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U.S. Geological Survey (USGS): Supplemental Appropriations

The U.S. Geological Survey (USGS) is a science agency in the Department of the Interior (DOI) that provides information to describe and understand the geological processes of the Earth, to mitigate risks of natural hazards, and to support the management of water, energy, mineral, and ecosystem resources. Congress typically appropriates funds for the agency through annual Interior, Environment, and Related Agencies appropriations acts. For example, annual appropriations for the USGS in FY2023 totaled \$1.5 billion. For more information about annual appropriations, see CRS In Focus IF12097, *The U.S. Geological Survey (USGS): Background and FY2023 Appropriations*.

This In Focus covers supplemental appropriations for the USGS that are in addition to annual appropriations. **Table 1** summarizes supplemental appropriations (including advance appropriations) for the USGS for FY2018-FY2026. Supplemental appropriations in six laws over the nine-year period totaled \$742.2 million. Some of the funds are available until expended, while others are available for specified time periods. (See **Table 1**.) Of the six laws, four provided a total of \$208.0 million for USGS natural hazard response, recovery, and related projects. Two of the laws provided \$534.2 million for mapping, energy, and minerals activities.

Table 1. USGS Supplemental Appropriations, FY2018-FY2026

Public Law	Total	Description
P.L. 117-328 (Div. N)	\$41.0 M (FY2023)	<ul style="list-style-type: none"> For expenses related to the consequences of wildfires, hurricanes, and other natural disasters in and prior to 2023.
P.L. 117-169 (Title V)	\$23.5 M (FY2022)	<ul style="list-style-type: none"> To produce, collect, disseminate, and use 3D elevation data (to remain available through FY2031).
P.L. 117-58 (Div. J)	\$510.7 M (FY2022-FY2026)	<ul style="list-style-type: none"> \$64.0 M for each of FY2022, FY2023, FY2024, FY2025, and FY2026 (to remain available for the fiscal year in which appropriated and two subsequent fiscal years) for the USGS Earth Mapping Resources Initiative (§40201 of Division D of P.L. 117-58). \$167.0 M for FY2022 for the design, construction, and build-out of an energy and minerals research facility through a cooperative agreement with an academic partner (§40204 of Division D of P.L. 117-58). \$8.7 M for FY2022 and \$5.0 M for each of FY2023-FY2025 (to remain available for the fiscal year in which appropriated and two subsequent fiscal years) for the National Geological and Geophysical Data Preservation Program (§41003(a) of Division D of P.L. 117-58; see also 42 U.S.C. §15908). 0.5% of these appropriations must be transferred to DOI's Office of Inspector General for funding oversight.
P.L. 117-43 (Div. B)	\$26.3 M (FY2022)	<ul style="list-style-type: none"> For expenses related to the consequences of wildfires, hurricanes, and other natural disasters that occurred in 2019, 2020, and 2021.
P.L. 116-20 (Title VII)	\$98.5 M (FY2019)	<ul style="list-style-type: none"> For expenses related to the consequences of Hurricanes Florence and Michael, wildfires in 2018, earthquake damage associated with emergency declaration EM-3410, and those areas impacted by a major disaster declared pursuant to 42 U.S.C. §§5121 et seq. for 2018 wildfires or volcanic eruptions. \$72.3M of the total is designated for repair and replacement of equipment and facilities damaged by disasters in 2018.
P.L. 115-123 (Div. B)	\$42.2 M (FY2018)	<ul style="list-style-type: none"> For expenses related to the consequences of Hurricanes Harvey, Irma, and Maria, and those areas impacted by a major disaster declared (pursuant to 42 U.S.C. §§5121 et seq.) for 2017 wildfires.

Source: CRS, using referenced laws.

Notes: M = million. Nominal dollars. Appropriations are to remain available until expended unless otherwise stated. In addition to amounts shown, P.L. 117-58 appropriated funding for DOI-wide activities, which may be used to provide additional funding for the USGS. (For instance, DOI announced \$6.6 million for USGS ecosystem restoration activities in 2022.)

Natural Hazards Funding

The USGS, with support from nonfederal partners, collects scientific information for long-term data sets, such as streamflow and flood records, and monitors, assesses, and conducts research on natural hazards. For FY2018 through FY2023, four supplemental appropriations laws have included \$208.0 million for the USGS to repair, replace, or upgrade monitoring equipment and facilities impacted by recent natural disasters and to improve natural hazard science capabilities. The USGS has released its plans for allocating funding provided by three of these laws. (See <https://www.usgs.gov/supplemental-appropriations-for-disaster-recovery-activities>.) The following sections highlight some of the activities supported by this funding. However, information on expenditures under P.L. 117-328 is not yet available.

Hurricanes and Floods

The USGS continues to use supplemental appropriations to conduct work in the following states and territories impacted by hurricanes and severe storms: AR, FL, GA, HI, LA, NC, NJ, NY, PA, PR, SC, TN, TX, and USVI. This work includes spending about \$10 million to replace or harden (i.e., improve structures to withstand hazards) hundreds of streamgages and to update information on stream and river conditions post-storm. The USGS is spending \$15.5 million to update lidar surveys and conduct coastal assessments and risk forecasts in affected areas. Further, the agency is spending \$8.1 million to upgrade the Puerto Rico Seismic Network and the Puerto Rico Strong Motion Program, which were impacted by Hurricane Maria.

Volcanoes and Earthquakes

The USGS is spending \$73.4 million of FY2019 supplemental appropriations for activities related to the intense eruptions at Kilauea Volcano in Hawaii in 2018, which damaged at least 724 structures. Of the total, the USGS is using \$10.8 million for rebuilding and hardening the Hawaiian Volcano Observatory monitoring network, \$3.0 million for investigations, and \$59.6 million for constructing a new facility in Hilo to replace facilities at the summit of Kilauea Volcano that were damaged beyond repair. The USGS also is spending \$4.3 million of FY2019 supplemental appropriations to harden and improve Alaska Volcano Observatory facilities and monitor network infrastructure after the 2018 magnitude 7.1 earthquake that struck north of Anchorage, AK. Upgrades to facilities and network infrastructure help ensure volcano monitoring capabilities for research and hazard risk assessment. With FY2022 supplemental appropriations, the USGS is upgrading portable seismic equipment in CA, PR, and UT.

Wildfires and Landslides

The USGS is spending about \$20 million provided in FY2018, FY2019, and FY2022 supplemental appropriations to assess post-wildfire landslide hazards and to conduct lidar studies in California and Washington, and to assess and update models of fire behavior and their impacts on DOI land. The USGS also is spending about \$5 million to repair, replace, or harden the seismic network in California for earthquake monitoring after parts of the network were damaged in wildfires. In response to landslides associated with Hurricane Maria, the USGS is

spending \$5.8 million for post-landslide assessments and lidar studies to identify landslide hazards, which contributed to a landslide susceptibility map for PR.

Mapping, Energy, and Minerals Funding

P.L. 117-169, commonly referred to as the Inflation Reduction Act (IRA), provided \$23.5 million in supplemental funding for FY2022, to remain available through FY2031, for USGS 3D elevation data activities. The USGS carries out these activities via its 3D Elevation Program (43 U.S.C. §3104). On December 31, 2022, the White House released a guidebook for IRA funding that included information on the 3DEP funding.

P.L. 117-58, the Infrastructure Investment and Jobs Act (IIJA), contained \$510.7 million in supplemental funding for activities authorized in Division D of the act that aim to bolster supply chains for clean energy technologies. Of the total, \$320.0 million was for the USGS Earth Mapping Resources Initiative (MRI), first funded with FY2019 annual appropriations, which aims to complete a national surface and subsurface mapping and data integration effort that prioritizes mapping (e.g., topographic, geologic, geochemical, and geophysical mapping). The IIJA also directed Earth MRI to research mine waste as a potential source for critical minerals. Another \$23.7 million of the total was to augment existing efforts to characterize, digitally document, and preserve physical geologic samples that may relate to mineral exploration. The USGS released a spend plan for its IIJA activities. (See <https://www.usgs.gov/media/files/usgs-bipartisan-infrastructure-law-spend-plan>.)

The remaining \$167.0 million was for a USGS Energy and Minerals Research Facility in Golden, CO, to replace an outdated facility. In May 2022, the USGS signed a memorandum for a cooperative agreement with the Colorado School of Mines for the design of the facility.

Issues for Congress

As previously noted, the USGS has released details on its spending plans for most of its supplemental appropriations. Specific issues for Congress may include how quickly these funds are being spent, what activities have been funded, and how the USGS is tracking output and performance data. Congress also may consider broader questions, such as how effective the funding is in accomplishing the purposes set out by Congress (e.g., reducing hazard impacts and identifying mineral resources). Another question may be whether and how to adjust USGS funding in future years.

Congress may consider how to ensure reliable, robust hazard monitoring for short-term hazardous events as well as long-term observations, both of which contribute to scientific understanding, risk assessment, hazard mitigation, warnings, and hazard response. For example, hazardous events may damage monitoring infrastructure. Congress may consider the sufficiency of appropriations to maintain, repair, or replace damaged infrastructure.

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