infrastructure; and providing access to foundational science, data, imagery, and geospatial frameworks to improve natural resource management.

USGS FY 2027 Priorities Under President Trump's Administration

Addressing the Energy Emergency

The USGS plays a crucial role in addressing the Trump Administration's priorities for responding to the energy emergency by providing the geoscientific foundation and mapping necessary to enhance the domestic energy and mineral industries. Through comprehensive research and assessments of oil, gas, coal, geothermal, hydrogen, and other emerging resources, USGS supplies objective data that informs

energy development nationwide. These data reduce uncertainties for the energy sector and support permitting processes by Federal land managers, thereby expanding access to energy resources essential for American homes and industries, reducing dependency on foreign energy, and simultaneously fostering future opportunities in the domestic energy sector.

To mitigate the U.S. reliance on foreign mineral imports, particularly in alignment with Executive Orders (EOs) 14154 *Unleashing American Energy* (1/20/2025) and 14241 *Immediate Measures to Increase American Mineral Production* (3/20/2025), the USGS leads initiatives to collect, analyze, and disseminate high-resolution geologic, geophysical, and geochemical data. This effort involves updating national geologic maps, conducting airborne surveys, and developing advanced 3D subsurface modeling. The USGS also gathers and maintains historic data, maps, and irreplaceable samples—such as rock core from remote Alaska—critical for identifying untapped deposits of essential minerals like manganese, graphite, and rare earth elements. Through initiatives like Earth MRI, the USGS collaborates with State geological surveys to identify regions with high potential for critical mineral development, directly supporting the strategic objectives of the mentioned EOs. The FY 2027 budget request includes a targeted increase to support accelerating critical mineral mapping and data collection under Earth MRI.

Moreover, USGS science enhances the efficiency of permitting and exploration processes by improving the quality and accessibility of geologic data. This work supports regulators and developers in conducting environmental reviews and making timely permitting decisions, thereby reducing delays and uncertainties. In FY 2027, the USGS will increase funding to accelerate geological energy resource assessments for leasing and permitting decisions. Additionally, the USGS provides valuable insights for land use, infrastructure development, and resource extraction through updated geological hazard models and resource forecasts, ensuring Federal and State agencies have critical data needed to revitalize American energy and industrial capacity.

The USGS is also leveraging artificial intelligence (AI) to modernize energy and mineral assessments and demonstrating innovative AI techniques for evaluating geothermal resources and critical minerals in brines. In collaboration with the Defense Advanced Research Projects Agency, the USGS is accelerating data analysis for critical mineral resource assessments, significantly reducing processing time from years to weeks. These advancements not only enhance data-driven decision-making but also align with the Administration's priorities to secure and strengthen domestic energy resources amid the Energy Emergency and support the Energy Act of 2020 directive to accelerate critical mineral resource assessments. The FY 2027 budget request includes a targeted increase that will expand a pilot grant program created in FY 2025, funding external grants to academia to help train the skilled minerals workforce of the future. This effort will accelerate the use of advanced technologies that are used to assess and the country’s critical mineral endowment, which will help lead to American mineral dominance.

Restoring U.S. Mineral Dominance

The USGS is central to restoring American mineral dominance by leading the scientific efforts necessary to secure and expand domestic access to critical mineral resources. With many strategic and economic sectors relying heavily on imported minerals, the USGS is working aggressively to map and identify new domestic sources. In FY 2027, leveraging new AI techniques, the USGS is planning additional national mineral resource assessments to better define the location, quality, and accessibility of key critical minerals. These assessments inform accelerated permitting processes by land management agencies and

long-term strategic policy decisions about options for the country's mineral supply chains. The USGS is also working with Federal partners to map seabed minerals in the next frontier in direct support of EO 14285 *Unleashing America's Offshore Critical Minerals and Resources* (4/24/2025). These efforts are also being enhanced by AI techniques; for example, the USGS is using AI techniques to determine the resource potential of critical minerals in seafloor massive sulfide deposits. Other Federal agencies and offshore exploration companies rely on the USGS's expertise to help assess the potential for critical minerals of the Outer Continental Shelf, which at 3.2 billion acres is larger than the land area of the United States.

In direct support of EO 14241 *Immediate Measures to Increase American Mineral Production* (3/20/2025), the USGS is modernizing its mineral supply chain analysis. In this work, the USGS is tracking global mineral production and trade, identifying supply risks, and forecasting vulnerabilities in U.S. industrial sectors. The USGS advises a wide range of Federal Agencies and programs from the National Defense Stockpile, Department of Energy's Loan Programs Office, and the intelligence community, to the Development Finance Corporation, International Trade Administration, and Export-Import Bank. USGS data underpin the interagency response to recent EOs on energy and minerals, and inform policy actions, section 232 investigations conducted under the Trade Expansion Act, billions in investment decisions, and emergency preparedness strategies, ensuring that U.S. industries and the military are not constrained by unstable or adversarial foreign suppliers. Through the USGS National Minerals Information Center, stakeholders have access to near-real-time data on availability, production, and pricing of dozens of critical minerals.

Further, the USGS supports permitting and exploration activities through the Earth MRI, which is deploying advanced geophysical and geochemical techniques to identify mineral potential on the surface and in the subsurface. These efforts prioritize areas with known data gaps and high potential for discovery of critical minerals. By dramatically improving the scientific foundation for mineral exploration, USGS data reduces investment risk for private developers and shortens project timelines. The USGS is also advancing its work on emerging sources for critical minerals, including identifying critical minerals in mine wastes and wastes from energy production. The FY 2027 budget request proposes a targeted investment to use new high-resolution remote sensing data and AI to advance existing techniques that can help identify critical minerals in mine waste.

Through these efforts on next-generation sources, the USGS is de-risking industry investment in mineral recovery and processing technology. These coordinated, science-driven efforts enable the United States to reclaim its position as a global leader in mineral production, reduce strategic dependencies, and drive innovation and economic growth.

Information to Protect Life and Property

The USGS plays a critical role in protecting life and property in the U.S. by providing vital information on geologic hazards, thereby enhancing public safety and resilience against disasters caused by earthquakes, landslides, volcanic eruptions, and coastal hazards and magnetic storms. Through its Natural Hazards Mission Area, the USGS will continue to deliver real-time warnings and long-term assessments that enable informed decision-making at all levels of government. Monitoring and assessment activities provide emergency managers and authorities critical information on earthquake and volcano hazards to anticipate and mitigate risks effectively. Specifically for earthquake hazards, the USGS has built upon the monitoring provided through the Advanced National Seismic System to operate *ShakeAlert* – an

earthquake early warning (EEW) system – in three U.S. west coast states. *ShakeAlert* can deliver seconds of advanced warning to people and systems ahead of earthquake shaking. Those warnings are delivered through FEMA's Integrated Public Alert Warning System. In addition, several License to Operate (LtO) partners use ShakeAlert messages to create and distribute EEW alerts via cellphones, internet, radio, public address systems, and machine-to-machine communication for critical operations (e.g. utilities and transportation systems). For example, Google has utilized their LtO partnership to send ShakeAlert-powered alerts to Android-based cellphones in California, Oregon, and Washington (about 21 million devices as of 2025). In FY 2027, the USGS will, in cooperation with States and other partners, work to operate, and maintain the *ShakeAlert* EEW system in certain high-priority regions of the west coast. Using the data provided through *ShakeAlert*, EEW alerts can continue to be delivered to individuals and institutions in those regions. Additionally, the USGS will continue providing the information and hazard assessments that are needed by communities to reduce the human and economic losses from landslides. The USGS will continue to provide monitoring and volcanic eruption forecasts to enhance public safety and minimize the social and economic disruption from eruptions. The USGS will conduct studies and assessments of coastal and marine geohazards, using shore and seabed observations and mapping expertise, that enhance preparedness and reduce risks to coastal communities, infrastructure, and offshore operations. Furthermore, the USGS's network of geomagnetic observatories will continue to serve a crucial role in monitoring magnetic storms and other geomagnetic hazards, providing essential data that help protect critical infrastructure and enhance national security.

Comprehensive assessments and data through the USGS Water Resources Mission Area will continue to inform water management decisions and policies that help communities plan for and enhance public safety against water hazards like floods and drought. The USGS will focus on the highest-priority activities that improve understanding of both the quantity and quality of water resources, while modeling the impacts of extreme events such as floods and droughts to inform long-term planning for infrastructure and water supply management. The FY 2027 budget request proposes increases for the Federal Priority Streamgage (FPS) network, Cooperative Matching Funds, and national technical support of monitoring networks. These investments will allow the USGS to enhance the protection of life and property and water-related decision making by: 1) sustaining the current FPS network, 2) flood-hardening select existing FPS sites, 3) installing approximately 60 new FPS sites to the network in priority flood-prone areas, 4) increasing the number of cooperatively-funded streamgages, 5) leveraging new monitoring instrumentation and techniques, including remote sensing, and 6) using AI approaches to guide field operations and automate most aspects of the quality assurance/quality control processes.

The USGS, as the Federal agency responsible for mapping the geologic and geographic features of the United States, provides a foundational framework of data and services that significantly enhances the protection of life and property across the country and supports economic development. Through the Core Science Systems Mission Area, the USGS will continue to produce highly accurate topographic, hydrographic, and biogeographic maps, aiding various applications such as infrastructure planning, emergency response, and natural hazard prediction. The continued integration of advanced technologies (e.g. AI) and innovative platforms, including the National Land Cover Database, topoBuilder, and the National Map, will allow for precise monitoring of land change dynamics. The USGS will ensure that comprehensive mapping data is readily accessible to the public and decision-makers for effective resource management and disaster readiness.

The budget continues Landsats 8 and 9 operations and data production through the National Land Imaging Program. It also funds ground system development activities for onefinal government satellite and for preparatory work with industry to support a phased transition of the Landsat program to a commercial solution. Specifically, the National Aeronautics and Space Administration and USGS will work with industry to implement a roadmap to address technical challenges and demonstrate capabilities in preparation for this transition.

Through all these activities, the USGS helps the country to reduce economic losses, expand economic opportunity, enhance national security, and promote community preparedness.

Proposed Budget Restructure: Geology, Energy, and Minerals Mission Area

The USGS proposes to move the National Cooperative Geologic Mapping Program (NCGMP) ($43.5 million), National Geological and Geophysical Data Preservation Program ($1.0 million), and Geologic Materials Repository ($0.7 million) from the Core Science Systems Mission Area into the newly renamed Geology, Energy, and Minerals Mission Area (GEMMA). This strategic change strengthens the longstanding mapping and resources mission of the USGS by reuniting geologic mapping (of both the surface and subsurface) with geologic resource assessments and studies of the full life cycle of geologic resources.

The USGS also proposes to unite its onshore and offshore energy and mineral resources expertise by moving two activities from the Coastal and Marine Hazards and Resources Program under the Natural Hazards Mission Area ($2.5 million). The Energy Resources Program (ERP) and Mineral Resources Program (MRP) have supported longstanding research on gas hydrates and offshore minerals. As these research topics have matured and become recognized as emerging resources, these activities will now be fully integrated into GEMMA. Offshore minerals work ($1.2 million) would move to the MRP and offshore gas hydrates work ($1.3 million) would move to the ERP.

Rationale

The restructure builds on the significant transformations created by the Mineral Resources Program's Earth Mapping Resources Initiative (Earth MRI), which has built strong synergies between these programs; and will create further efficiencies in geologic mapping and data delivery. In addition, these are the USGS programs with the broadest and deepest engagement with the State Geological Surveys. Uniting these programs will increase USGS scientific support to and leadership alongside the State Geological Surveys and larger geoscience community, which together advance the country's priorities for energy and mineral security. Bringing these two programs into a single Mission Area that advances the Nation's priorities for energy and mineral security will enable more efficient and aligned USGS scientific leadership with the State Geological Surveys and the broader geoscience community.

By formally integrating the complementary capabilities of the MRP, the ERP, the NCGMP, and the NGGDPP, the USGS unifies its geologic mapping, data preservation, and geologic resource-focused programs to deliver more efficient results for the Nation. Since Earth MRI's launch, the USGS has built powerful, science-driven partnerships with more than 39 State Geological Surveys—relationships that states credit with revitalizing their own minerals, energy, and geologic mapping programs, strengthening regional geoscience capacity, and increasing early career recruitment pipelines. The restructure institutionalizes these gains, blends the robust state support mechanisms of NCGMP and NGGDPP with

enhanced internal scientific capacity, and improves coordination in meeting statutory requirements such as implementation of the National Geologic Mapping Act of 1992 and the Energy Act of 2020.

The geologic resource fields have an extraordinary amount of legacy data. ERP and MRP have been investing in artificial intelligence-based approaches to accelerate data rescue so that legacy data can be leveraged to prioritize and augment new data collection. Bringing NGGDPP's data rescue mechanisms and cataloguing expertise together with ERP and MRP will further these efforts and make them more widely available to geoscience institutions in industry, government, and academia. These efficiencies directly support national priorities for domestic mineral and energy security, ensure more timely and relevant delivery of geoscience information to land management and permitting agencies, and further the USGS responsibility to strengthen the country's foundational geologic mapping and resource characterization.

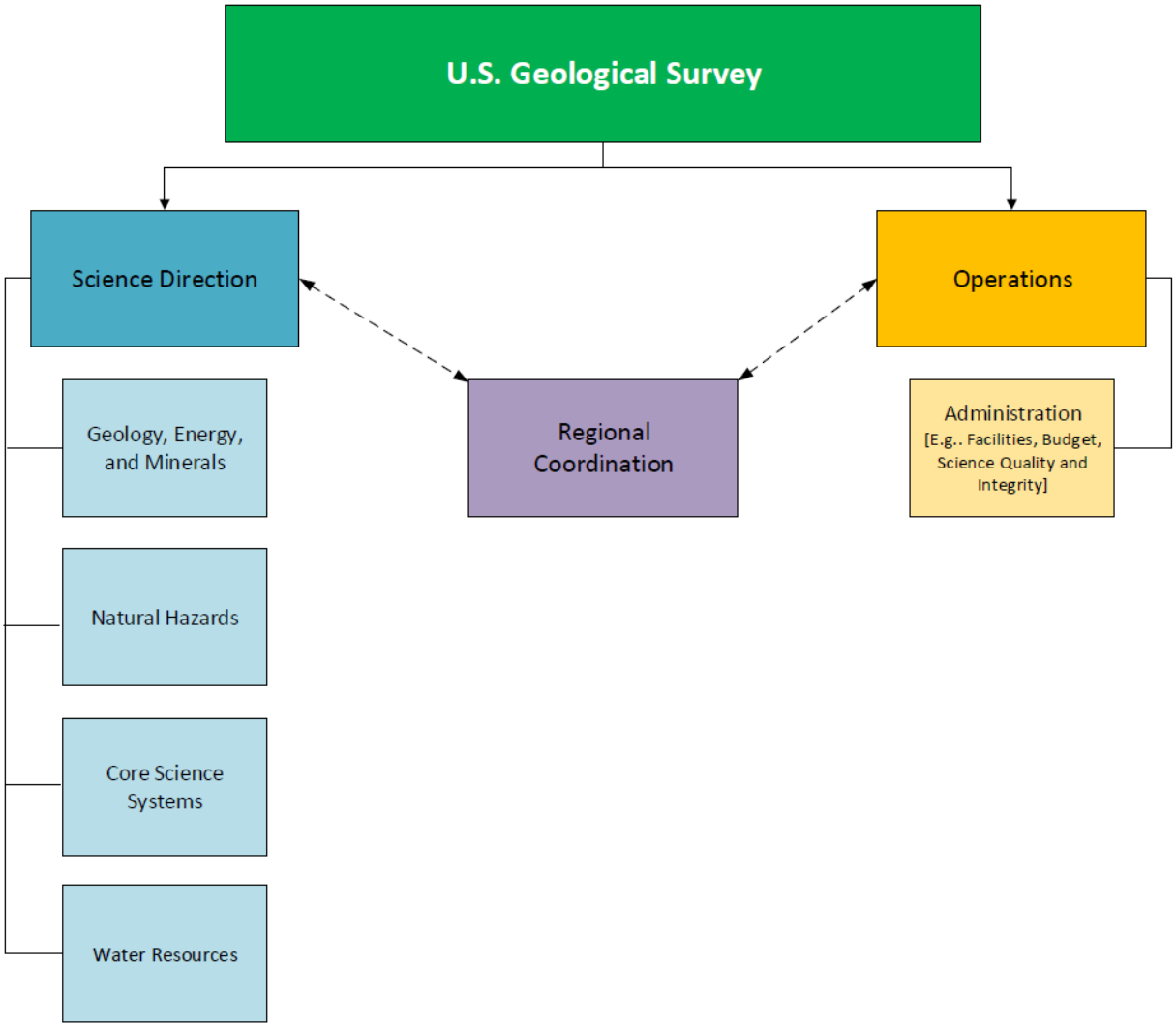
Summary Table

2027 President's Budget
U.S. Geological Survey
(Dollars in Thousands)

	2025 Actual		2026 Enacted		2027 Request		Change from 2026 Enacted	
Budget Authority	**Budget Authority**	***FTE***	**Budget Authority**	***FTE***	**Budget Authority**	***FTE***	**Budget Authority**	***FTE***
Current	1,450,197	*7,661*	1,420,433	*6,639*	892,668	*4,734*	-527,765	*-1,905*
Permanent	349	*2*	587	*2*	594	*2*	+7	-
Subtotal, Budget Authority w/o Supplementals	**1,450,546**	***7,663***	**1,421,020**	***6,641***	**893,262**	***4,736***	**-527,758**	***-1,905***
Supplemental - American Relief Act (P.L. 118-158)	*2,743*	-	-	-	-	-	-	-
Supplemental - Infrastructure Investment and Jobs Act (P.L. 117-58)	*68,655*	*55*	*63,680*	*55*	-	-	*-63,680*	*-55*
Total, Budget Authority w/ Supplementals[1]	**1,521,944**	***7,718***	**1,484,700**	***6,696***	**893,262**	***4,736***	**-591,438**	***-1,960***

[1] Supplemental funding reflects amounts made available in the fiscal year, not estimated allocations or obligations.

Organizational Chart



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Summary of Requirements Table

Summary of Requirements U.S. Geological Survey Appropriation: Surveys, Investigations, and Research *(Dollars in Thousands)*											
	2025 Actual		2026 Enacted		2027 Request						
Treasury Account/Activity	**Budget Authority**	***FTE***	**Budget Authority**	***FTE***	**Fixed Costs (+/-)**	**Internal Transfers (+/-)**	**Program Changes ($)**	***Program Changes FTE (+/-)***	**Budget Authority**	***FTE***	**Change from 2026 Enacted**
Surveys, Investigations, and Research											
Ecosystems	292,877	*1,219*	294,705	*981*	-	-	-294,705	*-981*	-	-	-294,705
Geology, Energy, and Minerals	155,337	*533*	104,664	*342*	-42	+47,510	-9,664	*+101*	142,468	*443*	+37,804
Natural Hazards	196,126	*688*	200,131	*640*	-72	-2,510	-61,023	*-55*	136,526	*585*	-63,605
Water Resources	288,772	*1,180*	288,772	*710*	-121	-	-61,562	*-109*	227,089	*601*	-61,683
Core Science Systems	227,987	*457*	276,127	*506*	-60	-45,000	-74,354	*-243*	156,713	*263*	-119,414
Science Support	105,000	*205*	73,683	*104*	+174	-	+6,143	-	80,000	*104*	+6,317
Facilities	184,098	*77*	180,101	*54*	-436	-	-29,793	-	149,872	*54*	-30,229
Special Initiatives (CDS)	-	-	2,250	-	-	-	-2,250	-	-	-	-2,250
Total, Surveys, Investigations, and Research	**1,450,197**	***4,359***	**1,420,433**	***3,337***	**-557**	**-**	**-527,208**	***-1,287***	**892,668**	***2,050***	**-527,765**
Operation and Maintenance of Quarters	**90**	**-**	**87**	**-**	**-**	**-**	**+7**	**-**	**94**	**-**	**+7**
Subtotal, Surveys, Investigations, and Research w/o Supplementals	**1,450,287**	***4,359***	**1,450,520**	***3,337***	**-557**	**-**	**-527,201**	***-1,287***	**892,762**	***2,050***	**-527,758**
Supplemental - American Relief Act (P.L. 118-158)	*2,743*	-	-	-	-	-	-	-	-	-	-
Supplemental - Infrastructure Investment and Jobs Act (P.L. 117-58)	*68,655*	*55*	*63,680*	*55*	-	-	*-63,680*	*-55*	-	-	*-63,680*
Transfer to OIG (P.L. 117-58)	*[-345]*	-	*[-320]*	-	-	-	*[+320]*	-	-	-	*[+320]*
Total, Surveys, Investigations, and Research w/ Supplementals[1]	**1,521,685**	***4,414***	**1,484,200**	***3,392***	**-557**	**-**	**-590,881**	***-1,342***	**892,762**	***2,050***	**-591,438**

[1] Supplemental funding reflects amounts made available in the fiscal year, not estimated allocations or obligations.

Summary of Requirements
U.S. Geological Survey
Appropriation: Contributed Funds
(Dollars in Thousands)

	2025 Actual		2026 Enacted		2027 Request						
Treasury Account/Activity	**Budget Authority**	***FTE***	**Budget Authority**	***FTE***	**Fixed Costs (+/-)**	**Internal Transfers (+/-)**	**Program Changes ($)**	***Program Changes FTE (+/-)***	**Budget Authority**	***FTE***	**Change from 2026 Enacted**
Total, Contributed Funds	**259**	***2***	**500**	***2***	**-**	**-**	**-**	**-**	**500**	***2***	**-**

Fixed Costs and Internal Realignments Tables

Surveys, Investigations, and Research

(Dollars In Thousands)

Fixed Cost Element	2026 Enacted Change	2026 Enacted to 2027 Request Change	Description
Change in Number of Paid Days	0	0	Total paid days for FY 2027 is 261 (2088 hours) which is the same number of days as FY 2026. This information is consistent with the published OMB Circular A-11.
Pay Raise	+5,528	+1,200	The President's Budget for 2027 includes one quarter (October-December 2026) of the 1.0% pay raise for 2026 and 0.0% pay raise for 2027. Pay raises are consistent with the published OMB Circular A-11.
FERS Employer Contribution Increase	0	-1,502	The estimates reflect adjustments to the employer contribution for FERS and Law Enforcement FERS for FY 2027. This information is consistent with the published OMB Circular A-11.
Departmental Working Capital Fund (WCF)	+1,402	+370	The estimates reflect Department decisions on the FY 2027 Working Capital Fund Central Bill.
Workers' Compensation Payments	+52	-196	The amount reflects final chargeback costs of compensating injured employees and dependents of employees who suffer accidental death while on duty. This amount reflects the final Workers Compensation bill for FY 2027 payable to the Department of Labor, Federal Employees Compensation Fund, pursuant to 5 U.S.C. 8147(b) as amended by Public Law 94-273.
Unemployment Compensation Payments	-40	0	The amount reflects projected changes in the costs of unemployment compensation claims to be paid to the Department of Labor, Federal Employees Compensation Account, in the Unemployment Trust Fund, pursuant to Public Law 96-499. This estimate reflects an applied annual inflation factor of 3.0% to the 5-year average of actuals between 2020-2024.
GSA and Non-GSA Rents	+3,008	-2,187	This estimate reflects the FY 2027 President's Budget Exhibit 54s as submitted. The amounts reflect changes in the costs payable to General Services Administration (GSA) and others for office and non-office space as estimated by GSA, as well as the rental costs of other currently occupied space. These estimates reflect Udall Building rent, Security, Federal Reserve Parking, and Operations and Maintenance, distributed by bureau and office, based upon OFAS provided Udall Building occupancy levels. Costs of mandatory office relocations, i.e. relocations in cases where due to external events there is no alternative but to vacate the currently occupied space, are also included.
Baseline Adjustments for O&M Increases	+9,053	+1,758	This adjustment captures the associated increase to baseline operations and maintenance requirements resulting from movement out of GSA or direct-leased (commercial) space into Bureau-owned space. During these transitions, bureaus often encounter an increase to baseline O&M costs not otherwise captured in fixed costs. This category of funding properly adjusts the baseline fixed cost amount to maintain steady-state funding for these requirements.
Total, Account 2027 Fixed Costs	**+19,003**	**-557**	

Internal Realignments and Non-Policy/Program Changes (Net-Zero)	BY (+/-)	Description
Natural Hazards - Coastal/Marine Hazards and Resources Program/Marine Minerals	-1,175	This would move marine minerals and deep-sea gas hydrates research from the Coastal/Marine Hazards and Resources Program in the Natural Hazards Mission Area to the renamed Geology, Energy, and Minerals Mission Area (GEMMA). This move better aligns these resource focused activities within a mission area specializing in resource assessment, mapping, and supply chain analysis. The benefits include better aligned technical oversight, enhanced collaboration with the Energy Resources Program and Mineral Resources Program, and improved positioning for USGS to advance the country's priorities on critical minerals and energy security, both onshore and offshore.
Natural Hazards - Coastal/Marine Hazards and Resources Program: Deep-Sea Gas Hydrates Research	-1,335	
Geology, Energy, and Minerals - Energy Resources Program: Deep-Sea Gas Hydrates Research	+1,335	
Geology, Energy, and Minerals - Mineral Resources Program: Mineral Resources Research and Assessments	+1,175	
Core Science Systems - National Cooperative Geologic Mapping Program	-43,500	The move brings the program that produces and archives the country's geologic maps into closer alignment with the programs that apply those maps to energy and mineral resource assessments and decision support for land management. This change also ensures that geologic mapping is directly informed by the country's most pressing needs, such as identifying domestic mineral resources, assessing energy potential, supporting federal and state land managers, and characterizing mine and energy-related waste. This alignment strengthens collaborations with the State Geological Surveys, streamlines workflows from field mapping to data delivery, strengthens the scientific basis for surface and subsurface decision-making, and ensures that geologic mapping is immediately relevant to national priorities for energy and mineral security.
Geology, Energy, and Minerals - National Cooperative Geologic Mapping Program	+43,500	
Science Synthesis, Analysis and Research Program - National Geological and Geophysical Data Preservation Program	-1,500	This would move the National Geological and Geophysical Data Preservation Program (NGGDPP) and the Geologic Materials Repository (GMR) from Science Synthesis, Analysis, and Research Program in the Core Science Systems Mission Area into GEMMA. NGGDPP's data and collections are central to USGS mapping and energy and mineral resource assessments, and those mapping and assessment activities constantly generate additional data of this nature, making GEMMA the most appropriate home to integrate and make these data streams available publicly. Benefits include bringing NGGDPPs data rescue mechanisms together with the Programs that use these rescued data and support the State Geological Surveys in using these rescued data to advance the country's priorities for critical minerals and energy security.
Geology, Energy, and Minerals - National Geological and Geophysical Data Preservation Program	+1,500	
Net Account Total, Internal Transfers	**0**	

Appropriations Language

SURVEYS, INVESTIGATIONS, AND RESEARCH

For expenses necessary for the United States Geological Survey 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 as authorized by the Organic Act of March 3, 1839, as amended (43 U.S.C. 31), and sections 3 and 11 of the Outer Continental Shelf Lands Act, as amended (43 U.S.C. 1332 and 1340); classify lands as to their mineral and water resources; give engineering supervision to power permittees and Federal Energy Regulatory Commission licensees; administer the minerals exploration program as authorized by section 1 of the Act of August 21, 1958, Public Law 85-701 (30 U.S.C. 641); conduct inquiries into the economic conditions affecting mining and materials processing industries as authorized by the provisions at chapter 3 of title 30, United States Code, section 2 of the Mining and Minerals Policy Act of 1970, Public Law 91-631, as amended (30 U.S.C. 21a), and section 8(a)(1) of the Strategic and Critical Materials Stock Piling Revision Act of 1979, Public Law 96-41, as amended (50 U.S.C. 98g(a)(1)), and related purposes as authorized by law; and to publish and disseminate data relative to the foregoing activities; $892,668,000, to remain available until September 30, 2028; of which $78,840,000 shall remain available until expended for satellite operations; and of which $55,614,000 shall be available until expended for deferred maintenance and capital improvement projects that exceed $100,000 in cost: Provided, That none of the funds provided for the ecosystem research activity shall be used to conduct new surveys on private property, unless specifically authorized in writing by the property owner: Provided further, That no part of this appropriation shall be used to pay more than one-half the cost of topographic mapping or water resources data collection and investigations carried on in cooperation with States and municipalities Provided further, That of the amount appropriated under this heading, not to exceed $15,000 may be for official reception and representation expenses.

ADMINISTRATIVE PROVISIONS

From within the amount appropriated for activities of the United States Geological Survey such sums as are necessary shall be available for contracting for the furnishing of topographic maps and for the making of geophysical or other specialized surveys when it is administratively determined that such procedures are in the public interest; construction and maintenance of necessary buildings and appurtenant facilities; acquisition of lands for gauging stations, observation wells, and seismic equipment; expenses of the United States National Committee for Geological Sciences; and payment of compensation and expenses of persons employed by the Survey duly appointed to represent the United States in the negotiation and administration of interstate compacts: Provided, That activities funded by appropriations herein made may be accomplished through the use of contracts, grants, or cooperative agreements (including noncompetitive cooperative agreements with tribes) as defined in section 6302 of title 31, United States Code: Provided further, That the United States Geological Survey may enter into contracts or cooperative agreements directly with individuals or indirectly with institutions or nonprofit organizations, without regard to section 6101 of title 41, United States Code, for the temporary or intermittent services of students or recent graduates, who shall be considered employees for the purpose of chapters 57 and 81 of title 5, United States Code, relating to compensation for travel and work injuries, and chapter 171 of title 28, United States Code, relating to tort claims, but shall not be considered to be Federal employees for any other purposes.

Justification of Proposed Language Changes

The 2027 budget proposes no changes to USGS language.

Appropriations Language Citations

A full listing of USGS authorizations is available at the USGS Office of Budget, Finance, and Analysis website (https://www.usgs.gov/about/organization/science-support/budget/authorizations).

Expiring Authorizations

The USGS has no expiring authorizations to report.

Activity: Ecosystems

The 2027 budget does not request funding for the Ecosystems Mission Area, which will allow the bureau to focus on higher priority activities, including achieving energy and minerals dominance. Some of the work that has historically been funded through the Ecosystems Mission Area may be continued at the state level and at academic institutions across the country, which are well positioned to focus on issues of regional and local importance. In support of the Presidential Memoranda *Protecting the Great Lakes from Invasive Carp*, the USGS will continue to conduct scientific investigations and modeling of drivers of invasive carps. That work will be funded through the National Water Quality Program in the Water Resources Mission Area.

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Activity: Geology, Energy, and Minerals

America's national security and economic prosperity rely on comprehensive mapping and resource science that guide future energy strategies, ensure resilient domestic mineral supply chains, and inform management of the country's land surface and subsurface. The Budget advances energy and mineral security through the Geology, Energy and Minerals Mission Area (GEMMA). The GEMMA portfolio is rooted in the original mission of the USGS and continues to lead the country's mapping and science on resources today, building the geoscience community's capacity and innovating to lead the country to the energy and mineral resources of the future. As the country's primary source of foundational mapping and data collection and scientific information on energy and mineral resources, the Mission Area maps traditional and emerging resources and their supply chains, both domestically and globally. Through GEMMA's unique expertise, the USGS delivers unbiased, publicly available data, tools, and comprehensive assessments of onshore and offshore energy and mineral resources. This information is critical to the country's economic growth and vitality and national security interests including critical mineral supply chains, public safety, and efficient resource management. The USGS studies the full life cycle of these resources – geologic resource occurrence, extraction, use, disposal, and waste as a resource. This full lifecycle perspective supports the complexities of land management and permitting decisions such as the potential to co-produce energy and mineral resources from Federal lands, and the potential to store and reuse energy and mine wastes. USGS geologic mapping, data preservation, energy and mineral resource assessments and research, and global mineral supply chain analyses inform sustainable natural resource management; economic, technological, national security, and global trade strategies; public and private sector investments; development and future investment by the energy and mineral industries; and the development of the infrastructure of tomorrow.

In FY 2027, the USGS will continue geologic mapping, data preservation, energy and minerals assessments, and supply chain analysis that support energy and mineral independence, inform resource management decisions by Federal and State land managers, and guide billions of dollars in Federal and private-sector investments. GEMMA will continue to strengthen the State Geological Surveys by providing scientific leadership, partnership, funding, and training in geologic and geophysical mapping, data collection and preservation, and energy and mineral resource assessments. Through these and other partnerships, GEMMA will continue to deliver the geoscientific data and analysis that underpins Administration priorities, including Executive Orders (EOs):

- EO 14153 *Unleashing Alaska's Extraordinary Resource Potential* (1/20/2025)
- EO 14154 *Unleashing American Energy* (1/20/2025)
- EO 14156 *Declaring the National Energy Emergency* (1/20/2025)
- EO 14213 *Establishing the Energy Dominance Council* (2/14/2025)
- EO 14241 *Immediate Measures to Increase American Mineral Production* (3/20/2025)
- EO 14261 *Reinvigorating America's Beautiful Clean Coal Industry and Amending Executive Order 14241* (4/08/2025)
- EO 14285 *Unleashing America's Offshore Critical Minerals and Resources* (4/24/2025)

In FY 2027, GEMMA will expand on a pilot grant program and launch an initiative to reinvigorate the country's geoscience educational pipelines essential to the geologic resource fields. A pressing challenge is the rapid decline in geoscience enrollment and training programs which threatens the country's long-term capacity to discover, develop, and responsibly manage critical mineral resources. This initiative

will strengthen, rebuild, and sustain geoscience fields, grow the workforce of the future, and help America achieve mineral dominance.

Advanced Mapping of the Country's Geology and Resources: The USGS is transforming the country's surface and subsurface mapping of geology and resources through advanced geologic and geophysical survey techniques and through compilation and reanalysis of historical samples and datasets. Targeted and accelerated by the Mineral Resources Program's (MRP) Earth MRI, in FY 2027, these advanced techniques will continue to identify previously uncharted mineral resources including minerals on the country's 2025 List of Critical Minerals, construction resources such as aggregates, and other economically vital mineral resources. The National Cooperative Geologic Mapping Program (NCGMP) will contribute to the effort through high-resolution surface and shallow subsurface mapping across the country, funding the production of detailed high-quality geologic maps through the State Geological Surveys and driving mapping of priority areas through Federal geoscience efforts; and synthesizing the results into seamless maps and databases. Together, these coordinated efforts will continue to develop the country's first modern three-dimensional maps of the surface and subsurface, supporting not only mineral resource assessments but also assessments quantifying the country's current and future energy resources, groundwater resources, and potential for natural hazards such as landslides; and informing economic development planning and land-use decision making, supporting infrastructure projects, and ensuring national security.

Unleashing Robust Geologic Data: In FY 2027, the USGS will continue to capture the full value of historical investments in samples and data to help solve today's energy, minerals, and mapping challenges. The National Geological and Geophysical Data Preservation Program (NGGDPP) will continue to rescue and provide seamless access to geologic samples for critical minerals exploration, supporting an efficient mechanism for Federal and State agencies and the private sector to glean new insights into the country's critical mineral resources. Under Secretary's Order (SO's) 3436 *Unlocking Critical and Strategic Minerals from Mine Waste, Cutting Red Tape, and Restoring American Dominance in Strategic Mineral Production* (7/23/2025), the MRP will continue to expand the National Mine Waste Inventory, the unified and authoritative repository of data on mine wastes and the potential to reuse waste as a resource, in partnership with State geological surveys, Interior's land management bureaus, and other Federal and private sector partners. In FY 2027, the USGS will continue developing AI tools to leverage robust maps and datasets, and invest in data standards, quality, management, and delivery to ensure seamless public access to the results of both historic and ongoing large-scale data collection and interpretation. These AI innovations leverage a public/private partnership in collaboration with the Defense Advanced Research Projects Agency (DARPA) that has streamlined data synthesis workflows for mineral resource assessments, accelerating the delivery of critical mineral assessments as called for in the Energy Act of 2020. The USGS, States, tribes, industry, and the public use these vast data resources to answer today's questions and conduct analysis that informs tomorrow's energy, minerals and mapping needs.

Energy and Mineral Resource Assessments: Energy and mineral resource assessments build on geologic and geophysical mapping of the surface and subsurface to describe the potential for undiscovered geologic resources, including minerals; oil; natural gas; coal; and uranium. In addition, the USGS assesses emerging geologic resources that maintain global competitiveness of the country's domestic energy industry including geothermal resources for electricity generation, heating, and cooling; gas hydrates; naturally occurring geologic hydrogen; helium; and the potential to store energy and wastes

in the subsurface. In FY 2027, USGS assessments will be used to inform mine site reclamation, co-production of minerals with energy, and permitting and land management decisions by partners including the Bureau of Land Management. USGS global assessments are used by Federal trade and foreign investment agencies to identify potential international trade partners and by the private sector to de-risk industry investments. Offshore, the USGS continues to provide scientific information and geology-based resource assessments that are foundational for seabed resource management decisions. In FY 2027, the USGS will collaborate with Federal partners to conduct mapping and research on marine minerals, building on collaborations with the Bureau of Ocean Energy Management and other Federal agencies under EO 14285 *Unleashing America's Offshore Critical Minerals and Resources* (4/24/2025). The USGS brings deep expertise on the geology of offshore minerals to this partnership to develop a comprehensive understanding of offshore seabed areas that hold critical mineral resources.

Supporting Energy Dominance and National Security: In FY 2027, USGS will continue geologic and geophysical mapping and data collection, energy and minerals research, and supply chain analysis that support energy and mineral independence, inform resource management decisions by Federal and State land managers, and guide Federal and private-sector investments. USGS's robust mineral industry data and mapping of energy and mineral resources inform the National Energy Dominance Council and interagency response to several EOs. For example, USGS data and mapping of critical mineral and coal resources are informing interagency efforts under EO 14241 *Immediate Measures To Increase American Mineral Production* (3/20/2025) and EO 14261 *Reinvigorating America's Beautiful Clean Coal Industry and Amending Executive Order 14241* (4/8/2025). Recent USGS research, in partnership with land managers, tribes, and industry, has stimulated new interagency efforts to reprocess mine wastes to recover critical minerals. This work, and the broader USGS of role mapping, characterizing, and inventorying mine waste supports SO 3436 *Unlocking Critical and Strategic Minerals from Mine Waste, Cutting Red Tape, and Restoring American Dominance in Strategic Mineral Production* (7/23/2025). The USGS also directly supports other Interior bureaus in implementing energy and mineral strategies, such as providing technical assistance for BLM's scenario planning for future lands development.

In FY 2027, the USGS will continue to expand its mineral supply chain analysis, as authorized in the Energy Act of 2020, to guide Federal decisions and investments in every aspect of the supply chain. The USGS has a longstanding role providing extensive data and decision support to multiple agencies including: the Department of War for management of the National Defense Stockpile and use of Defense Production Act authorities to invest in domestic rare earth element and other critical mineral supply chains; the DOE's loan programs; the Treasury Department supporting implementation of tax incentives supporting domestic critical mineral processing; to foreign investment and credit agencies such as the U.S. International Development Finance Corporation and Export-Import Bank; and to trade negotiators in the Office of the U.S. Trade Representative and the Department of Commerce's International Trade Administration. State agencies, private sector minerals and manufacturing decision-makers, Wall Street market analysts, and foreign trade partners similarly rely on USGS data and analysis to make informed decisions.

Introductory Funding Table

Activity: Geology, Energy, and Minerals[1] *(Dollars in Thousands)*											
	2025 Actual		2026 Enacted		2027 Request						
Activity/Sub Activity/Program Element/Budget Element	**Budget Authority**	***FTE***	**Budget Authority**	***FTE***	**Fixed Costs (+/-)**	**Internal Transfers (+/-)**	**Program Changes ($)**	***Program Changes FTE (+/-)***	**Budget Authority**	***FTE***	**Change from 2026 Enacted**
Geology, Energy, and Minerals											
Energy Resources	34,699	*118*	35,935	*109*	-10	+1,335	+783	*+10*	38,043	*119*	+2,108
Mineral Resources	75,404	*287*	68,729	*233*	-21	+1,175	+9,021	*+12*	78,904	*245*	+10,175
National Cooperative Geologic Mapping Program	43,500	*125*	-	-	-11	+43,500	-19,702	*+77*	23,787	*77*	+23,787
National Geological and Geophysical Data Preservation Program	1,734	*3*	-	-	-	+1,500	+234	*+2*	1,734	*2*	+1,734
Total, Geology, Energy, and Minerals	**155,337**	***533***	**104,664**	***342***	**-42**	**+47,510**	**-9,664**	***+101***	**142,468**	***443***	**+37,804**

[1] Table does not include supplemental funding.

Summary of Program Budget Changes Table: Energy Resources Program

Dollars in Thousands ($000)

Geology, Energy, and Minerals	2027 Request Change	FTE Change
Energy Resources Program		
Energy Resource Assessments and Scenario Analysis Tools	+5,167	+8
Geothermal Energy	-4,384	-4
TOTAL Program Changes	**+783**	**+4**

Justification of Program Budget: Energy Resources Program

Program Description

Geologic energy resources secure the country's energy future through meeting the rising demand for affordable energy, strengthening economic security, and ensuring the American energy industry is positioned as a global leader for the next century. The Energy Resources Program (ERP) is the sole provider of unbiased, publicly available estimates of undiscovered, technically recoverable geologic energy resources for the U.S. (exclusive of the U.S. Outer Continental Shelf) and provides research and assessments crucial to diversifying opportunities for the geologic energy sector. The USGS addresses the challenge of increasing demand for energy resources by conducting research and delivering assessments quantifying the country's and world's traditional and emerging energy resources, including oil and gas, coal, geothermal, geologic hydrogen, and critical minerals in subsurface brines. The Program also conducts research on current and future uses of the subsurface, including storage of energy and wastes from resource extraction, ranging from produced water and carbon dioxide and uranium waste. USGS science informs strategic decision-making related to the country's reliance on domestic versus foreign resources and the management of energy resources and subsurface pore space on and under Federal and State lands. This information is critical in efforts to meet increased energy demands and ensuring energy security. The ERP's work to characterize the subsurface and quantify geologic resources has been central to the USGS mission since 1879; recent authorizing direction includes the Energy Act of 2000, the Energy Policy Act of 2005, the Energy Act of 2020, and the following EOs:

- EO 14153 *Unleashing Alaska's Extraordinary Resource Potential* (1/20/2025)
- EO 14154 *Unleashing American Energy* (1/20/2025)
- EO 14156 *Declaring the National Energy Emergency* (1/20/2025)
- EO 14213 *Establishing the Energy Dominance Council* (2/14/2025)
- EO 14261 *Reinvigorating America's Beautiful Clean Coal Industry and Amending Executive Order 14241* (4/08/2025)

Energy Resource Assessments and Methods Development: The USGS conducts assessments quantifying the country's traditional and emerging energy resources, and the subsurface's capacity for storage and reuse of energy and wastes from energy resource extraction (including potential resources such as water and minerals in produced water). The USGS's traditional energy resource assessments estimate the amount of undiscovered oil and gas resources that could be recovered using today's technologies. These assessments identify oil and gas resource potential across the United States and internationally in over 250 petroleum provinces. USGS assessments of traditional energy resources also

provide critical information about the country's coal resources. ERP's foundational geologic, geophysical, and geochemical studies provide information on resource potential, including both the resource potential and the potential environmental impacts of energy wastes. These USGS resource assessments are used by a variety of stakeholders including Federal, local, Tribal, and State governments, other land resource managers, the private sector, and the public.

The USGS also assesses the country's emerging energy resources to diversify the U.S. energy portfolio and expand opportunities for the energy industry. The USGS is quantifying the potential for geothermal energy, gas hydrates, naturally occurring geologic hydrogen, and critical minerals in water from oil and gas productions. USGS geothermal resource assessments quantify not only traditional hydrothermal systems in the western United States but the enhanced geothermal systems enabled by recent DOE investments and the low temperature geothermal resources that have yet to be widely leveraged across the United States. Similarly, USGS assessments of carbon dioxide, including the potential for enhanced oil recovery, provide critical information to support emerging directions being adopted by the domestic energy industry. The USGS is accelerating assessments of traditional and emerging resources by developing innovative AI tools and has recently advanced AI techniques for predicting geothermal resource favorability and estimating the potential for lithium in brines.

Energy Resources Research: The USGS conducts research on a wide variety of energy resources, including coal, oil, gas, geothermal energy, gas hydrates, and energy gases such as carbon dioxide, helium and geologic hydrogen. This fundamental geologic research enables and accelerates the ERP's geology-based assessments, providing the country a path from early research on potential future energy resources to assessments quantifying undiscovered resources, emerging resources, and the potential to reuse waste as a resource.

USGS research addresses the full life cycle of energy resources from how and where resources form and accumulate prior to resource extraction to reclamation, recycling, and disposal following extraction activities. USGS research also informs the potential for co-production of critical minerals and energy, such as lithium in oil and gas and geothermal brines.

This research is used by a variety of Federal, State, Tribal, and industry decision-makers to identify best practices to maximize the value of extractive activities and limit adverse environmental impacts, and by land managers and regulators to enhance stewardship of public lands for multiple uses and for national energy and economic security. The USGS continues to invest in data delivery to ensure that energy resources research, assessments, and other information are accessible to and useful for a variety of decision-makers.

Program Change Description

The 2027 budget request for the Energy Resources Program is $38,043,000 and 119 FTE, a program change of +$783,000 and +4 FTE from the 2026 Enacted.

Energy Resource Assessments and Scenario Analysis Tools (+$5,167,000 / +8 FTE) – In FY 2027, the ERP will expand efforts to research, characterize, and assess the country's traditional and emerging energy resources. Assessments of these energy resources, including oil, natural gas, coal, geothermal, gas hydrates, geologic hydrogen, and critical minerals in energy wastes support energy leasing and permitting decisions and are essential to ensuring domestic energy dominance. Additional funding will be used to

accelerate the pace and expand the scope of geologic energy resource assessments to include additional geographic areas and resource types within assessed areas. Specifically, ERP will expand and accelerate assessments of energy resources (including oil and gas) in Alaska, the Permian Basin, the Gulf Coast, and other basins with high potential to host geologic energy resources. The ERP will also expand work assessing the potential to recover critical minerals in energy wastes (including oil and gas waters, geothermal brines, and coal waste). The USGS will continue to advance the responsible use of AI to accelerate and scale energy resource assessments, guided by USGS geoscience expertise. The program will also support energy leasing and permitting decisions on Federal lands through collaborative work with the Bureau of Land Management.

Geothermal Energy (-$4,384,000 / -4 FTE) – Geothermal energy is an important source of baseload electric power in the western U.S. and can help meet heating and cooling needs across the entire country. In FY 2027, the program will continue its highest-priority work, including updating the national geothermal energy resource assessment directed by the Energy Act of 2020 (P.L. 116-260). Work to assess high temperature geothermal resources in the Great Basin of Nevada and adjoining States will continue as will research needed to advance assessments of other geothermal resource types across the country. The USGS also will continue to partner with DOE to support their work to advance geothermal energy technology development.

Summary of Program Budget Changes Table: Mineral Resources Program

Dollars in Thousands ($000)

Geology, Energy, and Minerals	2027 Request Change	FTE Change
Mineral Resources Program		
Mineral Resources Research and Assessments	+3,021	+2
Earth Mapping Resource Initiative (Earth MRI)	+6,000	+6
TOTAL Program Changes	**+9,021**	**+8**

Justification of Program Budget: Mineral Resources Program

Program Description

The Mineral Resources Program (MRP) directly supports the country's economy and national security through supply chain data and analysis guiding public and private sector investment strategies; modernizing the country's mapping of mineral resources; resource assessments quantifying minerals potential to de-risk responsible development; and investing in the future minerals workforce. EO 14154 *Unleashing American Energy* (1/20/2025), sets an ambitious goal for the U.S. to be the leading producer and processor of minerals. USGS data show that the U.S. is currently 100% reliant on imports to meet its needs for 16 minerals and more than 50% import reliant for an additional 50 minerals. Increasing domestic mineral production and securing mineral supply chains depend on MRP's unique expertise and investments in research and supply chain analysis on mineral potential, production, consumption, recycling, disposal, and the potential to reuse waste as a resource as part of reclaiming mined sites. The MRP maps and analyzes the global supply, demand, and trade of the full range of mineral commodities that are used in the United States; analyzes and forecasts domestic, foreign, and industrial sector's dependencies on mineral commodities; and quantifies the country's mineral resources both "still in the

ground" and in mine waste. For over 140 years, the USGS has had the responsibility of collecting the country's data on domestic and global supply, demand, and trade of minerals. Under the Energy Act of 2020, MRP leverages these studies in the world's most sophisticated risk assessment on the effects of mineral supply chain disruption on the economy and national security. This risk assessment directly informs significant Federal investments in supply chain reliability and underpins the whole-of-government List of Critical Minerals. Through the USGS, DOI released the 2025 List of Critical Minerals in November 2025, designating 60 minerals critical to the country's economy and national security that have supply chains vulnerable to disruption. The USGS also provides relevant, timely, and unbiased scientific data to support government (Federal, State, Tribal, Territories) and private sector decision-making. USGS work in the following EOs is informing whole of government efforts to secure mineral supply chains:

- EO 14153 *Unleashing Alaska's Extraordinary Resource Potential* (1/20/2025)
- EO 14154 *Unleashing American Energy* (1/20/2025)
- EO 14156 *Declaring the National Energy Emergency* (1/20/2025)
- EO 14241 *Immediate Measures to Increase American Mineral Production* (3/20/2025)
- EO 14285 *Unleashing America's Offshore Critical Minerals and Resources* (4/24/2025)

Mineral Information and Supply Chain Analysis

Through the National Minerals Information Center (NMIC) and its regular surveys of the mineral industries, the USGS provides the country's data and analysis on global mineral production, consumption, and availability, and answers more than 2,000 inquiries on over 100 mineral commodities per month. This depth and breadth of timely information enables decision makers to anticipate supply chain disruptions and ensure dependable supplies of minerals to meet economic and national security needs. The public and private sectors use this information to understand the supply and use of minerals in the economy, and to inform investments in all aspects of supply chains. To facilitate access to the latest data for decision-makers, in February 2026 NMIC for the first time released a digital companion to the Mineral Commodity Summaries. The USGS has unique expertise in the flow of resources through the global economy identifying both cumulative risks to supply chains and the potential for cross-sector competition for mineral commodities. Agencies that rely on the USGS supply chain analyses include the Departments of Commerce, War, Energy, and State, intelligence agencies, the Federal Reserve Board, foreign investment and credit agencies including the U.S. International Development Finance Corporation and Export-Import Bank, and the Office of the U.S. Trade Representative. State agencies, private sector minerals and manufacturing decision-makers, Wall Street market analysts, and foreign trade partners similarly rely on USGS data. NMIC and DOE's Energy Information Administration (EIA) produce complementary data on minerals and energy respectively, and have collaborated to develop an approach for modeling and forecasting critical minerals demand in the energy sector, a topic of significant interest to policy makers and energy market participants.

Mineral Resource Research, Surveys, and Assessments

USGS mineral resource assessments are integral to building a strong domestic resource base. For policy makers, resource assessments locate and quantify the potential for major metals (e.g. copper), industrial minerals (e.g. construction materials), and low-volume specialty minerals (e.g. rare earth elements). For land and mine waste managers, resource assessments inform permitting, land use, waste, and resource management plans. For the private sector, USGS mineral resource assessments and associated products

provide a foundation for detailed site exploration, processing, and waste reprocessing or remediation activity. Under the Energy Act of 2020, the USGS is conducting nationwide assessments of all of the critical minerals, with a current focus on critical minerals needed for the energy sector including graphite, lithium, cobalt, nickel, vanadium, and manganese.

Mineral resource assessments depend on extensive data collection, surveys and mapping and on research on how and where mineral deposits are formed. This research has resulted in the recognition of new types of mineral deposits previously unknown in the United States. USGS research also identifies the potential for reprocessing valuable minerals from mine waste, informs the reclamation of previously mined lands, and identifies emerging challenges and opportunities for future mining. In partnership with other Federal agencies, State Geological Surveys, and Tribal governments, the USGS is developing the first National Mine Waste Inventory to inform future national resource assessments that will include both mineral deposits and minerals in mine waste for a more complete picture of the country's mineral resources. The National Waste Inventory is informing the national strategy for the interagency community as land managers work to incentivize critical mineral production from waste under EO 14156 *Declaring the National Energy Emergency* (1/20/2025) and Secretary's Order 3436*, Unlocking Critical and Strategic Minerals from Mine Waste, Cutting Red Tape, and Restoring American Dominance in Strategic Mineral Production* (7/23/2025).

The MRP also conducts mapping and research on marine minerals. This work assesses the distribution, composition, and resource potential of seabed minerals, and provides research support to the regulatory missions of the Bureau of Ocean Energy Management (BOEM) and National Oceanic and Atmospheric Administration. In 2025, the USGS released the first map of global seabed prospectivity for minerals. The USGS continues to collaborate with BOEM and other Federal agencies to develop a comprehensive understanding of offshore seabed areas that contain critical mineral resources through mapping and priority seabed research.

Earth Mapping Resources Initiative: Earth MRI was launched in 2019 to modernize mapping of the country's surface and subsurface and help identify areas that may contain critical minerals. Earth MRI has transformed the country's maps, drastically improving the country's ability to assess quantities of critical minerals both in the ground and above ground in mine waste, tripling the country's coverage of high-resolution subsurface geophysical data and funding the world's largest collection of airborne hyperspectral imagery to rapidly characterize mineralization on the land surface. This dramatic acceleration of Earth MRI has been transformative. Earth MRI has not only identified new areas with the potential for domestic critical mineral resources, but has spurred additional State investments in mapping, and rebuilt State Geological Survey's skills and capacity.

To prioritize data collection that accelerates identification of new critical mineral resources, the USGS collaborated with other Federal programs, State Geological Surveys, Tribal governments, and the private sector to publish the country's first map of critical mineral systems and companion database of known critical mineral deposits. This map drives prioritization of Federal and State investments in new geologic, geochemical, topographic, geophysical, and geospatial mapping and data acquisition, and informs both industry and land managers of areas with potential for critical mineral resources. These newly collected Earth MRI data are essential not only to understand critical mineral potential, but also for additional subsurface resources including geothermal energy and groundwater; infrastructure materials, transportation, and land-use planning; hazard assessments for earthquakes, landslides, volcanoes, and

floods. Completed and ongoing data collection is made transparent to partners and the public through the Earth MRI Acquisitions Viewer.

Program Change Description

The 2027 budget request for the Mineral Resources Program is $78,904,000 and 245 FTE, a program change of +$9,021,000 and +8 FTE from the 2026 enacted.

Mineral Resources Research and Assessments (+$3,021,000 / +2 FTE) – This increase will invest in critical mineral assessments and the future minerals workforce. The innovations needed to develop secure and sustainable critical mineral supplies and unleash American energy are hampered by a growing shortage of graduates trained in essential geoscience fields. In response to the Energy Act of 2020 sec. 7002(k)(2-3) direction to develop an extramural grant program supporting higher education and research, the USGS initiated a pilot university grant program in FY 2025. Building on the 2024 MRP-sponsored National Academy of Sciences workshop on the minerals workforce, in 2025 MRP consulted with the American Geosciences Institute's (AGI) Geoscience Workforce program, analyzing AGI's decades of data on universities' output of graduates in key disciplines essential to the mineral economy. MRP also took input from the community of Geological Surveys on how USGS Earth MRI funding has strengthened pipelines drawing students into the minerals workforce in private industry and at State Geological Surveys, and on university curriculum gaps that jeopardize recruitment pipelines in the geologic fields. MRP also collaborated with Federal partners to identify Federal support necessary to support vibrant educational institutions and workforce in these fields. The Society for Mining, Metallurgy, and Exploration has highlighted that U.S. mining engineering programs can only fill one in every four jobs that the domestic mining industry opens, and sees similar pipeline failures in the economic geology field. This decline in education focused on geologic mapping, energy, and minerals-related studies has coincided with significant new developments in science, technology, data management, and decision support, and therefore has limited the geoscience fields' ability to leverage these innovations. With this increase, the USGS will build out the grant program to strengthen energy and minerals education and the private sector workforce. In line with the ambitious vision of the Energy Act, this increase will build the institutional relationships and coordinated reinvestment across the Federal government, industry, and academia required to drive, rebuild, and sustain these fields and grow the workforce of the future. Ultimately, this effort will lead to more capacity across the country to identify and develop critical mineral resources that are essential to the economic success and national security of the United States.

Earth Mapping Resources Initiative (+$6,000,000 / +6 FTE) – Since 2019, Earth MRI has transformed the country's mapping for critical minerals, contributing to a surge of over 100,000 new mineral claims on Federal lands according to a recent analysis by the state of Nevada[1], identifying new areas with the potential for critical minerals including rare earth elements in Maine, and delivering a National Mine Waste Inventory now being used by Utah legislators as they consider future critical mineral and permitting decisions. The Earth MRI data collection to date has revealed previously unknown critical mineral potential and also identified types of critical mineral deposits that require novel types of geophysical and geochemical surveys. The 2027 increase will enable the USGS to accelerate mapping and data collection in areas deemed by the USGS and State Geological Surveys to be most highly prospective. The increase will also enable the USGS to fund State proposals for novel geophysical and

[1] Nevada Bureau of Mines and Geology. (2025). Nevada precompetitive data survey 2025. https://pubs.nbmg.unr.edu/Nevada-Precompetitive-Data-Survey-2025-p/pds-2025.htm

geochemical surveys for challenging areas, and for areas potentially prospective for minerals added to the List of Critical Minerals in 2025.

A priority in 2026 and 2027 is to maximize the impact of the information collected to date by enhancing delivery systems to make raw data and interpretive products more rapidly and seamlessly available to industry and the public, thus better serving smaller private sector users and the permitting community. The increase will also expand the development of AI tools to support users in interpreting Earth MRI results and enhancing geologic mapping efforts.

Summary of Program Budget Changes Table: National Cooperative Geologic Mapping Program

Dollars in Thousands ($000)

Geology, Energy, and Minerals	2027 Request Change	FTE Change
National Cooperative Geologic Mapping Program		
National Cooperative Geologic Mapping Program Projects and 3D Geologic Mapping	-19,702	-40
TOTAL Program Changes	**-19,702**	**-40**

Justification of Program Budget: National Cooperative Geologic Mapping Program

Program Description

Geologic maps and models are essential to the country's economic prosperity, land management, and the energy and minerals industries; a recent cost benefit study by the American Geosciences Institute[2] indicates that geologic mapping provides a tenfold return on investment. Several sectors of the economy depend on geologic maps to guide business decisions and future investments. Under the National Geologic Mapping Act of 1992 (P.L. 102-285) and subsequent reauthorizations, the USGS National Cooperative Geologic Mapping Program (NCGMP) systematically produces detailed geologic mapping and three-dimensional models of the Earth's surface and subsurface at various scales, through robust partnerships with State Geological Surveys and universities. NCGMP delivers these products and maintains the country's official geologic map archive, the National Geologic Map Database (NGMDB). These maps and models are critical for assessing undiscovered energy and mineral resources, planning infrastructure investments, geotechnical engineering, hazard mitigation, and land use planning. Currently only about 20% of the country has been mapped in detail (scales equal to or more detailed than 1:24,000), about 30% of the country has been mapped at an intermediate scale of 1:100,000, and 75% of the country has been mapped at a regional (less detailed) scale of 1:250,000. Detailed mapping is particularly important for identifying energy and mineral resources and supporting infrastructure investments.

The NCGMP and the State Geological Surveys house most of the country's geologic mapping expertise, a crucial skillset for the country's energy, minerals, and infrastructure industries. The NCGMP leverages these skills to deliver more robust mapping products like the new Cooperative National Geologic Map that provides standardized, searchable geologic map information and a national perspective on the geology for energy and critical mineral deposits, likelihood of aggregate resource availability, and other

[2] Berg, R. C., & Faulds, J. E. (Eds.). (2025). *Economic analysis of the costs and benefits of geological mapping in the United States of America from 1994 to 2019.* American Geosciences Institute. https://doi.org/10.62322/wra5.gs9v

resources relevant to National security and economic development. The NCGMP has built up relationships that have sustained the State Geological Surveys' capacity in geologic mapping and matured the States' separate efforts into the current vision for a seamless, three-dimensional national geologic map. At a time when the country has been losing these skills, NCGMP also plays a pivotal role in training the next generation of geologic mappers through its EDMAP program.

In FY 2027, the NCGMP will support the following major components:

(1) **Federal geologic mapping component**: includes (a) FEDMAP, which conduct geologic mapping in the 50 U.S. States and overseas territories; and (b) the National Geologic Map Database (NGMDB), which is the official archive of the country's geologic maps. This Federal component provides the expertise and infrastructure to coordinate most geologic mapping activities in the United States. FEDMAP conducts geologic mapping in priority areas, unifies state maps into national databases and maps, and ensures coverage in States and/or Territories that do not have a mapping agency. FEDMAP also conducts mapping of military bases and other Federal lands. The NGMDB supports the mining, energy, and infrastructure industries, and various land-use planning entities, and is widely used with more than 200,000 unique users per month.

(2) **State geologic mapping component** (STATEMAP): supports State needs for detailed geologic map coverage of the country and addresses critical Administration priorities such as public safety, natural hazards, and infrastructure, as well as energy, mineral, and water resources, via cooperative agreements with State Geological Surveys.

(3) **Geologic mapping education component** (EDMAP): provides mentorship and training for the next generation of geologic mappers in the foundational skills of field-based geologic mapping, as well as geologic map data synthesis activities that involve technology-focused themes such as machine learning, remote sensing, and artificial intelligence. The purpose of EDMAP is to accelerate development of the country's geoscience workforce in response to Administration priorities.

Program Change Description

The 2027 budget request for the National Cooperative Geologic Mapping Program is $23,787,000 and 77 FTE, a program change of -$19,702,000 and -40 FTE from the 2026 enacted.

National Cooperative Geologic Mapping Program (-$19,702,000 / -40 FTE) – In FY 2027, the USGS will priorities FEDMAP activities that directly support State partners, including delivery of existing geologic maps and continuing to execute cooperative agreements for geologic mapping funded by the Earth Mapping Resources Initiative. The STATEMAP component will be focused on the activities that best support States needs and address critical Administration priorities such as public safety, natural hazards, and infrastructure. In FY 2027, the USGS will maintain funding for EDMAP at FY 2026 Enacted levels.

Summary of Program Budget Changes Table: National Geological and Geophysical Data Preservation Program

Dollars in Thousands ($000)

Geology, Energy, and Minerals	2027 Request Change	FTE Change
National Geological and Geophysical Data Preservation Program		
National Geological and Geophysical Data Preservation Program	+234	+0
TOTAL Program Changes	**+234**	**+0**

Justification of Program Budget: National Geological and Geophysical Data Preservation Program

Program Description

Under OMB Circular A–16, "Coordination of Geographic Information and Related Spatial Data Activities" (2002) and the Geospatial Data Act of 2018, the USGS is responsible for stewarding national geological, geophysical, and related earth science data. As part of this responsibility, the National Geological and Geophysical Data Preservation Program (NGGDPP) maintains collections of geological data that support Federal agencies, State Geological Surveys, tribal governments, academic institutions, and the energy and minerals industries. By preserving and making these high value data accessible, the NGGDPP reduces unnecessary duplication of effort, increases the efficiency of future data collection, and upholds principles of good government. Because the acquisition of geologic and geophysical information is often costly and logistically challenging, ensuring that existing datasets are discoverable and reusable maximizes return on past public and private investment while strengthening Federal-State coordination. In recent years in partnership with the State Geological Surveys, data preservation efforts through the NGGDPP have unlocked the discovery of new copper resources in Idaho and potash resources in Michigan, preserved an irreplaceable geologic collection in Alaska valued at $35 billion dollars, and preserved decades of hazard data that now inform Colorado's decision makers. States and industry often have legacy geologic and geophysical data and samples that are useful for solving today's challenges, including the need to secure domestic critical mineral supplies and identify undiscovered energy resources. Under the Energy Policy Act of 2005 and subsequent authorizations, the NGGDPP promotes the preservation and availability of geologic, geophysical and engineering data supporting national mapping initiatives.

Through grants to State Geological Surveys and funding for Interior bureaus, the program documents, modernizes, and archives these assets and makes them publicly accessible, providing an efficient, nonduplicative mechanism for collecting data that underpin national energy and mineral mapping efforts.

In 2027, the NGGDPP is prioritizing data preservation work that supports the identification of critical minerals and energy resources aligned with the Administration's priorities:

- EO 14154 *Unleashing American Energy* (1/20/2025)
- EO 14156 *Declaring the National Energy Emergency* (1/20/2025)

The NGGDPP manages two physical repositories that house the largest collection of rock core and cuttings available to the public. In addition, the NGGDPP maintains multiple digital repositories and catalogs that are heavily used by partner institutions and industry for applications ranging from mapping

to exploration. Specifically, NGGDPP catalogues include the Registry of Scientific Collections (ReSciColl), the National Index of Borehole Information (NIBI), and the USGS Geological Materials Repository. Together these resources are advancing collaboration across the State Geological Surveys and other partners and identifying new areas for modern data collection.

Program Change Description

The 2027 budget request for the National Geological and Geophysical Data Preservation Program is $1,734,000 and 2 FTE, a program change of +$234,000 and +0 FTE from the 2026 Enacted.

National Geological and Geophysical Data Preservation Program (+$234,000 / +0 FTE) – This increase funds the NGGDPP at the FY 2025 enacted level. The funding will support the critical national need for more accessible, transparent, and interactive geoscience data. With the proposed increase, the USGS will launch development of integrated data that unifies the Geology, Energy, and Minerals Mission Area's flagship geological, energy, and minerals datasets and delivers them through effective data tools. In 2027, the USGS will also explore options for streamlining data donations from industry, positioning the country to benefit from faster, more efficient incorporation of privately held geoscience information into the public domain and transforming how industry and government make data-driven decisions.

Activity: Natural Hazards

Natural hazards pose an ongoing threat to lives, property, and infrastructure, causing billions of dollars in damage each year across the United States. The Natural Hazards Mission Area (NHMA) carries out the USGS's Federal responsibility to deliver real-time warnings and situational awareness, long-term assessments, and targeted research on a wide range of hazards, including earthquakes, landslides, volcanic eruptions, coastal inundation and erosion, and geomagnetic storms. For hazards such as tsunamis and space weather, the NHMA directly supports the warning responsibility of the National Oceanic and Atmospheric Administration (NOAA), and other Federal or State agencies. The actionable scientific information provided by the USGS directly contributes to public safety, national security, and economic stability, enabling risk-informed decision making at all levels. The NHMA works closely with local, State, Tribal, territorial, and Federal partners, as well as private industry, to guide priorities and ensure that hazard science is timely, relevant, and effective. Through these collaborations, the USGS helps build a more resilient, hazard-ready country.

This activity also supports the following Executive and Secretary's Orders:

- EO 14239 *Achieving Efficiency Through State and Local Preparedness* (3/18/2025)
- EO 14308 *Empowering Commonsense Wildfire Prevention and Response* (6/12/2025)
- EO 14153 *Unleashing Alaska's Extraordinary Resource Potential* (1/20/2025)
- EO 14154 *Unleashing American Energy* (1/20/2025)
- EO 14156 *Declaring a National Energy Emergency* (1/20/2025)
- EO 14239 *Achieving Efficiency Through State and Local Preparedness* (3/18/2025)
- EO 14241 *Immediate Measures to Increase American Mineral Production* (3/20/2025)
- EO 14272 *Ensuring National Security and Economic Resilience Through Section 232 Actions on Processed Critical Minerals and Derivative Products* (4/15/2025)
- EO 14179 *Removing Barriers to American Leadership in Artificial Intelligence* (1/23/2025)
- EO 14285 *Unleashing America's Offshore Critical Minerals and Resources* (4/24/2025)
- EO 14303 *Restoring Gold Standard Science* (5/23/2025)
- EO 14307 *Unleashing American Drone Dominance* (6/6/2025)
- EO 14308 *Empowering Commonsense Wildfire Prevention and Response* (6/12/2025)
- EO 14338 *Improving Our Nation Through Better Design* (8/21/2025)
- SO 3423 *The Gulf of America* (2/7/2025

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Introductory Funding Table

Activity: Natural Hazards[1] (Dollars in Thousands)											
	2025 Actual		2026 Enacted		2027 Request						
Activity/Sub Activity/Program Element/Budget Element	**Budget Authority**	***FTE***	**Budget Authority**	***FTE***	**Fixed Costs (+/-)**	**Internal Transfers (+/-)**	**Program Changes ($)**	***Program Changes FTE (+/-)***	**Budget Authority**	***FTE***	**Change from 2026 Enacted**
Natural Hazards											
Earthquake Hazards	92,651	*254*	94,901	*241*	-30	-	-32,220	*-7*	62,651	*234*	-32,250
Volcano Hazards	37,500	*155*	37,500	*146*	-17	-	-7,983	*-6*	29,500	*140*	-8,000
Landslide Hazards	14,432	*62*	14,532	*61*	-6	-	-3,094	*-5*	11,432	*56*	-3,100
Global Seismographic Network	7,000	*9*	7,000	*9*	-	-	-3,500	-	3,500	*9*	-3,500
Geomagnetism	5,198	*15*	5,198	*14*	-	-	-1,000	-	4,198	*14*	-1,000
Coastal/Marine Hazards and Resources	39,345	*193*	41,000	*169*	-19	-2,510	-13,226	*-37*	25,245	*132*	-15,755
Total, Natural Hazards	**196,126**	***688***	**200,131**	***640***	**-72**	**-2,510**	**-61,023**	***-55***	**136,526**	***585***	**-63,605**

[1] Table does not include supplemental funding.

Summary of Program Budget Changes Table: Earthquake Hazards Program

Dollars in Thousands ($000)

Natural Hazards	2027 Request Change	FTE Change
Earthquake Hazards Program		
ANSS - AK EarthScope Stations	-3,000	+0
ANSS - ShakeAlert Earthquake Early Warning	-25,220	-5
ANSS - Geodetic Network Partners	-400	+0
ANSS - Deferred Maintenance	-700	+0
Statewide California Earthquake Center	-1,500	+0
National Seismic Hazard Model Improvements and Updates	-650	-2
Subduction Zone Science	-750	+0
TOTAL Program Changes	**-32,220**	**-7**

Justification of Program Budget: Earthquake Hazards Program

Program Description

A 2024 update to the National Seismic Hazard Model (NSHM) shows half of the U.S. population is at risk from potentially damaging earthquakes. Annualized earthquake losses to American infrastructure are estimated at $14.7 billion per year.[3] The USGS provides the scientific information, situational awareness, and knowledge necessary to reduce deaths, injuries, and economic losses from earthquakes and earthquake-induced tsunamis, landslides, and soil liquefaction.

The USGS Earthquake Hazards Program (EHP) is the applied Earth science component of the National Earthquake Hazards Reduction Program (NEHRP). Through NEHRP, the USGS partners with the Federal Emergency Management Agency (FEMA), National Science Foundation (NSF), and National Institute of Standards and Technology (NIST) to reduce earthquake losses in the United States. To affect loss reduction, the EHP supports a highly coordinated set of monitoring, hazards assessment, applied research, and risk translation and communication activities in at-risk regions nationwide. Through the National Earthquake Information Center (NEIC), the USGS is the only U.S. agency that continuously reports on current domestic and worldwide earthquake activity. Through the Advanced National Seismic System (ANSS), the USGS and its State and university partners monitor and report on earthquakes nationwide. Built on the ANSS, *ShakeAlert*, a west coast EEW system, can deliver seconds of advanced warning to people and systems ahead of earthquake shaking. In FY 2027, the USGS will, in cooperation with States and other partners, work to operate and maintain the *ShakeAlert* EEW system in certain high priority regions of the U.S. West Coast.

[3] Jaiswal, K.S., Rozelle, J., Tong, M., Sheehan, A., McNabb, S., Kelly, M., Zuzak, C, and Bausch, D.-2023, Hazus® estimated annualized earthquake losses for the United States: Federal Emergency Management Agency, FEMA P-366, 7 p.

Through the USGS NSHM, the EHP provides the basis for seismic provisions in the country's building codes, which affect nearly two trillion dollars' worth of new construction annually in the United States.[4] The USGS also issues timely aftershock forecasts following potentially damaging earthquakes within the United States and its Territories and provides similar forecasts following significant global earthquakes in support of Federal and international partners.

In FY 2027, the EHP will continue to provide universities, State geological surveys, and private institutions with earthquake hazards applied research grants and cooperative agreements in certain high-priority regions. This funding supports earthquake research in high-risk areas nationwide and contributes to the maintenance and operation of the ANSS.

Program Change Description

The 2027 budget request for the Earthquake Hazards Program (EHP) is $62,651,000 and 234 FTE, a program change of -$32,220,000 and -7 FTE from the 2026 enacted.

ANSS – *ShakeAlert* Earthquake Early Warning (-$25,220,000 / -5 FTE) – The 2027 budget funds the operation of the *ShakeAlert* system in high-priority regions. The budget eliminates funding going to external partners in California, Oregon, and Washington. This will require states that directly benefit from the program to contribute more to help cover the costs of operating and maintaining the system moving forward.

National Seismic Hazard Model Improvements and Updates (-$650,000 / -2 FTE) – Beginning in FY 2027, the USGS will continue to update the NSHM for the 50 States as scheduled but will align the NSHM updates for Puerto Rico and the U.S. Virgin Islands with the later schedule for other U.S. Territories.

ANSS – Alaska EarthScope Stations (-$3,000,000 / +0 FTE) – To address higher priorities, the budget does not request funding for this activity.

ANSS – Geodetic Network Partners (-$400,000 / +0 FTE) – To address higher priorities, the budget does not request funding for this activity.

ANSS – Deferred Maintenance (-$700,000 / +0 FTE) – To address higher priorities, the budget does not request funding for this activity.

Statewide California Earthquake Center (-$1,500,000 / +0 FTE) – To address higher priorities, the budget does not request funding for this activity.

Subduction Zone Science (-$750,000 / +0 FTE) – The USGS will maintain support for the highest priority research focused on subduction zone hazard characterization and risk reduction.

[4] U.S. Census Bureau. Press Release; U.S. Census Bureau, 2024. And USGS Circ 1544

Summary of Program Budget Changes Table: Volcano Hazards Program

Dollars in Thousands ($000)

Natural Hazards	2027 Request Change	FTE Change
Volcano Hazards Program		
National Volcano Early Warning System (NVEWS)	-2,000	+0
Volcanic Hazard Assessments	-5,983	-6
TOTAL Program Changes	**-7,983**	**-6**

Justification of Program Budget: Volcano Hazards Program

Program Description

There are approximately 170 potentially active volcanoes in the United States and its territories. Volcanic eruptions are among the most destructive natural phenomena and can have significant social and economic impacts. The mission of the USGS Volcano Hazards Program (VHP) is to enhance public safety and minimize social and economic disruption from volcanic unrest and eruption. Through the VHP, USGS scientists monitor active and potentially active volcanoes, assess the hazards they pose, and conduct targeted research to improve understanding of volcanic processes. This work allows the USGS to deliver timely hazard assessments, forecasts of potential impacts, activity alerts, warnings, and other critical information to authorities and the public. These products help emergency responders, land managers, and communities take actions that reduce risks to life, property, and infrastructure.

The USGS has evaluated the country's volcanoes to determine the level of monitoring needed based on the threats they pose. To address these needs, the USGS is implementing the National Volcano Early Warning System (NVEWS), which ensures that monitoring capabilities are commensurate with volcanic threat. This enables scientists to improve the timeliness and accuracy of hazard warnings, enabling communities to take early and effective action to reduce risk. NVEWS focuses on enhancing the ability of scientists and response organizations to address volcanic eruptions by: (1) expanding partnerships with local governments and emergency responders; (2) advancing automation to improve 24/7 volcano monitoring; and (3) developing modern, integrated systems to deliver data to operational scientists, responding agencies, and the public.

As part of NVEWS in FY 2027, the VHP will ensure that monitoring stations are maintained and networks on the country's highest-threat volcanoes remain operational. The VHP will also continue efforts to address issues related to geothermal energy, critical minerals, and the use of AI to improve monitoring and forecasting capabilities.

The VHP is primarily implemented by the USGS Volcano Science Center (VSC), which operates five volcano observatories in partnership with State and academic entities. The observatories are organized into distinct geographic areas of responsibility:

- Hawaiian Volcano Observatory – Hawaii and American Samoa
- Cascades Volcano Observatory – Idaho, Oregon, and Washington
- Alaska Volcano Observatory – Alaska and the Commonwealth of the Northern Mariana Islands
- California Volcano Observatory – California and Nevada

- Yellowstone Volcano Observatory – Arizona, Colorado, Montana, New Mexico, Utah, and Wyoming

Under the leadership of the VSC, each observatory is responsible for volcano monitoring, community preparedness (including the development and regular practice of volcano hazard emergency response plans), managing volcanic crises, and coordinating research in its area of responsibility.

Program Change Description

The 2027 budget request for the Volcano Hazards Program (VHP) is $29,500,000 and 140 FTE, a program change of -$7,983,000 and -6 FTE from the 2026 enacted.

National Volcano Early Warning System (-$2,000,000 / +0 FTE) – In FY 2027, the VHP will continue to maintain monitoring capacities at the highest threat volcanoes and critical emergency response capabilities. The USGS will continue support for State surveys and universities to conduct monitoring of volcanoes as part of NVEWS implementation, though at a reduced level. Additionally, USGS will prioritize efforts related to geothermal energy and critical minerals in volcanic settings and the use of AI and ML to detect and forecast volcanic events.

Volcano Hazard Assessments (-$5,983,000 / -6 FTE) – In FY 2027, the USGS will focus assessment work on modernizing hazard assessments from dated paper versions where projects are near completion.

Summary of Program Budget Changes Table: Landslide Hazards Program

Dollars in Thousands ($000)

Natural Hazards	2027 Request Change	FTE Change
Landslide Hazards Program		
Landslide Hazard Assessments in Alaska	-1,844	-4
Cooperative Landslide Hazards and Assessment Competitive Grant Program	-1,000	-1
Actionable Landslide Hazard Data and Science	-250	+0
TOTAL Program Changes	**-3,094**	**-5**

Justification of Program Budget: Landslide Hazards Program

Program Description

Landslides occur in all 50 States and many territories, threatening lives, property, and infrastructure. Widespread landslides can accompany big storms or earthquakes, impacting broad areas and hindering rescue and recovery efforts. For example, in 2024, rainfall associated with Hurricane Helene generated thousands of landslides across southern Appalachian States causing loss of life, impacting transportation and other lifelines, and hampering response, recovery, and rebuilding. The USGS Landslide Hazards Program (LHP) is the only Federal program dedicated to landslide hazard science and conducts targeted studies to understand landslide initiation and mobility processes. This understanding is used to (1) develop methods and models for landslide hazard assessment, (2) develop and deploy systems to monitor threatening landslides, and (3) develop methods and tools for landslide early warning and situational awareness. Program activities are targeted toward the types of landslides that result in human and economic losses in the United States, such as those with long travel distances, those initiated by heavy rainfall, and those exacerbated by the effects of wildfire. The USGS assists Federal, State, and local

agencies through landslide site evaluations and provides strategies for reducing ongoing and future impacts from landslides. The LHP deploys near-real-time monitoring systems at active landslide sites to gather continuous movement, rainfall, and hydrologic data needed to understand the mechanisms of landslide occurrence and mobility and forecast future behavior. Such data and understanding form the scientific underpinnings for early warning of conditions that may trigger landslides.

The LHP began cooperative work with the National Weather Service (NWS) in 2005 to deliver alerts for debris flows from recently burned areas in southern California. Since then, this limited-scale project has provided essential guidance to emergency, land, and transportation managers for burned areas in the U.S. In FY 2027, the LHP will continue to build on recent scientific advances to expand the project to other parts of the U.S. to meet the intent of the National Landslide Preparedness Act.

In 2021, the National Landslide Hazard Preparedness Act was enacted and directs the Secretary of the Interior, acting through the Director of the USGS, to establish a program to identify risks and hazards from landslides, reduce losses, protect communities at risk, and improve communication and emergency preparedness. In response, the USGS published a National Strategy for Landslide Loss Reduction and formed an Interagency Coordinating Committee on Landslide Hazards. In FY 2027, the Interagency Committee will support the implementation of the National Landslide Hazard Preparedness Act.

The USGS is working to develop and deliver actionable landslide hazard and risk modeling with an emphasis on areas recently burned by wildfire. The USGS is also continuing efforts to meet requirements set out in the National Landslide Preparedness Act by developing Federal capacity to deploy scientists and assets that can provide technical assistance to Federal land managers, State geological surveys, and State and local emergency management. Work is being conducted in partnership with technical expertise from State, academic, and private sectors and data and products and will benefit land and emergency managers at all levels as well as the general public across the United States and Territories with landslide risk.

In FY 2027, the LHP will continue to collect data and conduct analyses to assess the landslide hazard in southeast Alaska and continue surveilling landslide movement of the unstable slopes at the terminus of the Barry Glacier to inform the National Tsunami Warning Center and land and emergency managers of potential hazards.

Program Change Description

The 2027 budget request for the Landslide Hazards Program (LHP) is $11,432,000 and 56 FTE, a program change of -$3,094,000 and -5 FTE from the 2026 enacted.

Landslide Hazard Assessments in Alaska (-$1,844,000 / -4 FTE) – The 2027 budget continues efforts to support NOAA's National Tsunami Warning Center and will maintain the highest-priority assessment work. In FY 2027, work will be focused on the landslides in Barry Arm and determining recent landslide movement history, field investigations in cooperation with the State, delivery of preliminary landslide and tsunami model results, and developing a longer-term monitoring and hazard assessment strategy. Data collection and monitoring of rainfall conditions in Southeast Alaska to evaluate landslide threat will continue.

Cooperative Landslide Hazards and Assessment Competitive Grant Program (-$1,000,000 / -1 FTE) – To address higher priorities, the budget does not request funding for this activity.

Actionable Landslide Hazard Data and Science (-$250,000 / +0 FTE) – The USGS will continue the highest-priority work, maintaining delivery of postfire debris-flow hazard assessments and other landslide hazard science objectives described in the National Strategy.

Summary of Program Budget Changes Table: Global Seismographic Network Program

Dollars in Thousands ($000)

Natural Hazards	2027 Request Change	FTE Change
Global Seismographic Network Program		
GSN Station Operations	-2,500	+0
GSN Upgrades	-1,000	+0
TOTAL Program Changes	**-3,500**	**+0**

Justification of Program Budget: Global Seismographic Network Program

Program Description

The Global Seismographic Network (GSN) is a network of over 100 globally distributed high-quality seismic stations, approximately two-thirds of which are currently operated by the USGS. The GSN is a partnership between the USGS and the NSF and is implemented in collaboration with the EarthScope Consortium and many other entities. It provides the highest-quality real-time seismic data needed for global earthquake alerts and situational awareness products, tsunami warnings, national security (through nuclear test treaty monitoring and research), seismic hazard assessments and earthquake loss reduction, as well as research on earthquake sources and the structure and dynamics of the Earth.

GSN stations transmit real-time data continuously to the USGS NEIC in Golden, CO, where that data is used to rapidly determine the locations, depths, magnitudes, and other parameters of earthquakes worldwide, in conjunction with data from other networks. An additional important aspect of GSN activities is evaluating, developing, and advancing new technologies for seismic instrumentation, sensor installation, and seismic data acquisition and management.

GSN operation is accomplished in cooperation with domestic and international partners who, in most cases, provide facilities to shelter the instruments and personnel to oversee the security and operation of each station. USGS responsibilities include station maintenance and upgrades, overseeing telecommunications, troubleshooting problems and providing major repairs, conducting routine service visits, training station operators, providing limited financial aid in support of station operations at sites lacking a host organization, and ensuring data quality and completeness.

In FY 2027, the USGS will continue to provide high-quality real-time seismic data through the GSN, prioritizing sites that meet the needs of national risk reduction activities.

Program Change Description

The 2027 budget request for the Global Seismographic Network (GSN) is $3,500,000 and 9 FTE, a program change of -$3,500,000 and +0 FTE from the 2026 enacted.

GSN Station Operations (-$2,500,000 / +0 FTE) – The USGS will continue to provide high-quality real-time seismic data through approximately 60 percent of the USGS-operated GSN stations which is

needed for: earthquake alerts and situational awareness products; tsunami warnings (via NOAA); national security (Department of War (DOW) and DOE, through nuclear test ban treaty monitoring and research); seismic hazard assessments and earthquake risk reduction; and research on earthquake sources and the structure and dynamics of the Earth. Continued stations will be those that best support GSN monitoring objectives with sites prioritized based on spatial redundancy, quality, site accessibility, and the site's value in characterizing earthquakes in support of domestic risk reduction activities.

GSN Station Upgrades (-$1,000,000 / +0 FTE) – To address higher priorities, the budget does not request funding for this activity.

Summary of Program Budget Changes Table: Geomagnetism Program

Dollars in Thousands ($000)

Natural Hazards	2027 Request Change	FTE Change
Geomagnetism Program		
Expansion of Magnetometer Observatories	-1,000	+0
TOTAL Program Changes	**-1,000**	**+0**

Justification of Program Budget: Geomagnetism Program

Program Description

The Geomagnetism Program provides data and information on short-term and long-term variations in the strength and direction of the Earth's magnetic field, including the intensity of magnetic storms. These data and information are provided through operation of a network of geomagnetic observatories and research and analyses related to geomagnetic hazards that threaten the economy and national security. Magnetic storms, caused by interactions between the Earth's magnetic field and the Sun, can produce beautiful auroras but can also disrupt electric-power grids and communications, reduce GPS accuracy, affect satellite operations, enhance radiation levels for astronauts and high-altitude pilots, and interfere with directional drilling for oil and gas.

The Geomagnetism Program provides real-time data to Federal agencies, oil drilling services companies, geophysical surveying companies, and several international partners, including the International Real-time Magnetic Observatory Network (INTERMAGNET), an organization with a worldwide membership drawn from institutes operating geomagnetic observatories who coordinate geomagnetic monitoring around the world. Data, products, and services from the USGS are also used by the electric-power industry to evaluate geomagnetic storm risk.

The USGS operates 14 geomagnetic observatories across the U.S. (six in the contiguous States), supporting NOAA's Space Weather Prediction Center (SWPC), the U.S. Air Force 557th Weather Wing, and numerous other customers and Federal agencies. For example, USGS observatory data are used by NOAA's SWPC, and by the U.S. Air Force, for issuing geomagnetic warnings and forecasts. The Program also operates over 40 variometer geomagnetic stations, co-located with USGS Earthquake Hazards Program monitoring sites. USGS geomagnetism research is conducted in collaboration with the Colorado School of Mines and Federal partners. The USGS also works with private entities that are affected by space weather and geomagnetic activity, including electric-power grid companies and the oil and gas

drilling industries. In the oil and gas industry, for example, drill operators need to know the exact direction that their drill bits are going to maximize oil production and avoid collisions with other wells. One way to accomplish this is to install a magnetometer—a sort of modern-day "compass"—in a drill-string instrument package that follows the drill bit. Simultaneous measurements of the magnetic field in the drill hole are combined with those monitored by the USGS to produce a highly accurate estimate of the drill bit position and direction.

The USGS works with Federal partners to produce hazard maps of the induced electric field in the crust due to geomagnetic storms. These results, now incorporated into a real time product, will help power-grid companies improve the resilience of their systems to magnetic storms, as required by the Federal Energy Regulatory Commission (FERC). Power grid operators will use these results to design mitigation strategies for geomagnetic storms, and the space weather alerting agencies will use the resulting electric field model to issue improved forecasts and nowcasts for space weather alerts. The Geomagnetism Program will continue magnetotelluric (MT) survey efforts, building upon a national survey of the conterminous United States. This work targets improving U.S. electrical grid resilience, improving forecast models for geomagnetic storms, and aids in mineral resource assessments. FY 2027 efforts will focus on areas of highest geoelectric hazard identified in the national survey. Collection of this MT data is critical for modeling the Earth's electric field, used to assess the impact of electrical storms.

Program Change Description

The 2027 budget request for the Geomagnetism Program is $4,198,000 and 14 FTE, a program change of -$1,000,000 and +0 FTE from the 2026 enacted.

Expansion of Magnetometer Observatories (-$1,000,000 / +0 FTE) – To address higher priorities, the budget does not request funding for this activity.

Summary of Program Budget Changes Table: Coastal/Marine Hazards and Resources Program

Dollars in Thousands ($000)

Natural Hazards	2027 Request Change	FTE Change
Coastal/Marine Hazards and Resources Program		
National Marine/Coastal Hazard Response Infrastructure and Mapping	-7,181	-13
Valuation and Monitoring of Coastal Natural Infrastructure	-6,045	-14
TOTAL Program Changes	**-13,226**	**-27**

Justification of Program Budget: Coastal/Marine Hazards and Resources Program

Program Description

The Coastal/Marine Hazards and Resources Program (CMHRP), the only Federal science program focused on the geology and processes of coastal and marine landscapes, provides scientific information, applications, and tools to support public safety, development, economic growth, and resource management across the country's deep seas to its coasts. With 40 percent of the United States population

residing near the coastline,[5] USGS's unique capabilities and expertise address the country's needs for coastal and marine science-based products on a national scale in supporting the priorities and objectives of the Administration, Interior and other Federal agencies. In FY 2027, the CMHRP projects will provide information to Federal partners, local officials, resource managers, emergency personnel, and other ocean and coastal stakeholders that supports public safety and national security efforts related to the risks associated with natural disasters and other disruptions. Coastal changes due to storms, changes in sediment supply, human alterations, and long-term cumulative changes pose substantial risk to communities across the country. The USGS is the primary Federal provider of information used to anticipate and respond to physical change along our country's coasts and the consequences of geologic and oceanographic processes causing coastal change that impacts communities, coastal and offshore infrastructure, and resources. USGS operational, real-time forecasts of erosion and coastal inundation for all weather conditions, including coastal storms and hurricanes, provide the public with reliable, nationally consistent guidance on pending threats to coastal communities. To address needs related to long term planning for resilient coasts, USGS scientists assess past changes such as land loss, erosion, and flooding, and develop projections of future changes due to extreme storms and coastal change that result from longer-term processes, as well as their impacts on coastal environments and communities.

In FY 2027, the CMHRP will maintain scientific studies and assessments of coastal hazard impacts to protect the country's people, environment, and infrastructure from short- and long-term coastal and marine hazards. USGS assessments of marine environments and potential geohazards – such as submarine earthquakes and landslides – provide critical information that helps Federal partners, resource managers and other stakeholders identify and prepare for potential future hazards as well as reduce risk to offshore operations, coastal communities, and infrastructure. Ocean observations, marine mapping expertise, and engineering capabilities are utilized in both rapid response and repeated surveys that characterize continental shelf, slope and deep-sea geology and processes, identify marine-sourced earthquake and landslide hazards, and inform the development of offshore energy, critical mineral resources, and other resource needs. This CMRHP expertise will continue to support Administration efforts to develop the country's critical mineral supplies and energy resources in collaboration with the USGS Geology, Energy and Minerals Mission Area for research on marine minerals and gas hydrates assessments.

Program Change Description

The 2027 budget request for the Coastal/Marine Hazards and Resources Program (CMHRP) is $25,245,000 and 132 FTE, a program change of -$13,266,000 and -27 FTE from the 2026 enacted.

National Marine/Coastal Hazard Response Infrastructure and Mapping (-$7,181,000 / -13 FTE) – The 2027 budget will maintain rapid response capacities for coastal disasters at one of three coastlines (Pacific, Gulf of America, Atlantic). In addition, the USGS will continue to support deep-sea deployments, and in-progress assessments on active offshore faults and seismic research, but at a reduced capacity. The USGS will continue technical support for forecasts of hurricane impacts to coastlines, and seafloor mapping efforts in highest priority areas and for at risk population centers. In FY 2027, seafloor mapping will be confined to locations where partner support exists, providing seafloor characterization

[5] National Oceanic and Atmospheric Administration. Economics and Demographics. https://coast.noaa.gov/states/fast-facts/economics-and-demographics.html

information to inform protection of offshore energy and communications infrastructure, and maritime transportation safety and security.

Valuation and Monitoring of Coastal Natural Infrastructure (-$6,045,000 / -14 FTE) – In 2027, the CMRHP will continue its highest-priority work, maintaining products that forecast event-based and long-term coastal hazard impacts, continuing to develop models that end users can deploy independently for their own assessments, and delivering actionable information for Interior and other Federal decision-makers. In addition, the budget will retain capacity to support collaborative efforts with the Department of War.

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Activity: Water Resources

The USGS Water Resources Mission Area (WMA) is the country's primary source of water information. That information is used by water decisionmakers at all levels (Federal, State, Tribal, and municipal) to respond to and manage a wide range of issues, such as minimizing loss of life and property from floods and droughts; protecting human health from water-borne contaminants and diseases; assuring adequate supplies of clean water for drinking, agricultural, commercial, industrial, mining, data centers, and recreational water uses; and supporting local, regional and National infrastructure projects. To adequately meet these many demands for water information the mission area focuses on observing, understanding, predicting, and delivering information on the country's water resources. Observations include stream gaging, water quality sampling, and groundwater monitoring. Understanding those observations is part of the research to assess water conditions and develop models and sensors. Prediction uses understanding to forecast scenarios of water conditions. Delivery includes databases, web applications, and visualizations that disseminate this work to the public. Collectively, these efforts contribute to sustainable stewardship and development of the country's resources for the benefit of present and future generations. This activity also supports Administration's priorities reflected in EOs and Presidential Memoranda (PM):

- EO 14154 *Unleashing American Energy* (1/20/25)
- EO 14156 *Declaring a National Energy Emergency* (1/20/25)
- EO 14179 *Removing Barriers to American Leadership in Artificial Intelligence* (1/31/25)
- EO 14210 *Implementing the President's "Department of Government Efficiency" Workforce Optimization Initiative* (2/14/25)
- EO 14241 *Immediate Measures to Increase American Mineral Production* (3/20/25)
- EO 14303 *Restoring Gold Standard Science* (5/29/25)
- PM *Protecting the Great Lakes from Invasive Carp* (5/9/25)

In FY 2027, the WMA will focus on the following science priorities:

- ***Advancing USGS water observing systems.*** The USGS will continue to operate and maintain the highest priority Next Generation Water Observing System (NGWOS) monitoring infrastructure in select basins while continuing to work with the private sector to advance water observing techniques, methods, and instrumentation for eventual migration into our national monitoring networks to expand the availability of water data. In addition, the USGS will continue to operate its National Streamgaging Network of over 12,000 gages in cooperation with more than 1,500 partners. As part of the Streamgaging Network, the USGS will support approximately 3,430 locations in the Federal Priority Streamgage Network, which provide long-term, real-time water data at locations that meet National needs for forecasting/operations, water rights/compacts/decrees, and tracking sentinel trends and extremes.
- ***Advancing water availability information for decision making***. The USGS will continue to invest in nationally consistent approaches for assessing and predicting water conditions, changes, and future scenarios that improve the country's understanding of water availability. These efforts are designed to inform decisions to meet the needs of humans and sustainability of ecosystems through predictive modeling and tools for decision support. Models utilizing AI methods are used to increase efficiency and accuracy in predicting water quantity, quality, and use, an essential task given the nearly 5 trillion gallons of water moving daily through the country's waterways, farmlands, cities, and energy infrastructure. At the national scale, the USGS is advancing this

work through the next report, version 1b, of the National Water Availability Assessment, which will incorporate historical trends, improve predictions of water quantity and quality, refine models of water use across multiple categories reported by USGS and include regional synopses. Collectively, these efforts strengthen the ability of decision makers to anticipate water challenges and ensure sustainable management of this critical resource. The assessment depends on the USGS National Water Census (NWC). The NWC provides nationally consistent, well-documented information and data on modeled historical and projected water quantity, quality, and use.

- ***Cooperative Matching Funds (CMF).*** The USGS is increasing its investment in CMF, a unique subset of funds that support WMA cooperative science efforts with partners. Required by law to be matched at least 50:50 by State, local, or Tribal partners, CMF is matched by over 1,800 of these partners to monitor and assess water resources in every State, and U.S. protectorate and territory. CMF are found in all three budget programs: Water Availability and Use Science (WAUSP); Groundwater and Streamflow Information (GWSIP); and National Water Quality (NWQP). In 2027, water resources CMF is funded at $68.4 million. In the WAUSP, CMF will support a variety of projects with a focus on water resource availability and use. Additional CMF is proposed in the GWSIP to support projects focused on data collection (i.e., monitoring streamflow or groundwater levels) or water hazards (e.g., flood and low-flow frequency studies, flood inundation mapping, short-term, rapid-deployment monitoring networks). NWQP CMF efforts include water-quality monitoring; studies related to water quality, per- and poly-fluoroalkyl substances (PFAS), pesticides, and harmful algal blooms. CMF provides comprehensive, timely, and reliable water information to Federal, State, Tribal, and local resource managers tasked with making decisions relating to water management and policy and ensuring the availability of safe, high-quality water supplies for their local communities.

Introductory Funding Table

Activity: Water Resources[1] *(Dollars in Thousands)*											
	2025 Actual		2026 Enacted		2027 Request						
Activity/Sub Activity/Program Element/Budget Element	**Budget Authority**	***FTE***	**Budget Authority**	***FTE***	**Fixed Costs (+/-)**	**Internal Transfers (+/-)**	**Program Changes ($)**	***Program Changes FTE (+/-)***	**Budget Authority**	***FTE***	**Change from 2026 Enacted**
Water Resources											
Water Availability and Use Science Program	67,296	*354*	67,296	*172*	-29	-	-24,845	*-68*	42,422	*104*	-24,874
Groundwater and Streamflow Information Program	109,976	*449*	110,976	*263*	-44	-	-5,885	*+6*	105,047	*269*	-5,929
National Water Quality Program	96,000	*376*	94,500	*274*	-48	-	-14,832	*-46*	79,620	*228*	-14,880
Water Resources Research Act Program	15,500	*1*	16,000	*1*	-	-	-16,000	*-1*	-	-	-16,000
Total, Water Resources	**288,772**	***1,180***	**288,772**	***710***	**-121**	**-**	**-61,562**	***-109***	**227,089**	***601***	**-61,683**

[1] Table does not include supplemental funding.

Summary of Program Budget Changes Table: Water Availability and Use Science Program

Dollars in Thousands ($000)

Water Resources	2027 Request Change	FTE Change
Water Availability and Use Science Program		
Integrated Water Availability Assessments	-6,024	-18
Water Use Withdrawal Models and Applied Research	-1,221	-8
Integrated Water Prediction (Modeling, Tools, and Decision Support Systems)	-5,153	-16
Water Cycle Components for Management of Water Resources	-3,947	-18
Hydrologic Science Talent Pipeline	-2,000	+0
U.S.-Mexico Transboundary Aquifer Assessment Project (TAAP)	-1,500	-1
OpenET	-3,500	-7
Early Career Training & Development Program	-1,500	+0
TOTAL Program Changes	**-24,845**	**-68**

Justification of Program Budget: Water Availability and Use Science Program

Program Description

In FY 2027, the Water Availability and Use Science Program (WAUSP) will continue its investments in applications, assessments, and research that improve the country's understanding of water availability. WAUSP accomplishes this through the determination of the quantity and quality of water available in the U.S., identifying long-term trends in water availability, and future scenarios of water for future economic, energy production, and environmental uses. The models and assessments include impacts of extreme events, such as flooding and drought for use in future long-term planning to protect life and property through decisions on infrastructure, emerging water quality issues, and water supply. The WAUSP also supports development of methods to detect and measure water-quality components. Measuring these components and using them for more accurate models improves our capacity to predict modern water challenges like harmful algal blooms, perfluorinated compounds (PFAS), and microplastics to help inform water management decisions and policy.

Program Change Description

The 2027 budget request for Water Availability and Use Science Program is $42,422,000 and 104 FTE, a program change of -$24,845,000 and -68 FTE from the 2026 enacted.

Integrated Water Availability Assessments (-$6,024,000 / -18 FTE) – IWAAs are assessments that interpret and deliver information of the NWC and that will provide periodically updated predictions of water availability. At a national scale, the USGS will continue delivering two primary products in FY 2027, a web-based product that conveys simulated water conditions and trends across the U.S. and a regularly recurring 5-year National Water Availability Assessment Report (National Report). Version 1a of the assessment was delivered in early 2025, and the USGS will continue working to deliver the next report, version 1b, of the National Water Availability Assessment in late 2026. Version 1b will include historical trends, improve predictions of water quantity and quality, and link to water use for additional categories of use reported by USGS.

Water Use Withdrawal Models and Applied Research (-$1,221,000 / -8 FTE) – The USGS is developing nationally consistent models of water use, which enable the bureau to report monthly historical and future water use estimates. The requested funding will allow the USGS to continue reporting industrial, mining, domestic self-supplied, aquaculture, and livestock water withdrawals. The USGS will also continue to use AI/ML to develop estimates and identify, evaluate, and predict changes in water availability and forecast the onset, severity, and duration of hydrologic drought.

Integrated Water Prediction (-$5,153,000 / -16 FTE) – The Integrated Water Prediction (IWP) program is a dedicated effort that helps to scale up and operationalize water models using a consistent framework, software architecture, and standards. In FY 2027, this will include model applications to simulate streamflow and major reservoirs. Additional efforts will include support for benchmarking information to improve predictions, development of required model input datasets, workflows for models, calibration techniques, and flood frequency estimates.

Water Cycle Components (-$3,947,000 / -18 FTE) – Through its research activities, the USGS expands understanding of the variables that drive water availability. Topics of study are selected based on their ability to improve USGS assessments. In FY 2027, the USGS will continue research focused on understanding relevant economic drivers of water availability, as well as AI and statistically-based models of water-quantity-related water cycle components caused by extreme events (e.g., flooding, drought). The USGS will continue to integrate this information into larger models and assessments.

Hydrologic Science Talent Pipeline (-$2,000,000 / +0 FTE) – To address higher priorities, the budget does not request funding for this activity.

U.S.-Mexico Transboundary Aquifer Assessment Project (TAAP) (-$1,500,000 / -1 FTE) – To address higher priorities, the budget does not request funding for this activity.

OpenET (-$3,500,000 / -7 FTE) – To address higher priorities, the budget does not request funding for this activity.

Early Career Training and Development Program (-$1,500,000 / +0 FTE) – To address higher priorities, the budget does not request funding for this activity.

Summary of Program Budget Changes Table: Groundwater and Streamflow Information Program

Dollars in Thousands ($000)

Water Resources	2027 Request Change	FTE Change
Groundwater and Streamflow Information Program		
Next-Generation Water Observing System	-8,456	-23
National Groundwater Monitoring Network	-900	+0
Integrated Water Science Basin Coordinators	-120	-1
Transboundary Water-Quality Streamgages and Assessments	-3,870	-12
Base Cooperative Matching Funds	+4,000	+27
Federal Priority Streamgages	+1,715	+6
Ohio River Supergages	-500	-2
Klamath Basin Water Availability Activities	-2,536	-3
National Support for Observing Network Operations	+2,831	+7
National Support for Data System Operations	+3,951	+7
Hydrologic Science Talent Pipeline	-2,000	+0
TOTAL Program Changes	**-5,885**	**+6**

Justification of Program Budget: Groundwater and Streamflow Information Program

Program Budget Narrative Description

In FY 2027, the Groundwater and Streamflow Information Program (GWSIP) will continue its long-term operations around the collection, management, and dissemination of high-quality and reliable water information in real-time and over the long-term. The information is critical for managing the country's water resources and anticipating and responding to water hazards that can result in loss of life and property. Serving as one of the largest water data holders in the world, the USGS partners with more than 1,500 Federal, regional, State, Tribal, and local agencies to maintain and manage its water monitoring networks for decisions such as emergency response, flood forecasting, reservoir management, water-use restrictions, drinking water deliveries, permit compliance, water-quality studies, and recreational safety. The long-term data supplied by the program are a critical component to sustaining the viability of industries such as agriculture, fishing, and outdoor recreation and are used for decisions related to water-supply planning, aquifer storage and recovery, infrastructure design, floodplain and ecosystem management, energy development, and resolution of water disputes.

Program Change Description

The 2027 budget request for Groundwater and Streamflow Information Program is $105,047,000 and 269 FTE, a program change of -$5,885,000 and +6 FTE from the 2026 enacted.

Base Cooperative Matching Funds (+$4,000,000 / +27 FTE) – GWSIP CMF is primarily used to support annual operation and maintenance costs of streamgages, so increased funding will allow the USGS to significantly expand water monitoring networks critical to flood forecasting and warning operations at a lower cost to the Federal government. In fact, 55 percent of the National Streamgage

Network is funded by these funding partnerships. USGS streamgages are critical to flood forecasting and warning operations. The data from USGS streamgages are used to generate increasingly accurate, advance warnings that can reduce the total amount of damage and loss of life during a flood event. Additional GWSIP Cooperative Matching Funds will facilitate increasing the number of cooperatively funded streamgages and leverage new monitoring instrumentation and techniques, including remote sensing, to expand the collection and delivery of water data across the country.

Federal Priority Streamgages (+$1,715,000 / +6 FTE) – The Federal Priority Streamgage (FPS) network is a subset of the National Streamgage Network and is designed to be a core, federally funded network to address long-term Federal information needs, such as forecasting floods, drought and providing appropriate emergency notifications. The data from USGS streamgages are used to generate increasingly accurate, advance warnings that can reduce the total amount of damage and loss of life during a flood event. With about 12,300 eligible sites, the FPS network is also used to regulate interstate and international water compacts and decrees and identify and track indicators of hydrologic change. These FPS sites are supported through a combination of USGS and local, State, and Federal partner funding. This funding increase will allow for 1) continued operation of the current network without any reductions in FPS sites from expected increases in operations and maintenance costs, 2) flood-hardening of select existing FPS sites and 3) installation of approximately 60 new Federal Priority Streamgage sites to the network in priority flood-prone areas.

National Support for Observing Network Operations (+$2,831,000 / +7 FTE) – The mission of USGS water observing networks is to strategically enhance and expand the spatial and temporal collection of high-quality water observations to address National and local needs by providing national-level technical support, developing policies and procedures for consistent data collection and science delivery, and brings efficiencies to water data collection. This increase will allow USGS to use AI approaches to guide field operations by implementing new technology/methods to conduct remote sensory verifications and water measurements. These AI approaches and new technology/methods could enable more efficient network operation and allow USGS hydrologic technicians to maintain more monitoring locations.

National Support for Data System Operations (+$3,951,000/ +7 FTE) – This activity ensures that USGS monitoring activities are supported by necessary IT and operational infrastructure. Support includes sustaining and evolving secure enterprise IT data systems that can manage data collection operations and ingest, process, store, and deliver high-quality water observations. In FY 2027, the USGS will use new AI approaches to automate most aspects of water-data quality assurance/quality control (QA/QC) processes, allowing the USGS to operate more efficiently. Increased IT operational support will monitor and address issues with data delivery to limit National Water Information System (NWIS) downtime.

Next Generation Water Observing System (-$8,456,000 / -23 FTE) – The Next Generation Water Observing System (NGWOS) supports the research and development of water observing methods and instrumentation. USGS has been working internally as well as with universities and the private sector to identify, develop, and evaluate innovative water monitoring technologies and methods. Through these activities, the USGS is working to cost-effectively expand the amount of water data available for the country to facilitate expanded/improved flood and drought prediction/warning and more informed decision making associated with water availability for public supply, energy and mineral development/production, flood control, irrigation, industry, navigation and recreation. In FY 2027, the

USGS will continue to operate and maintain the highest priority NGWOS monitoring infrastructure in the existing NGWOS basins. The USGS will also continue to work with the private industry to advance water observing techniques, methods, and instrumentation for eventual integration into USGS national monitoring networks.

National Groundwater Monitoring Network (NGWMN) (-$900,000 / +0 FTE) – In FY 2027, the USGS will continue to support access to water-level and/or water-quality data from more than 20,000 groundwater wells that are provided by over 45 Federal, State, local, and Tribal agencies. The USGS will also continue to support 185 federally-funded groundwater monitoring sites as reauthorized in the 2024 WATER Data Improvement Act (PL 118-174).

Integrated Water Science Basin Coordinators (-$120,000 / -1 FTE) – To address higher priorities, the budget does not request funding for this activity.

Transboundary Water-Quality Streamgages and Assessments (-$3,870,000 / -12 FTE) – To address higher priorities, the budget does not request funding for this activity.

Ohio River Supergages (-$500,000 / -2 FTE) – To address higher priorities, the budget does not request funding for this activity.

Klamath Basin Water Availability Activities (-$2,536,000 / -3 FTE) – The budget maintains support for approximately eight priority streamgages in the Klamath Basin.

Hydrologic Science Talent Pipeline (-$2,000,000 / +0 FTE) – To address higher priorities, the budget does not request funding for this activity.

Summary of Program Budget Changes Table: National Water Quality Program

Dollars in Thousands ($000)

Water Resources	2027 Request Change	FTE Change
National Water Quality Program		
National Groundwater Quality Network	-550	-1
SW Quality Monitoring Network	-2,000	-7
National Atmospheric Deposition Network	-1,378	-5
Integrated Water Availability Assessments	-2,260	-10
Integrated Water Science Basin Coordinators	-120	-1
Invasive Carp	+11,000	+46
Base Cooperative Matching Funds	-2,150	-7
National Support for Observing Network Operations	-3,465	-19
Water Prediction and Information Delivery	-6,540	-19
National Support for Water Quality Science	-7,369	-23
TOTAL Program Changes	**-14,832**	**-46**

Justification of Program Budget: National Water Quality Program

Program Description

To effectively manage the country's water resources, decision makers depend on understanding what resources are available for various purposes, and whether the quality of those resources is fit for purpose. The National Water Quality Program (NWQP) supports the data collection, assessments, and modeling needed to quantify the quality of freshwater resources. The long-term data, assessments, and models supported by the NWQP are used for decisions related to water-supply planning, aquifer storage and recovery, infrastructure design, floodplain management, energy development, and water dispute resolutions.

Program Change Description

The 2027 budget request for National Water Quality Program is $79,620,000 and 228 FTE, a program change of -$14,832,000 and -46 FTE from the 2026 enacted.

Invasive Carp (+$11,000,000 / +46 FTE) – In FY 2027, the USGS will continue to conduct scientific investigations and modeling of drivers of invasive carps pursuant to the Presidential Memorandum, "Protecting the Great Lakes from Invasive Carp". The USGS will continue to provide science methods and models to guide technology development for potential integration into the design and operation of navigational locks, and will continue to evaluate behavioral deterrents for invasive carp (e.g., carbon dioxide, underwater acoustic deterrent systems, bubble curtains etc.). The USGS will continue to document these technologies for water resource managers with accompanying decision support tools to inform best placement and improve decision support tools to model implementing various management alternatives throughout the Mississippi River basin.

National Groundwater Quality Network (-$550,000 / -1 FTE) – The USGS will continue sampling seven regional groundwater networks in the National Groundwater Water-Quality Network. These large-scale efforts to valuate water quality in groundwater will occur on a 13-year cycle.

Surface Water Quality Monitoring Network (-$2,000,000 / -7 FTE) – In FY 2027, the USGS will continue to focus sampling on the coastal, large in-land and reference sites in the network. The USGS will also continue to compute estimates and trends of the amount of various constituents that are carried to key basins such as the Mississippi River and Chesapeake Bay, which support forecasts of hypoxic zones and support determining how successful implemented pollution control measures are at improving water-quality in rivers, lakes and estuaries.

Integrated Water Availability Assessments (-$2,260,000 / -10 FTE) – The 2027 budget supports USGS research and assessment activities that directly support national water availability assessments. These efforts will involve the evaluation of long-term trends in multiple water quality constituents and interpretation of impacts of quality on water availability. The 2027 budget also supports developing the capacity to deliver nationally consistent modeled water quality information for multiple constituents such as salinity, temperature, and nutrients.

Base Cooperative Matching Funds (-$2,150,000 / -7 FTE) – In FY 2027, USGS Water Science Centers will continue to conduct high-priority water-quality science and monitoring in cooperation with local, State, and Tribal partners.

National Support for Observing Network Operations (-$3,465,000 / -19 FTE) – Through this activity, the USGS provides Water Science Centers with technical support for the data collection and assessment techniques and methods and quality assurance of water data across the country and advances water-quality monitoring techniques. In FY 2027, the USGS will continue to conduct technical reviews to assure documented Quality Assurance/Quality Control (QA/QC) processes are being followed, as well as provide technical support on data collection and assessment techniques and methods and delivery of water-quality data.

Water Prediction and Information Delivery (-$6,540,000 / -19 FTE) – Water prediction capabilities are critical to monitoring the current and future conditions of the country's water resources. They allow water managers to leverage the data from existing monitoring sites and develop nationally consistent estimates of how water flows, what quality it is, and how demand shifts over time across entire landscapes. In 2027, the USGS will continue to provide data-driven methods that improve model predictions and monitoring , as well as the delivery of water quality-related information to stakeholders. As part of this work the USGS will continue support for enterprise-level model codes and innovative models to predict major water quality components including nutrients, salinity, and temperature and deliver results to the public.

National Support for Water Quality Science (-$7,369,000 / -22 FTE) – This activity provides applied research methods to efficiently assess water quality conditions at multiple scales. The USGS will continue efforts to incorporate wildfire impacts and other water quality information into larger assessments for use by land and resource managers in decision making.

National Atmospheric Deposition Network (-$1,378,000 / -5 FTE) – To address higher priorities, the budget does not request funding for this activity.

Integrated Water Science Basin Coordinators (-$120,000 / -1 FTE) – To address higher priorities, the budget does not request funding for this activity.

Summary of Program Budget Changes Table: Water Resources Research Act Program

Dollars in Thousands ($000)

Water Resources	2027 Request Change	FTE Change
Water Resources Research Act Program		
Water Resources Research Institutes	-16,000	-1
TOTAL Program Changes	**-16,000**	**-1**

Justification of Program Budget: Water Resources Research Act Program

Program Change Description

In order to focus on higher priorities, the Budget proposes to discontinue this program. Some of the work that has historically been funded through the Institutes may be continued at academic institutions across the country, which are well positioned to focus on issues of regional and local importance.

Activity: Core Science Systems

The USGS is the Federal agency responsible for mapping the geologic, geographic, and land features of the United States. The USGS, through the Core Science Systems (CSS) Mission Area, conducts detailed surveys and distributes high-quality and highly accurate topographic, hydrographic, and biogeographic maps and remotely sensed data to the public. Mapping accuracy enabled by cutting-edge technologies allows precise planning for: recreational use on public lands; permitting with Interior partners; critical mineral resources assessments; energy development; transportation and pipeline infrastructure projects; land change and flood prediction at regional, local, and neighborhood scales; emergency response; and hazards mitigation.

The physical structure of the Earth underpins all life on it. The precise maps and data products that the USGS delivers from its cutting-edge Earth surveys and explorations help the country better understand the planet and, ultimately, aid in every aspect of human society, from economic planning to natural disaster prediction and response to natural resources management. The CSS fulfills the USGS role as the primary national civilian mapping agency and is responsible for topographic mapping in support of Federal and State requirements; national geospatial coordination in support of Interior and the Federal Geographic Data Committee; geospatial mapping and applications through the Civil Applications Committee; and satellite operations and remote sensing. In addition, the CSS provides:

- research, modeling, and analysis of land change dynamics, in support of agriculture, forestry, natural resource management, and public safety;
- computational analytics and synthesis and integration of USGS national data sets, in support of modeling and forecasting;
- high-performance computing and data management and storage in support of energy and mineral assessments; and
- management of the network of libraries in support of USGS Earth science research and evidence-based science.

The USGS, through CSS, uses a mix of commercial and non-commercial imagery to support the country's economic development, land use management, and resilience to severe weather and other natural hazards events.

The USGS, through CSS, is the primary Federal steward of high-quality civil geospatial data and provides access to the public through The National Map, the Federal Geospatial Platform, the National Land Cover Database, USGS Earth Explorer, the National Biogeographic Map, and the Protected Areas Database of the United States. The CSS also operates Landsat satellites and data systems necessary to understand, monitor, and detect changes that affect the country's natural and agricultural resources, economy, public safety and national security.

Introductory Funding Table

Activity: Core Science Systems[1] *(Dollars in Thousands)*											
	2025 Actual		2026 Enacted		2027 Request						
Activity/Sub Activity/Program Element/Budget Element	**Budget Authority**	***FTE***	**Budget Authority**	***FTE***	**Fixed Costs (+/-)**	**Internal Transfers (+/-)**	**Program Changes ($)**	***Program Changes FTE (+/-)***	**Budget Authority**	***FTE***	**Change from 2026 Enacted**
Core Science Systems											
National Geospatial Program	89,650	*223*	91,421	*188*	-29	-	-39,920	*-54*	51,472	*134*	-39,949
National Cooperative Geological Mapping Program	-	*-*	43,500	*117*	-	-43,500	-	*-117*	-	*-*	-43,500
Science Synthesis, Analysis, and Research Program	23,266	*79*	25,000	*60*	-9	-1,500	-8,971	*-41*	14,520	*19*	-10,480
National Land Imaging Program	115,071	155	116,206	141	-22	-	-25,463	*-31*	90,721	*110*	-25,485
Satellite Operations	*95,334*	*98*	*95,334*	*89*	*-22*	*-*	*-16,472*	*-9*	*78,840*	*80*	*-16,494*
Science Research and Investigations	*19,737*	*57*	*20,872*	*52*	*-*	*-*	*-8,991*	*-22*	*11,881*	*30*	*-8,991*
Total, Core Science Systems	**227,987**	***457***	**276,127**	***506***	**-60**	**-45,000**	**-74,354**	***-243***	**156,713**	***263***	**-119,414**

[1] Table does not include supplemental funding.

Summary of Program Budget Changes Table: National Geospatial Program

Dollars in Thousands ($000)

Core Science Systems	2027 Request Change	FTE Change
National Geospatial Program		
3D National Topography Model (3DNTM)	-32,670	-27
National Map Products and Delivery	-3,921	-19
National Digital Trails	-1,350	-2
Center of Excellence for Geospatial Information Science (CEGIS)	-1,979	-6
TOTAL Program Changes	**-39,920**	**-54**

Justification of Program Budget: National Geospatial Program

Program Description

In FY 2027, the National Geospatial Program (NGP) will continue to provide vital mapping information depicting the topography, natural landscape, and built environment of the United States. The USGS provides this information through The National Map, a compilation of nationwide topographic mapping products and geospatial datasets encompassing elevation, hydrography, structures, boundaries, and transportation data, including trails. The USGS supports Interior's responsibilities for national geospatial coordination and carries out the USGS's government-wide leadership responsibilities for elevation, hydrography and watershed boundaries, structures, and geographic names. As one of the cornerstones of the USGS, The National Map has many uses ranging from recreation to natural resources development to emergency response. The National Map is easily accessible and leveraged by users of all types including sophisticated commercial mapping platforms (e.g., Esri, Google Maps), data analytics companies, all levels of government, and the public. The National Map products and services allow users to enhance their recreational experiences, make life-saving decisions, support scientific missions, and assist in effective land use management. Americans rely on the USGS's publicly available data and mapping to remain informed and to stay healthy and safe.

3D National Topography Model (3DNTM): The 3D National Topography Model (3DNTM) is a national initiative that integrates USGS 3D Elevation Program (3DEP) and 3D Hydrography Program (3DHP) data to create a comprehensive three-dimensional model of the entire U.S., providing updated and detailed elevation and hydrography information for various applications.

The 3DNTM improves and enables applications such as critical mineral detection, energy extraction, flood risk management, landslide hazards, infrastructure development, precision agriculture, and others by collecting a new, higher quality generation of elevation and hydrography data that also includes inland bathymetry data. 3DNTM data supports national priorities including EO 14153 *Unleashing Alaska's Extraordinary Resource Potential* (1/20/2025) and the National Landslides Preparedness Act.

Published Maps, Products, and Services – The USGS is the primary civil mapping agency, producing topographic maps for the country for more than 140 years. In addition to the standard digital US Topo map product, the USGS has embarked on a new paradigm of generating and delivering topographic maps through investments in topoBuilder, a new cloud-based platform that enables users to request and receive custom, on-demand topographic maps. The USGS is the first and only Federal agency delivering this

innovative capability to the public.

The **Federal Geographic Data Committee** is an interagency committee that develops and implements Federal geospatial data policies and standards to deliver accurate, reliable data essential for resource management and disaster response. It guides the development of the National Spatial Data Infrastructure by promoting collaboration among Federal, State, and local governments.

Program Change Description

The 2027 budget request for National Geospatial Program is $51,472,000 and 134 FTE, a program change of -$39,920,000 and -54 FTE from the 2026 enacted.

3D National Topography Model (3DNTM) (-$32,670,000 / -27 FTE) – The USGS will continue to acquire high resolution elevation and hydrography data across the United States, through commercial contracts and partnerships. Additionally, efforts will focus on the creation of a seamless, one-meter resolution elevation data set derived from 3DEP baseline data to support the integration of elevation and hydrography data as part of the broader 3DNTM.

National Map Products and Delivery (-$3,921,000 / -19 FTE) – USGS static, downloadable topographic maps are currently quality assured so that the presentation of topographic maps meets high standards of accuracy and clarity, enhancing readability, trust, and appearance in the data presented. In FY 2027, the USGS will rely only on automated processes for quality assurance**.**

National Digital Trails (-$1,350,000 / -2 FTE) – The budget does not request funding for this activity; however, existing trail data will still be available to the public and a generalized level of trail dataset development will continue to support USGS topographic maps.

Center of Excellence for Geospatial Information Science (CEGIS) (-$1,979,000 / -6 FTE) To address higher priorities, the budget does not request funding for this activity

Summary of Program Budget Changes Table: Science Synthesis, Analysis, and Research Program

Dollars in Thousands ($000)

Core Science Systems	2027 Request Change	FTE Change
Science Synthesis, Analysis and Research Program		
Risk and Vulnerability Assessments	-1,596	-12
Biogeographic Mapping	-4,541	-16
USGS Library Consolidation	-2,470	-9
JW Powell Center	-130	-2
High Performance Computing	-234	+0
TOTAL Program Changes	**-8,971**	**-41**

Justification of Program Budget: Science Synthesis, Analysis, and Research Program

Program Description

The Science Synthesis, Analysis and Research (SSAR) Program provides analysis and synthesis of scientific data and information within interdisciplinary research to improve understanding and use of natural resources for economic growth, national security, and safeguarding communities. This program accelerates research and decision-making through data science, information and data delivery, advanced computing, and artificial intelligence. The SSAR Program ensures that data are strategically managed, integrated, and easily available to decision makers and others as they focus on issues associated with Earth science processes.

The SSAR Program supports the Earth science community by offering interdisciplinary approaches, expertise, tools, data; nurtures strategic partnerships; and leverages resources to advance scientific discovery. The SSAR Program also provides the long-term management and public distribution of scientific resources and data that are collected, processed, analyzed, and reused by researchers. USGS researchers also rely on the program's high-performance computing, data management expertise, and the USGS Library to address science challenges and administration priorities.

Scientists conduct complex analyses using advanced research computing capacity, including powerful supercomputers, large data transfer and storage, training, and expert consulting. Policymakers, land resource management decision-makers, emergency responders and scientists rely on immediate access to this timely, well-curated, high-quality science to make well-informed decisions. The SSAR Program brings expertise in data analytics and information synthesis to ensure that USGS science is timely, relevant, and applied to support the long-term prosperity and safety of the American public.

Program Change Description

The 2027 budget request for Science Synthesis, Analysis and Research Program is $14,520,000 and 19 FTE, a program change of -$8,971,000 and -41 FTE from the 2026 enacted.

Biogeographic Mapping (-$4,541,000 / -16 FTE) – USGS biogeographic science activities focus on the landscape-level understanding of terrestrial and aquatic species and ecosystems. In FY 2027, the USGS will maintain the Protected Areas Database for wildfire and natural resources mapping. In addition, the USGS will maintain mapping for big game corridors, and vegetation and ecosystem mapping for fire, forest, and grassland management; and will support acceleration of permitting for sustainable energy development on public lands.

USGS Library Consolidation (-$2,470,000 / -9 FTE) – In FY 2027, the USGS will consolidate all library collections into the Clarence King Library in Reston, VA to reduce facilities costs, eliminate duplication of materials, and focus on modernization of digital library services.

John Wesley Powell Center (-$130,000 / -2 FTE) – To address higher priorities, the budget does not request funding for this activity.

Risk and Vulnerability Assessments (-$1,596,000 / -12 FTE) – To address higher priorities, the budget does not request funding for this activity.

High Performance Computing (-$234,000 / +0 FTE) – In FY 2027, this activity will support Administration and Interior priorities to advance Artificial Intelligence (AI) innovation and

adoption. High performance computing accelerates AI model development by providing access to USGS supercomputers for training and running AI models at scale. Technical AI training courses for USGS scientists will be held, equipping them with the skills needed to integrate AI into research workflows. These investments remove computational and knowledge barriers, enabling AI-driven solutions for critical science priorities such as mineral resource assessments, hazard response, and water availability forecasting.

Summary of Program Budget Changes Table: National Land Imaging Program

Dollars in Thousands ($000)

Core Science Systems	2027 Request Change	FTE Change
National Land Imaging Program		
Science Research and Investigations	**-8,991**	**-22**
Remote Sensing State Grants	-2,600	+0
Science Information Products and Archives	-10,050	-33
National Civil Applications Center [2-Yr]	-250	-1
Integrated Remote Sensing for Mine Waste Mapping	+3,909	+12
Satellite Operations	**-16,472**	**-9**
Sustainable Land Imaging Operations and Development	-16,472	-9
TOTAL Program Changes	**-25,463**	**-31**

Justification of Program Budget: National Land Imaging Program

Program Budget Narrative Description

Our country's economic security, natural resource vitality, and ability to respond to the impacts of natural hazard events rely on the USGS's continuous monitoring of the Earth's land surfaces, surface waters, and coastal regions. The USGS National Land Imaging (NLI) Program, through its USGS Earth Resources Observation and Science (EROS) Center in Sioux Falls, South Dakota, provides the world's largest civilian archive of remotely sensed Earth observations. This information drives strategic choices and fuels smart investments and decision-making by land resource managers in all 50 States, Tribal lands, and U.S. territories.

The USGS is responsible for U.S. civil operational land surface observations through its Landsat satellite missions that are designed, launched, and operated in collaboration with NASA under both agencies' Sustainable Land Imaging (SLI) partnership. This partnership ensures continued, long-term operational provision of global land, water, and coastal remote sensing data on a free and open basis. Through EROS, the USGS operates the Landsat 8 and Landsat 9 satellites, continuing the world's longest-running operational civil satellite series with simultaneous full spectrum coverage including visible, near- to short-wave and thermal infrared sensors. The thermal and short-wave infrared sensors help to measure the Earth's surface temperature and detect differences in moisture content in soils and plants, which are crucial for informing water use management in Western States. These satellites provide continued, foundational Earth observations to hundreds of thousands of government, commercial, educational, and research users across the country. With over 50 years of continuous data, Landsat drives smarter decisions, protects critical resources, and addresses resource challenges - supporting wide-ranging

applications from wildland fire response to infrastructure planning - at multiple scales.

The USGS processes and distributes Landsat data and maintains the long-term Landsat data archive. Through its partnership with commercial cloud data services and free and open data access, the USGS has exponentially increased the amount of Landsat data product accesses by users across all sectors in recent years. For example, the total volume of Landsat data accessed increased from less than 4,000 terabytes in FY 2020 prior to the commercial cloud implementation, to over 31,000 terabytes in FY 2025 – an eight-fold increase in five years. The Budget continues Landsats 8 and 9 satellite flight operations and data collection, processing and product distribution, and supports other preparatory work for a phased transition to a commercial solution of the Landsat program. In FY 2027, the USGS will continue the development of a ground system that will operate one satellite (referred to as LandIS-1) to be launched in the early 2030s. Also in FY 2027, NASA and USGS will work with industry to implement a roadmap to address technical challenges and demonstrate capabilities in preparation for this transition.

In addition to Landsat operations and development, the NLI Program also funds the USGS National Civil Applications Center (NCAC), which uses Earth observations from military and U.S. Intelligence Community sensors to detect wildland fires, compile Incident Commanders' wildfire response maps, and to monitor global volcanoes for aviation safety and local government information. The NCAC also manages the interagency Civil Applications Committee (CAC), which oversees and facilitates appropriate Federal civil agency access to, and use of, military, intelligence, and commercial Earth observations. These observations are used extensively by Interior, the USGS, and numerous agencies for disaster response, environmental infrastructure monitoring, energy development, and scientific research.

The NLI Program funds the USGS National Uncrewed Systems Office in Lakewood, Colorado, to enable the broad use of uncrewed aircraft system (UAS) technology across the USGS. UAS observations support multiple USGS science applications, including hazards assessments. These data also complement Landsat observations to maximize user need satisfaction across the science community.

Program Change Description

The 2027 budget request for National Land Imaging Program is $90,721,000 and 110 FTE, a program change of -$25,463,000 and -31 FTE from the 2026 enacted.

Integrated Remote Sensing for Mine Waste Mapping (+$3,909,000 / +12 FTE) – This funding will support innovation in mapping and powerful data collection supporting the characterization of critical minerals in mine waste. This work adds new high-resolution remote sensing and AI technology to existing mine waste mapping techniques. Integrating high-resolution UAS (drone) data and satellite imagery from classified and commercial sources along with Earth MRI's foundational data and the Mineral Resources Program's national mine waste inventory will ultimately accelerate assessments of critical minerals in mine wastes and identify further opportunities for resource recovery and site reclamation.

Science Information Products and Archives (-$10,050,000 / -33 FTE) – To address higher priorities, the budget does not request funding for this activity. In FY 2027, the USGS will maintain key existing Landsat-derived science products such as fire and land cover product suites through remaining capabilities in the National Land Imaging Program.

National Civil Applications Center (-$250,000 / -1 FTE) – In FY 2027, the USGS will continue emergency response support for wildfire detection and disaster mapping at the Reston, VA Sensitive

Compartmented Information Facility (SCIF). The USGS will also continue to manage the interagency CAC, which facilitates Federal civil agency access to military, intelligence, and commercial Earth observation data.

Sustainable Land Imaging Operations and Development (-$16,472,000 / -9 FTE) – The USGS will continue operating the on-orbit Landsat 8 and 9 satellites, as well as the collection, processing and distribution of Landsat data, adding 20 million square miles of new imagery to the USGS EROS Archive in Sioux Falls, SD, every day. The USGS will maintain calibration and validation of Landsat data and products and science investigation to ensure the quality and continuous production of Landsat standard and derived products. The FY 2027 budget continues development of the ground system that will support the next iteration of the Landsat program and prepares for a phased transition to a commercial solution. Through these development activities, the USGS will design, develop, and implement an operational capability for flying the new satellite (LandIS-1) and to collect, archive and process its data, to include monitoring, assessing, and projecting land surface conditions and change as part of the Landsat operational science product suite. These operational science products provide scientific information to the broad user community for informed decision-making to manage the country's natural resources. The USGS will also work with NASA and industry on preparatory work to support a phased transition to a commercial solution for the Landsat program.

Remote Sensing State Grants (-$2,600,000 / +0 FTE) – To address higher priorities, the budget does not request funding for this activity.

Activity: Science Support

The USGS Science Support activity provides funding and resources toward business and information services that are crucial to conducting quality science, including programmatic internal controls; budget and performance; publishing; monitoring and evaluation of science quality and integrity; information assurance; strategic planning; facilities, safety, property, materials management, and the Freedom of Information Act (FOIA). Science Support provides policy and analysis services related to technology transfer, intellectual property, agreement reviews, and directives management. Included under the Science Support umbrella are the offices of the Director and Administrative Services, as well as offices that provide expertise in budget, performance, publishing, FOIA, and science quality and integrity. Science Support also hosts critical business liaisons in areas that coordinate unique mission needs with Interior's unified business functions. The activity partially funds the unified business functions that includes information management technology, finance, communications, human resources, international programs, civil rights, personnel security, acquisition, and financial assistance.

Science Support also includes the executive leadership and management that provide guidance, direction, and oversight for all USGS science activities. The Science Support team aids USGS science by providing science and operational leadership and oversight, including ensuring fiduciary responsibility, and verifying the validity and quality of USGS science.

Introductory Funding Table

Activity: Science Support[1] *(Dollars in Thousands)*											
	2025 Actual		**2026 Enacted**		**2027 Request**						
Activity/Sub Activity/Program Element/Budget Element	**Budget Authority**	***FTE***	**Budget Authority**	***FTE***	**Fixed Costs (+/-)**	**Internal Transfers (+/-)**	**Program Changes ($)**	***Program Changes FTE (+/-)***	**Budget Authority**	***FTE***	**Change from 2026 Enacted**
Science Support											
Administration and Management	81,500	*174*	56,708	*93*	+174	-	+4,618	-	61,500	*93*	+4,792
Information Services	23,500	*31*	16,975	*11*	-	-	+1,525	-	18,500	*11*	+1,525
Total, Science Support	**105,000**	***205***	**73,683**	***104***	**+174**	**-**	**+6,143**	**-**	**80,000**	***104***	**+6,317**

[1] Table does not include supplemental funding.

Summary of Program Budget Changes Table: Administration and Management Program

Dollars in Thousands ($000)

Science Support	2027 Request Change	FTE Change
Administration and Management Program		
Science Coordination and Services	+4,618	+0
TOTAL Program Changes	**+4,618**	**+0**

Justification of Program Budget: Administration and Management Program

Program Description

The Administration and Management Program provides funding and resources toward business functions that are crucial to conducting quality science, including internal controls; publishing; budget and performance; monitoring and evaluation of science quality and integrity; facilities, safety, security, directives, technology transfer, and strategic planning.

Administration and Management program also performs critical business functions such as bureau-wide leadership and direction; establishing organizational vision, mission, goals, and scientific priorities; planning, obtaining, and managing necessary resources, including people, budget authority, facilities, and equipment; providing resource management systems; implementing statutory and regulatory requirements and monitors and enforcing compliance; and supporting Interior's unified administrative and business services.

The program also monitors and enhances the integrity, quality, and health of USGS science through oversight and development and enforcement of standards for scientific rigor through strong practices, policy, and supporting USGS programs.

Program Change Description

The 2027 budget request for the Administration and Management Program is $61,500,000 and 93 FTE, a program change of +$4,618,000 and +0 FTE from the 2026 enacted.

Science Coordination and Services (+$4,618,000 / +0 FTE) – The 2027 budget requests additional funding to ensure that the USGS can continue to produce world-class science and serve as an effective resource for the Department and other stakeholders. This increase directly supports the USGS science mission by funding critical activities like laboratory quality management systems oversight, safety and security of USGS personnel and facilities, and coordination of the Administration's priorities for producing gold standard science. This activity also partially funds Interior's unified business functions. This increase reduces the portion of these costs that must be covered by USGS science Mission Areas. Science support costs that cannot be fully paid for through the Science Support budget activity are covered by the USGS science Mission Areas.

Summary of Program Budget Changes Table: Information Services Program

Dollars in Thousands ($000)

Science Support	2027 Request Change	FTE Change
Information Services Program		
Information Management, Technology Services & Communications Infrastructure	+1,525	+0
TOTAL Program Changes	**+1,525**	**+0**

Justification of Program Budget: Information Services Program

Program Description

The Information Services (IS) Program provides funding and resources to the critical Information Management & Technology (IMT) foundation for the USGS science mission by implementing advances in IMT and using them to facilitate research, data gathering, analysis, modeling, scientific collaboration, enhance computing capacity, knowledge management, and process efficiencies. These resources support numerous IMT services, such as the USGS information assurance program; continued cloud adoption for advanced scientific computing and the necessary network enhancements to support the bureau's scientific community; expanding artificial intelligence to accelerate scientific discovery in energy and minerals resources and monitoring natural hazards; and supports the Interior IMT activities through the Interior's Working Capital Fund. The IS program also provides funding for the Freedom of Information Act office.

Program Change Description

The 2027 budget request for Information Services Program is $18,500,000 and 11 FTE, a program change of +$1,525,000 and + 0 FTE from the 2026 enacted.

Information Management, Technology Services & Communications Infrastructure (+$1,525,000 / +0 FTE) – The 2027 budget request requests additional funding to ensure that the USGS can conduct and deliver world class science with in a secure and robust IT environment. This increase directly supports the USGS science mission by funding a core group of USGS liaisons within the Information Services program that ensure the bureau's unique IT needs for producing gold standard science are coordinated and met efficiently. In addition, the USGS will support functional services that were included in Secretarial Order 3429 *Consolidation, Unification and Optimization of Administrative Functions* (04/17/2025), covering must pay operational requirements that are crucial to conducting quality science. This increase reduces the portion of these costs that must be covered by USGS science Mission Areas. Science support costs that cannot be fully paid for through the Science Support budget activity are covered by the USGS science Mission Areas.

Activity: Facilities

The USGS Facilities activity provides safe, functional workspace to accomplish the bureau's scientific mission, with an emphasis on the USGS mission driving facility needs. The goal of Facilities is to meet bureau science needs while optimizing facility locations and functionality of workspace and reducing costs. The USGS defines facilities as all sites where USGS activities are housed, and mission-related work is conducted. Facilities typically provide space for offices, laboratories, and storage, as well as shared support for conference rooms and other common space uses. USGS research vessels are also considered facilities for funding purposes. Rent costs, basic facility operations, and security are funded and performed through this program, as is facility maintenance which, in compliance with Federal, State, and local standards, provides a safe working environment for employees, visiting partners, and customers.

USGS partners with other Federal agencies, State and local governments, universities, and the private sector to provide appropriate space for USGS scientists and other staff. Collaboration with these partners supports the USGS's scientific work and facilitates communication of the results of this work to the public, emergency managers, and the scientific community. In these instances, the USGS occupies space in return for science-related services or space is acquired as part of a larger cooperative agreement. Typically, the USGS pays a reduced rental rate or the cost of operations and maintenance when in partner space. Co-location with other bureaus, agencies, or universities is a space management strategy that advances science, creates partnerships, and facilitates recruitment of new talent.

Introductory Funding Table

Activity: Facilities[1] *(Dollars in Thousands)*											
	2025 Actual		**2026 Enacted**		**2027 Request**						
Activity/Sub Activity/Program Element/Budget Element	**Budget Authority**	***FTE***	**Budget Authority**	***FTE***	**Fixed Costs (+/-)**	**Internal Transfers (+/-)**	**Program Changes ($)**	***Program Changes FTE (+/-)***	**Budget Authority**	***FTE***	**Change from 2026 Enacted**
Facilities											
Rental Payments and Operations Maintenance	109,258	*74*	105,261	*52*	-436	-	-10,567	-	94,258	*52*	-11,003
Facilities Maintenance, Modernization, and Restoration Program	74,840	*3*	74,840	*2*	-	-	-19,226	-	55,614	*2*	-19,226
Total, Facilities	**184,098**	*77*	**180,101**	*54*	**-436**	**-**	**-29,793**	**-**	**149,872**	*54*	**-30,229**

[1] Table does not include supplemental funding.

Summary of Program Budget Changes Table: Rental Payments and Operations and Maintenance Program

Dollars in Thousands ($000)

Facilities	2027 Request Change	FTE Change
Rental Payments and Operations & Maintenance Program		
Rental Payments and Operations Costs	-10,567	+0
TOTAL Program Changes	**-10,567**	**+0**

Justification of Program Budget: Rental Payments and Operations and Maintenance Program

Program Description

The Rental Payments and Operations and Maintenance Program provides the USGS with funding needed to pay for annual rent and operations and maintenance costs. Rental payments are made to the General Services Administration (GSA), other Federal sources, private lessors, and cooperators for space occupied by the USGS.

The USGS has unique facility and modern laboratory space requirements to support science functions and relies on a mix of owned, leased, and other agency provided space to meet those needs. The USGS collaborates closely with the Department of the Interior and the General Services Administration to effectively right-size its portfolio by aligning its resources and facilities with current mission needs and operational efficiency. This partnership involves assessing the agency's spatial and infrastructural requirements, strategically consolidating assets, and optimizing real estate solutions to support scientific research and data collection. Through this collaborative approach, USGS ensures that its facilities are positioned to support the utilization of the country's natural resource assets and ensures that infrastructure and modernization investments simultaneously serve the public and meet Administration priorities.

The 2027 budget will allow the USGS to:

- Begin funding the annual operating and maintenance costs associated with the newly constructed Hawaiian Volcano Observatory located within Hawaii Volcanoes National Park. Construction of the new facility was required as a result of the 2018 eruption of Kilauea Volcano, which rendered the previous observatory unsafe and unsuitable for continued operations.
- Coordinate facility planning with science planning to provide safe, high-quality workspace aligned with science needs.
- Continue supporting the USGS scientific mission by providing facilities with unique space requirements.
- Implement cost savings initiatives through space consolidations in alignment with Administration priorities.

Program Change Description

The 2027 budget request for the Rental Payments and Operations and Maintenance Program is $94,258,000 and 52 FTE, a program change of -$10,567,000 and +0 FTE from the 2026 enacted.

Rental Payments and Operations Costs (-$10,567,000 / +0 FTE) – This reduction will be managed in part by decommissioning Ecosystems Mission Area facilities in alignment with EO 14222 *Implementing the President's "Department of Government Efficiency" Cost Efficiency Initiative* (2/26/2025). The Rental Payments and Operations and Maintenance Program provides the USGS with the resources necessary to meet annual rent obligations and to fund required operations and maintenance activities across the bureau's facilities portfolio. This subactivity will pay approximately 48 percent of the bureau's rent and operations and maintenance costs in FY 2027. The remaining costs will be supported through a combination of reimbursable agreements and science appropriated funding.

Summary of Program Budget Changes Table: Facilities Maintenance, Modernization, and Restoration Program

Dollars in Thousands ($000)

Facilities	2027 Request Change	FTE Change
Facilities Maintenance, Modernization, and Restoration Program		
Major Infrastructure Projects	-19,226	+0
TOTAL Program Changes	**-19,226**	**+0**

Justification of Program Budget: Facilities Maintenance, Modernization, and Restoration Program

Program Description

Facilities Maintenance, Modernization, and Restoration (FMMR) funding provides for construction, modernization, and maintenance/repair projects on USGS-owned and maintained assets and infrastructure. Funding is provided to the highest-priority facility requirements in support of USGS mission needs. Prioritization follows annual Interior budget guidelines and funding is primarily directed toward projects that stabilize, restore, replace, or improve life-cycle performance of assets that are mission critical or mission dependent. Projects that facilitate space consolidation, improve utilization, and reduce the bureau space footprint also receive FMMR funding as do other facilities maintenance and management activities that identify, document, track, and remediate deferred maintenance needs.

The following table depicts how those funds will be used. This allocation reflects current plans; however, it is subject to change.

Project Title	Description	Funding Request ($000)
Divestiture and Consolidation Efforts	USGS will begin to divest itself of science centers utilized by the Ecosystems Mission Area.	**52,770**
Perform Condition Assessments and Engineering Support	Condition Assessments identify maintenance and capital improvement needs. Engineering services support funded projects and conduct surveys to determine asbestos-related cleanup, environmental and disposal cost.	**1,000**
Support Bureau Maintenance Management System	The Facility Maintenance Management System (FMMS) is the USGS's implementation of the commercial maintenance-management software application Maximo™. The FMMS system supports efficient operation and maintenance of USGS facilities by providing accurate maintenance information for bureau managed facilities.	**844**
Program and Project Management	This activity provides contract architectural, engineering, management and design services for complex projects, particularly for developing project requirements and cost estimates.	**1,000**
Total		**55,614**

Major Infrastructure Project Description

Divestiture and Consolidation Efforts

In alignment with the budget request, the USGS will prioritize the decommissioning of the Ecosystems Mission Area (EMA) facilities. The USGS EMA primarily operates from a wide variety of centers in over 150 unique locations. Many of these centers have multiple field stations geographically dispersed from the main center. Within the unique locations, centers often share space within other EMA centers. Some of these locations have multiple uses (office, lab, warehouse, and ware yard) and some may be for a single purpose including storage. Below is a list of EMA centers.

- EMA Office of the Associate Director
- Alaska Science Center – Interdisciplinary center, partially EMA
- Climate Adaptation Science Centers
- Columbia Environmental Research Center
- Eastern Ecological Science Center
- Forest and Rangeland Ecosystem Science Center
- Fort Collins Science Center
- Great Lakes Science Center
- National Wildlife Health Center
- Northern Prairie Wildlife Research Center
- Northern Rocky Mountain Science Center
- Pacific Island Ecosystems Research Center
- Southwest Biological Science Center

- Upper Midwest Environmental Sciences Center
- Western Ecological Research Center
- Western Fisheries Research Center
- Wetland and Aquatic Research Center

Funding will be used to decommission and conduct the environmental cleanup required at EMA center locations, as well as operate the facility until facilities are fully decommissioned and, if owned, sold. In some cases, facilities may be transferred to partners willing to assume the cost of operating them. The cost of decommissioning and environmental cleanup at each center will vary greatly based on the type of space, location, contaminants present, and complexity of its laboratories. EMA center locations are made up of multiple types of space: owned, leased (GSA or other), interagency or cooperative agreements, and in-kind. Costs to close operations at remote locations may be higher based on associated unique transportation and/or shipping requirements. Many include complex laboratories with specific design requirements, chemicals and other contaminants, and specialized equipment. The activities and associated costs required to decommission and clean up laboratories will increase with more complex and specialized laboratories. It is expected to take up to four years to decommission and clean up all centers.

Program Change Description

The 2027 budget request for the Facilities Maintenance, Modernization, and Restoration Program is $55,614,000 and 2 FTE, a program change of -$19,226,000 and + 0 FTE from the 2026 enacted.

Major Infrastructure Projects (-$19,226,000 / +0 FTE) – The USGS will continue to support construction, modernization, maintenance/repair, and divestiture projects on USGS-owned and maintained assets and infrastructure that support administration priorities.

Activity: Working Capital Fund

The Working Capital Fund (WCF) is used for expenses necessary to furnish materials, supplies, equipment, work, and services in support of the USGS programs, and as authorized by law, to Federal and non-Federal entities.

The WCF consists of the following components:

- **The WCF Investment Component** provides a mechanism to assist USGS managers in planning for and acquiring goods and services that are too costly to acquire in a single fiscal year or that, due to the nature of services provided, requires a multi- as opposed to a single-year basis of funding. Investments are supported by documented investment plans that include estimated acquisition/replacement costs, a schedule of deposits, and approval of the plans, deposits, and expenditures by designated USGS officials.
- **The WCF Fee-for-Service Component** provides a continuous cycle of client services for fees established in a rate-setting process established by designated USGS officials. Fees are predicated upon both direct and indirect costs associated with providing the services, including amortization of equipment required to provide the services.
- **The GSA Buildings Delegation Component** is used to manage funds received under the delegated authority for the J.W. Powell Building and Advanced Systems Center in Reston, VA, as provided by 40 U.S.C. 121 (d) and (e) (formerly subsections 205 (d) and (e) of the Federal Property and Administrative Services Act of 1949, as amended, and 40 U.S.C. 486 (d) and (e), respectively). Delegated functions include building operations, maintenance, cleaning, overseeing fire and life safety, maintaining high voltage switchgear and fire alarms, recurring repairs, minor alterations, historic preservation, concessions, energy management and security. Because of the size of the Reston buildings and the need to expend the facility funds in a manner corresponding to GSA's no-year funding (Federal Buildings Fund) mechanisms and the GSA National Capital Region long-range capital improvement plan, no-year funding is a prerequisite to administering the delegation. Public Law 104–208, Section 611, provides that, for the fiscal year ending September 30, 1997, and thereafter, any department or agency that has delegated authority shall retain that portion of the GSA rental payment available for operation, maintenance, and repair of the building and the funds shall remain available until expended. This component was established in 2004 to provide the USGS with this no-year flexibility.

Appropriation Language and Citations

P.L. 101-512 Department of the Interior and Related Agencies Appropriations Act, 1991. This authority established a Working Capital Fund account in 1991. The Telecommunications Amortization Fund was included as part of the WCF and all balances of the Telecommunications Amortization Fund existing at the end of 1990 were transferred to the WCF. These balances were to be used for the same purposes as originally authorized.

P.L. 103-332 Department of the Interior and Related Agencies Appropriations Act, 1995. This authority expanded the use to partially fund laboratory operations and facilities improvements and to acquire and replace publication and scientific instrumentation and laboratory equipment.

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Activity: Special Initiatives

The FY 2026 Enacted provided $2,250,000 for three congressionally directed spending items. The FY 2027 budget does not request funding for these projects.

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Appendix A – Section 403 Compliance/Employee Count by Grade

Compliance with Section 403

This section describes details related to any assessments to, or within, the USGS to support bureau-wide services and functions to support governmentwide, Interior-wide, bureau-wide and regional administrative functions, headquarters, and central operations as required in Public Law 119-74, Commerce, Justice, Science; Energy and Water Development; and Interior and Environment Appropriations Act, 2026 as shown below.

DISCLOSURE OF ADMINISTRATIVE EXPENSES

SEC. 403. The amount and basis of estimated overhead charges, deductions, reserves, or holdbacks, including working capital fund charges, from programs, projects, activities and subactivities to support government-wide, departmental, agency, or bureau administrative functions or headquarters, regional, or central operations shall be presented in annual budget justifications and subject to approval by the Committees on Appropriations of the House of Representatives and the Senate. Changes to such estimates shall be presented to the Committees on Appropriations for approval.

	2025 Actual ($000)	2027 Estimate ($000)
Department of the Interior Working Capital Fund and Payments to Other Federal Agencies	**$109,148**	**$236,602**
WCF Centralized Billings	*$22,790*	*$150,969*
WCF Direct Billings	*$15,849*	*$14,087*
Worker's Compensation Payments	*$1,698*	*$1,680*
Unemployment Compensation Payments	*$502*	*$461*
GSA Rental Payments	*$68,309*	*$69,405*
Bureau Administrative Costs	**$79,379**	**$97,780**
Shared Program Costs	*$45,465*	*$63,005*
Bureau-Level Costs	*$33,914*	*$34,775*
Reimbursable Overhead	**$56,752**	**$55,000**

Department of the Interior Working Capital Fund and Payments to Other Federal Agencies

Working Capital Fund

Dollars in Thousands ($000)

	2026 Estimate			2027 Estimate		
Activity	**Central**	**Direct**	**TOTAL**	**Central**	**Direct**	**TOTAL**
OS Shared Services	428.6	43.6	472.2	458.6	44.6	503.2
OS Activities	65,412.8	1,145.5	66,558.3	62,062.1	1,039.1	63,101.2
IT Shared Services	86,434.6	13,100.9	99,535.5	84,672.7	11,982.6	96,655.3
Interior Business Center	3,854.9	993.6	4,848.5	3,775.4	1,012.2	4,787.6
TOTAL, WCF Billing	**$156,130.9**	**$15,283.7**	**$171,414.5**	**$150,968.8**	**$14,087.4**	**$165,056.2**

The Department's Working Capital Fund was established pursuant to 43 U.S.C. 1467, to provide common administrative and support services efficiently and economically at cost. The Fund is a revolving fund, whereby capital is expended to provide services for customers who pay for the services. Customers consist of the Department's bureaus and offices, as well as other Federal agencies. Through using centrally provided services, the Department standardizes key administrative areas, such as commonly used administrative systems, support services, business functions, and centrally managed departmental operations that are beneficial to the bureaus and offices.

Centralized billing is used whenever the product or service being provided is not severable or it is inefficient to bill for the exact amount of product or service being procured. Customers are billed each year using a pre-established basis that is adjusted annually to reflect change over time. These bills are paid for by both the Administration and Management and the Information Services subactivities within Science Support, and payment may be adjusted accordingly between these lines during the year of execution based on the enacted appropriation.

Direct billing is used whenever the product or service provided is severable but is executed through a time and materials reimbursable support agreement or similar contractual arrangement.

More information related to payments to other Federal agencies can be found in the USGS Account chapter under the Fixed Cost Table.

Bureau Administrative Costs

Shared Program Costs

The USGS maintains a portion of its budget submission for other bureau-wide support and science-related activities. These costs are in addition to what may be needed to adequately pay for science support. These funds are used for initiatives that may be unfunded mandates, are crosscutting in nature, or respond to new bureau priorities and emerging scientific issues.

The funding for the initiatives in the Shared Program Costs are assessed at the budget activity level and distributed proportionately based on total appropriated funds for the mission area; or proportionately based on total funds for the mission area. These initiatives are vetted each year with the Executive Leadership Team of the USGS and approved by the Director.

Bureau-Level Costs

The USGS manages overhead costs at two levels—the bureau and science center. Bureau-level costs include headquarters executive, managerial, supervisory, administrative, and financial functions, and bureau-wide systems. Funding appropriated to the Science Support budget subactivities pays much of the bureau-level costs. For this reason, bureau-level costs collected on reimbursable support agreements are deposited within Science Support program areas as well (see the Reimbursable overhead section below). Additionally, the USGS may allocate costs for these activities typically funded out of the Science Support program to the direct appropriation for those programs when those costs exceed amounts allocated to Science Support subactivities in the appropriation. At the 2026 Enacted level, these costs are approximately four percent of the science program appropriations. Taken as a whole, costs to support science mission areas are estimated at about 12 percent of the USGS operating budget and up to 12 percent of appropriated programmatic funding could be used to adequately pay for science support costs. These costs may be considered shared program costs.

At the science center level, as there generally is not a direct appropriated funding source to pay the local overhead (common services) costs, both the direct appropriated and reimbursable funding are assessed to cover science center-level costs. Science center common services costs include center costs that are not directly attributable to a specific activity or project, such as managerial, supervisory; administrative; and financial functions and related systems; as well as costs incidental to providing services and products, such as postage, training, miscellaneous supplies, and materials.

Reimbursable Overhead

The USGS assesses a bureau overhead rate, estimated to remain at 12 percent, on reimbursable work to recoup their share of bureau-level costs. In some cases, the USGS assesses a special or reduced rate when it can be demonstrated that indirect costs are substantially and consistently less than the norm and the amount collected covers the full costs, such as with pass-through funding where the USGS does not perform any of the actual work.

In recognition of the USGS role as the science bureau for the Department of the Interior, the USGS is continuing to give Interior bureaus and offices a "preferred" customer rate on overhead charges for a significant portion of reimbursable work, to the extent that cost share funds are available within the USGS budget to cover the uncovered overhead costs. Cost Centers may charge up to 22 percent for the preferred rate, which covers cover both bureau and center-level common services costs. Of the 22 percent, 7

percent is applied to bureau costs (the same as in previous years), and the remaining 15 percent is applied to common services costs.

The Associate Director for Budget, Finance, and Analysis establishes the USGS bureau special rate for each fiscal year. The special rate for 2027 is estimated to remain at three percent. Cost centers do not charge more than the bureau special rate for facilities-related costs or their standard common services rate when funding is approved for a bureau-level special rate. Special rates are applied under the following circumstances:

- When the USGS receives funds from a non-USGS organization and awards a grant to a third-party entity.
- When the USGS receives funds from one or more non-USGS organizations to support, under USGS leadership, a strategic science objective that includes the USGS passing through funds to one or more third-party entities.
- When the USGS receives funds from a non-USGS organization for the purpose of the customer acquiring services through the Cartographic Services or the Remotely Sensed Data Contracts. The special rate helps encourage other Federal agencies to use these contracts for cartographic services and remotely sensed data, rather than establishing and managing their own contracts, and ensures greater data consistency using common service providers.
- Equipment purchase required for new project; cost of the equipment is a major portion of the total agreement funds; and equipment will be USGS property.
- Interagency detail work assignments of a USGS employee to a non-USGS agency when space and administrative support are provided at no charge.
- Funds received with specific legal authority to award a grant which will be transferred to a third-party entity.

Employee Count by Grade Table

U.S. Geological Survey
Employee Count by Grade
(Total Employment)

Employee Count by Grade	2025 Actual	2026 Estimate	2027 Estimate
Executive Level V	1	1	1
SES	15	5	5
Subtotal	**16**	**6**	**6**
SL – 00	11	6	6
ST – 00	31	28	28
Subtotal	**42**	**34**	**34**
GS/GM – 15	396	302	272
GS/GM – 14	703	544	483
GS/GM – 13	971	686	667
GS – 12	1,436	981	986
GS – 11	1,360	1,025	934
GS – 10	183	166	126
GS – 9	729	542	500
GS – 8	188	163	129
GS – 7	442	318	303
GS – 6	175	123	120
GS – 5	145	98	100
GS – 4	43	34	29
GS – 3	23	21	16
GS – 2	2	1	1
GS – 1	2	2	1
Subtotal	**6,798**	**5,006**	**4,668**
Other Pay Schedule Systems	170	141	100
Total employment (actual/estimate)	**7,026**	**5,292**	**4,808**

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