Department of the Interior

U.S. Geological Survey

Implementation of the Bipartisan Infrastructure Law

Initial Spend Plan

President Biden signed the Bipartisan Infrastructure Law (BIL) on (P.L. 117-58) November 15, 2021, making this once-in-a-generation investment in the Nation's infrastructure and economic competitiveness a reality. This landmark investment will rebuild America's critical infrastructure, tackle the climate crisis, advance environmental justice, and drive the creation of good-paying union jobs. By addressing long overdue improvements and strengthening our resilience to the changing climate, this investment in our communities across the country will grow the economy sustainably and equitably so everyone gets ahead for decades to come.

The Department of the Interior (DOI) will receive $30.6 billion over five years in direct funding through the Bipartisan Infrastructure Law. Interior plans to stand up new programs and expand existing work to deliver results by boosting local economies, building resilience to the devastating effects of drought and wildfires, putting Americans to work to reclaim abandoned coal mine sites and plug orphaned oil and gas wells, restoring important ecosystems and watersheds, strengthening Tribal water infrastructure and climate resilience, and identifying domestic supplies of mineral resources needed to advance new technologies.

The reporting requirements within the Bipartisan infrastructure Law (PL-117-58) state:

> Sec. 601. Not later than 90 days after the date of enactment of this Act, the Secretary of the Interior shall submit to the House and Senate Committees on Appropriations a detailed spend plan for the funds provided to the Department of the Interior in this title in this Act for fiscal year 2022, and for each fiscal year through 2026, as part of the annual budget submission of the President under section 1105(a) of title 31, United States Code, the Secretary of the Interior shall submit a detailed spend plan for the funds provided to the Department of the Interior in this title in this Act for that fiscal year.

The Department plans to execute these investments adhering to the Administration's implementation priorities to:

- invest public dollars efficiently, working to avoid waste, and focus on measurable outcomes for the American people;
- increase the competitiveness of the United States economy, including through implementing the law's Made-in-America requirements and bolstering United States manufacturing and supply chains;

- improve job opportunities for millions of Americans by focusing on high labor standards for these jobs, including prevailing wages and the free and fair chance to join a union;
- invest public dollars equitably, including through the Justice40 Initiative, which is a Government-wide effort toward a goal that 40 percent of the overall benefits from Federal investments in climate and clean energy flow to disadvantaged communities;
- build infrastructure that is resilient and that helps combat the crisis of climate change, and where feasible leverage funding to sequester carbon and reduce greenhouse gas emissions; and
- effectively coordinate with State, local, Tribal, and territorial governments in implementing these critical investments.

U.S. Geological Survey Funding Summary

The Bipartisan Infrastructure Law provides a total of $510.7 million directly to the U.S. Geological Survey (USGS) to support integrated mapping and interpretation of mineral resources data, the preservation of data from geochemical samples from the Earth Mapping Resource Initiative (Earth MRI), and a replacement facility for the USGS energy and minerals research center in Denver, CO. In addition to the funding USGS received directly in the bill, there is also the potential for the coordination of interagency projects with DOI bureaus and other Federal agencies to provide USGS science to support other provisions contained in the bill.

Details of each program and project are shown in the summary table below. Also detailed below is a multi-year transfer to the DOI Office of the Inspector General for project oversight. Funding is provided to USGS as emergency appropriations and is available for obligation with various spending availability terms depending on specific Congressional direction.

U.S. Geological Survey - Total Bipartisan Infrastructure Law Funding

($ in 000s)		FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	Total
Survey, Investigations & Research							
Facilities/ Deferred Maintenance and Capital Improvement	USGS Energy and Minerals Research Facility	167.00	0.00	0.00	0.00	0.00	167.00
Core Science Systems/ Science Synthesis, Analysis and Research	National Geological and Geophysical Data Preservation Program	8.67	5.00	5.00	5.00	0.00	23.67
Energy and Mineral Resources/ Mineral Resources Program	Earth Mapping Resources Initiative	64.00	64.00	64.00	64.00	64.00	320.00
Office of the Inspector General	Directed Transfer	-1.20	-0.35	-0.35	-0.35	-0.32	-2.55
Survey, Investigations & Research, Total		238.47	68.66	68.66	68.66	63.68	508.11
U.S. Geological Survey, Total		**238.47**	**68.66**	**68.66**	**68.66**	**63.68**	**508.11**

The USGS plays an essential role in providing a broad range of science to other Federal, State, and local government agencies, Tribal communities, and the public. The USGS plans to make historic investments in science with the following projects:

- **USGS Energy and Minerals Research Facility** ($167.0 million) – Funds the design, construction, and tenant build out of a USGS-owned facility to support energy and

minerals research and appurtenant associated structures, through a cooperative agreement with an academic partner. Funding is available in FY 2022 until expended.

- **National Geological and Geophysical Data Preservation Program** ($23.7 million) – Supports State Geological Surveys through the matched grants program to preserve and make digitally accessible geological and geophysical data and assets, including support of the Earth MRI critical minerals priorities. Funding will be received over a period of four years, with $8.7 million in FY 2022 and $5.0 million in FY 2023 through FY 2025.

- **Earth MRI** ($320.0 million) – Advances the USGS' mapping mission by providing integrated topographic, geologic, geochemical, and geophysical mapping; accelerating the integration and consolidation of geospatial and resource data; and interpreting subsurface and above-ground mineral resources data. The initiative will focus on the full range of minerals, using a whole ore body approach rather than a single commodity approach, to emphasize all the recoverable critical minerals in a given surface or subsurface deposit. The USGS plans to also map and collect data for areas containing mine waste to increase understanding of above-ground mineral resources in previously disturbed areas. USGS may enter into cooperative agreements with States or use existing contracting authorities. Funding will be received over a period of five years, with $64.0 million each year in FY 2022 through FY 2026.

Collectively, these investments will deliver science information and data that are essential to the design, development, and management of the Nation's infrastructure. A more detailed description of each project is provided in the Project Spend Plan sections. Additionally, USGS plans to utilize a percentage of these funds to support administrative costs associated with the operation of these projects. Additional information can be found in the Administration section below.

U.S. Geological Survey Implementation Strategy

The USGS 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." In 1962, Congress amended the USGS Organic Act to include examinations outside the national domain.

The USGS is the Nation's largest water, earth, and biological science and civilian mapping agency, and is the primary Federal source of publicly available, science-based information on ecosystem science, land use, energy and mineral resources, natural hazards, water use and availability, and updated maps and images of the Earth's features. The USGS works in partnership with the Interior bureaus, other Federal agencies, Tribes, States, local jurisdictions, academia, and the private sector to deliver actionable information to help resource managers, planners, emergency response officials, and the public make informed land and natural resource decisions, and to support the U.S. economy and the health and safety of our Nation.

Through the Bipartisan Infrastructure Law, the USGS plans to vastly expand investments in critical minerals research, advance the data preservation of geological and geophysical data, and support construction of a new USGS research facility to support energy and minerals research. The USGS is committed to investing in our Nation's infrastructure and advancing the research and development of the clean energy supply chain.

Bureau Governance Structure

Within the USGS, the BIL Executive Oversight Committee, chaired by the Associate Director for Energy and Mineral Resources, is responsible for the general oversight of projects funded by the Bipartisan Infrastructure Law. The Committee is responsible for ensuring programs and projects address the Administration's and the Department's priority goals, meet Department-wide performance objectives and are well-coordinated with other BIL projects within the Department and within BIL Title II "Supply Chains for Clean Energy Technologies". The USGS is using existing management structures that have been adapted from prior emergency supplemental process to manage the BIL funds.

The BIL Executive Oversight Committee includes the following members:

- Associate Director for Natural Hazards Exercising the Delegated Authority of the Director, U.S. Geological Survey
- Deputy Director, Operations
- Deputy Director, Administration & Policy
- Associate Director, Energy & Mineral Resources (Chair)
- Associate Director, Core Science Systems
- Associate Director, Office of Budget, Planning & Integration
- Associate Director, Office of Administration
- Associate Director, Communications
- Deputy Regional Director, Rocky Mountain Region
- Bureau Implementation Lead

The BIL Implementation Team is responsible for maintaining strong internal controls, overseeing project work, coordinating communications, monitoring progress, and meeting all tracking and reporting requirements established by the USGS, DOI, the Office of Management and Budget, or other Executive or Legislative authorities. The BIL Implementation Team includes Project Managers responsible for planning, organizing, managing, controlling, and communicating the implementation of each project from initiation to close. It also has leads from the USGS Science Support offices, including the Office of Administration, the Office of Budget, Planning and Integration, the Office of Communications and Publishing, and the Office of Human Capital. This team works in tandem with the equivalent offices within DOI's Office of Policy, Management and Budget.

Finally, the USGS has designated subject matter expects for DOI's programmatic "strike teams" to assist with policy development, program guidance and the professional advisement of the interagency coordination of BIL projects.

Setting Priorities and Establishing Criteria

As the primary science bureau for DOI, the USGS' diverse expertise enables us to carry out large-scale, multidisciplinary investigations and provide impartial scientific information to resource managers, planners, and other customers.

In the first year of the BIL, the USGS plans to focus on existing prioritization processes, including funding projects that can be initiated quickly and create jobs in both the private sector and State governments. The USGS aims to also emphasize initial efforts on State and DOI-bureau proposals that support the preservation and public access of data and assets that are relevant to the identification and understanding of U.S. critical mineral resources. The bureau intends to use existing review and peer-ranking criteria to provide competitive grants to States and projects in USGS and other DOI bureaus quickly and efficiently to preserve and make publicly available historical geological and geophysical data and samples. Also, through the support of both internal and external partners, the USGS plans to leverage its scientists with State government and academic scientists to jointly prioritize areas in need of modern mapping to identify potential critical minerals deposits and, under the BIL, mineral resources in mine wastes.

Monitoring and Evaluation

The USGS will monitor funds and establish reporting criteria, including accounting crosswalks, and track project and administrative costs to meet DOI reporting requirements. The USGS will ensure that projects are on track, monitor major milestones and report them on various timelines dependent on DOI, OMB and external oversight committees, which may include weekly, monthly, quarterly, annual, or ad hoc deadlines. The USGS will also ensure accountability for internal controls, reporting improper payments, and accounting for grant expenditures.

The BIL Implementation Team's Project Managers are responsible for monitoring projects from beginning to end and alerting the lead of potential issues relating to project progress, timeliness of contract awards, reporting, communication with stakeholders, or other operational concerns. Project Managers will also identify any technical expertise needed for coordinating efforts between USGS Centers. Project Managers will work with Centers to identify scientists, provide staffing suggestions and other resources necessary to complete projects, and ensure that necessary products are delivered in a timely manner.

The USGS will also work with DOI and OMB to establish performance measures and metrics for each project geared towards achieving project objectives and legislative requirements.

Timeline for Implementation – FY 2022

To meet the objectives of the BIL, the USGS expects the following initial major BIL milestones in FY 2022.

- The USGS anticipates publishing the 2022 List of Critical Minerals in early 2022, under the Energy Act of 2020. This whole-of-government list identifies non-fuel minerals or mineral materials essential to the economic or national security of the U.S that have supply chains that are vulnerable to disruption. The draft list was posted in the Federal Register for public comment. The final list is expected to be released by February 24, 2022.
- The USGS anticipates awarding approximately 35 competitive grants to State geological surveys and funding approximately 25 DOI bureau projects for data preservation activities that will result in the public availability of historical data and physical samples. USGS plans to award competitive grants by the end of FY 2022.
- The USGS anticipates awarding a Cooperative Agreement for the design and construction of the Energy and Minerals Research Facility in mid to late FY 2022. The bureau also anticipates awarding a contract for the preparation and delivery of the Environmental Impact Statement for the research facility project in mid FY 2022.

Administration

The USGS will use existing policies and guidance for establishing and tracking administrative costs separately from program costs. The USGS intends to set aside sufficient funds each year for administration and is committed to proper management and oversight of BIL funds. The USGS plans to fund Executive Oversight Committee and Bureau oversight activities, and administrative and communication support, and outreach material, and additional administrative costs for USGS Center/Regional offices.

The BIL requires the USGS to transfer a total of $2.6 million (or 0.5 percent of each project amount in FY 2022 through 2026) to the DOI Office of Inspector General for oversight of funding. Additionally, the BIL Implementation Team plans to monitor obligations and expenditures monthly and ensure conformity with bureau requirements for project tracking. The BIL Implementation Team will coordinate with the USGS Office of Administration to monitor execution and provide targeted internal control reviews for infrastructure.

USGS Energy & Minerals Research Facility

Program Managers

Chief, Office of Management Services
Chief, Facilities Project Management and Support Branch

Program Description and Objectives

The objective of this project is the construction of a new Federally owned building for mineral and energy science. The new building is intended to house the USGS Geology, Geophysics, and Geochemistry (G3) and Central Energy Resources (CER) Science Centers and allow for co-location with a host academic partner and provide opportunities for science collaboration that leverages USGS science; supports the development of science, technology, engineering, and mathematics (STEM) talent by engaging students in USGS science; and expands the diversity of the USGS workforce.

The USGS G3 and CER Science Centers provide unique research and operational capabilities in critical minerals, energy resource evaluation, and other essential energy and mineral program priorities for the USGS and DOI. Currently located on the Denver Federal Center (DFC), the science activities of G3-CER are increasingly hindered by the active deterioration of DFC Building 20, including repeated floods and building failures that have resulted in material losses of more than $5 million. This replacement facility is urgently needed.

This project is estimated to be completed within 5 years and USGS plans to utilize a cooperative agreement with the academic partner to complete the design, construction, and tenant build-out of the new building and appurtenant associated structures. The USGS intends to retain ownership of the facility and associated structures. The project requires a National Environmental Policy Act (NEPA) action in the form of an Environmental Assessment (EA) or if needed an Environmental Impact Statement (EIS). The USGS plans to contract directly with a qualified consultant for the preparation and delivery of the EA/EIS. The USGS also intends to enter into a no-cost lease with the academic partner for a term of not less than 99 years to obtain the land on which the constructed building and appurtenant structures would reside. The current estimated cost to complete the construction of this new facility is approximately $240 million. The BIL provides $167 million in FY 2022, to remain available until expended.

Implementation Strategy

The USGS plans to execute the project following best practices for project management. This project requires a NEPA action in the form of an EA/EIS, a lease to be established with the academic partner, and a cooperative agreement for the design and construction of the building and associated appurtenances.

In year one, the USGS aims to focus on its NEPA requirements first, establishing a contract in mid FY 2022 to conduct the NEPA review process while also establishing the cooperative agreement with the academic partner. The agreement would allow USGS to begin working with the academic partner on the design, construction, and tenant build-out of the new building. Work under the cooperative agreement would be coordinated with the environmental reviews and construction will not begin until NEPA requirements are complete. Work establishing the lease agreement for the land on which the buildings and appurtenant structures will be located is anticipated to commence mid FY 2022 and continue in parallel with other project tasks. The USGS expects final execution and lease signing to coincide with the conclusion of the NEPA review process.

The USGS plans to use the roles, responsibilities, and governance processes identified in the DOI Capital Planning and Investment Control (CPIC) guidelines for executing the planning and programming, design, and construction phases of this project. A lead project manager would be assigned to lead the multidisciplined integrated project team, providing specialized expertise in contracts/grants; architecture and general/environmental engineering; and project management skills to develop key milestones and critical activities of the project. The integrated project team would meet on a regular schedule to report out on progress on individual tasks, helping the project keep to acceptable cost and schedule variances. On a quarterly basis, project progress and status would be reported to both the Bureau Investment Review Board (BIRB) and the DOI Office of Acquisition and Property Management (PAM). At the end of each CPIC phase, the lead project manager would gain approval from the BIRB, prior to moving to the next phase.

In FY 2022 various actions and activities would begin in the planning and programming phase to include the initiation of environmental assessments and NEPA activities; development of the cooperative agreement with our academic partner; program analysis and validation; site analysis and selection followed by the no cost land lease agreement; updates to the business case; the preparation of risk management and project management plans with project schedule, milestones and dependencies identified.

The NEPA process will include public engagement with local stakeholders, Tribes, and State historical entities as applicable.

Working through the cooperative agreement, the partnership with the academic partner is critical in designing and constructing the Energy and Minerals Research building to meet the requirements of both parties and ensure the project remains within budget and scope.

Performance

The USGS plans to work with the Department of the Interior, as necessary, to develop performance measures and monitor progress toward achieving program objectives.

National Geological Geophysical Data Preservation Program (NGGDPP)

Program Managers

Program Coordinator
Associate Program Coordinator

Program Description and Objectives

The National Geological and Geophysical Data Preservation Program (NGGDPP) was established and authorized in Section 351 of the Energy Policy Act of 2005 (Public Law 109-58, Sec. 351), reauthorized in Section 7002 of the Consolidated Appropriations Act, 2021 (Public Law 116-260), and amended by the Infrastructure Investment and Jobs Act, 2022 (Public Law 117-58), all recognizing the need for the preservation, cataloging of and access to geological and geophysical data and materials for research and education use.

The objectives of the Program as outlined in the Acts are to:

1. archive geologic, geophysical, and engineering data, maps, well logs, and samples.
2. provide a national catalog of such archival material.
3. provide technical and financial assistance related to the archival material.
4. provide for preservation of samples to track geochemical signatures from critical mineral (as defined in section 7002(a) of the Energy Act of 2020 (30 U.S.C. 1606(a))) ore bodies for use in provenance tracking frameworks.

To meet these objectives, the Program provides competitive grants to State Geological Surveys and funds projects executed by USGS and other Department of the Interior bureaus, to preserve, modernize, and make publicly available, geological, and geophysical data and assets. Assets preserved with Program funding are cataloged in the National Digital Catalog (ScienceBase), a searchable resource catalog. Making these resources publicly available results in the reuse of these sample and data resources, reducing the cost and need for new sampling and other types of data acquisition. Many of the preserved assets are irreplaceable due to landscape changes or lack of access.

Implementation Strategy

The USGS plans to leverage the existing NGGDPP State grants program to provide competitive grants to States quickly and efficiently, to preserve and make publicly available historical geological and geophysical data and samples. There is currently an open Notice of Funding Opportunity (NOFO) that is being amended to: 1) prioritize funding of the preservation of data and materials relevant to critical minerals resource characterization, 2) remove the funding cap for the critical minerals activities, 3) increase the overall spending cap for the grants to $9.5 million, and 4) extend the submission deadline to allow States the time to amend their proposals

accordingly. Grant opportunities would be announced annually through a NOFO distributed to stakeholders and announced in the Federal Register.

State grant proposals would be reviewed by a seven-member peer panel, consisting of three State geological survey representatives, three USGS representatives, and one non-USGS representative. Proposals would be scored on the following 4 criteria: technical merit; societal benefits; knowledge, prior performance, and experience; and budget. Each proposal would be scored in each of the categories and then provided an overall rank. The panel then makes funding recommendations to the NGGDP Program Coordinator who makes final funding decisions.

The NGGDPP would also provide funding for projects to USGS and other Department of the Interior bureaus to preserve historical geological and geophysical data and samples relevant to the characterization of national critical mineral resources. Some grants to DOI bureaus may result in contracting work outside of the Federal bureaus. Grants to the DOI bureaus would be reviewed by a panel of 3 USGS experts, using the same criteria as listed above for the State grants.

In year one, the Program plans to focus on funding State and USGS proposals that address preservation and public access of data and assets that are relevant to the identification and understanding of U.S. critical mineral resources. In years two through four, the Program plans to provide grants with a 2-year period of performance that may address more complex data provision and compilation from historical sources (e.g., cataloging physical sample collections for geochemical analysis, hyperspectral imaging of rock core and cuttings, compilation of historical mine waste maps/data, etc.), and infrastructure improvements to State geological repositories and data portals. In each year, Program leadership would meet with stakeholders on a regular basis to request input on relevant priorities and needs. Progress would be measured by the number of new items cataloged in the National Digital Catalog, as well as metrics collected when users are redirected to the State-held data or sample resources.

Over the course of the BIL funding, NGGDPP would continue efforts and investments in data compilation and delivery tools and resources. NGGDPP plans to collaborate with Federal, State, academic, and private partners to advance the FAIR (Findable, Accessible, Interoperable, and Reusable) and CARE (Collective benefit, Authority to control, Responsibility, and Ethics) principles for data and physical objects preserved with NGGDPP funding. NGGDPP would continue the development of the National Index of Borehole Information (NIBI), a centralized discovery portal for information about State and Federal subsurface data and sample resources. NIBI was envisioned to support the Earth Mapping Resources Initiative as well as other geological data integration efforts (e.g., U.S. GeoFramework Initiative and other subsurface modeling). NGGDPP would continue efforts in data management, including collaborative (Fish and Wildlife Service, Bureau of Ocean Energy Management) development of the DOI enterprise *mdTools* suite of metadata creation, editing, and translation tools to advance data interoperability and reuse; and the promotion of the use of persistent unique identifiers for data and samples.

Performance

The USGS plans to work with DOI, as necessary, to develop performance measures and monitor progress toward achieving program objectives.

Earth Mapping Resources Initiative (Earth MRI)

Program Managers

Earth MRI Program Manager
Earth MRI Science Coordinator
Acting Mineral Resources Program Coordinator
Associate Mineral Resources Program Coordinator

Program Description and Objectives

The USGS Organic Act of 1879 established the Mineral Resources Program's mission to "examine the geological structure, mineral resources, and products within and outside the national domain". The 2019 appropriations provided the Program funding to launch the Earth Mapping Resources Initiative (Earth MRI), a partnership between the USGS, the Association of American State Geologists (AASG), and other Federal, State, Tribal, and private-sector organizations to modernize the Nation's surface and subsurface mapping.

The BIL augments the funding of Earth MRI with an additional $64 million per year over the next 5 years for a total of $320 million to identify areas with potential critical mineral resources both still in the ground and in mine wastes. The BIL directs the USGS to accelerate efforts to carry out the fundamental resources and mapping mission of the USGS by (1) providing integrated topographic, geologic, geochemical, and geophysical mapping; (2) accelerating the integration and consolidation of geospatial and resource data; and (3) providing interpretation of mineral resources data on the subsurface and above ground (i.e., in mine waste materials). These data are fundamental to understand the Nation's potential for critical mineral resources used throughout the defense, manufacturing, and renewable energy sectors of the economy, and other minerals such as construction materials; carbon storage potential; groundwater; and geohazards such as seismic faults. Earth MRI coordinates with partners to ensure that data collection addresses both critical minerals and other geoscience needs. For example, Earth MRI is coordinating priorities and funding with the Department of Energy's Geothermal Technologies Office to collect data useful for both critical mineral and geothermal resources.

The expansion and acceleration of Earth MRI through the BIL funding would yield new understanding of the potential for sustainable primary and secondary production in the United States, including minerals still in the ground and mine waste sites with potential for mineral reprocessing and site remediation. Data collected through the expanded Earth MRI would support development of a national mine waste inventory, development of assessments quantifying the Nation's domestic mineral resources as called for in the Energy Act of 2020, and identification of locations suitable for sustainable development as called for by the 100-day report recommendations produced in response to Executive Order 14017.

The data generated through Earth MRI would also inform the USGS development of the whole-of-government list of critical minerals and analysis of global and domestic supply chains,

providing crucial data to shorten the time for discovery of mineral resources, and inform mine waste remediation efforts. Earth MRI's advanced mapping of the Nation's subsurface and surface would also directly improve our understanding of other economically valuable mineral resources, including construction materials, energy resources, groundwater resources, geologic hazards, such as seismic faults, infrastructure dependencies on subsurface geology, landscape evolution as a result of climate change, and other pressing National needs.

Implementation Strategy

The USGS plans to fund projects that can be initiated quickly and create jobs in both the private sector and State governments. Earth MRI would use a collaborative science-based approach to prioritize expenditure of funds and use existing contracting and granting processes to distribute funding. All data and products funded by Earth MRI would be made publicly available.

Prioritization and Project Selection Process

The USGS and the State Geological Surveys employ much of the Nation's remaining science expertise in minerals-related fields. Earth MRI brings together USGS and State scientists to jointly prioritize areas in need of modern mapping to identify potential critical minerals deposits, mineral resources in mine waste materials, and other data and science needs supporting the study of carbon storage, geothermal, and groundwater resources and geohazards. This partnership synthesizes the combined Federal and State data and scientific knowledge for each region of the country. The USGS-State collaboration results in maps of priority areas, geologic formations, and data types, which inform the proposal processes and project selection process. Through these processes Earth MRI currently supports approximately40 States, and through the BIL funding Earth MRI anticipates providing data and funding to additional States. Earth MRI would also collaborate with internal and external partners to develop a unified approach to a national mine waste inventory and evaluate sites for their potential for successful reclamation and critical mineral recovery.

Funds Distribution

Several USGS Programs coordinate to efficiently distribute Earth MRI funds to and work with partners and private sector surveyors facilitated through the USGS National Cooperative Geologic Mapping Program.

Geologic and Geochemical Mapping Projects

Funding for geologic and geochemical mapping projects is distributed to State Geological Surveys through cooperative agreements.

Geophysical Surveys

Earth MRI collects geophysical data to map and investigate areas with potential for critical mineral deposits and minerals in mine wastes. USGS works with other Federal agencies, and State Geological Surveys to design the geophysical data collection. USGS contracts the surveys with private sector contractors specializing in airborne geophysical data acquisition. Ground-based geophysical surveys are collected where appropriate to better define the mineral resources and mine waste materials. Final data review and publication is conducted by USGS staff.

Lidar Surveys
Earth MRI partners with the USGS National Geospatial Program (NGP) to acquire lidar data. Lidar acquisition contracts are awarded to the private sector, while data review and delivery are conducted internally by USGS.

Data Preservation
Earth MRI partners with the USGS National Geological and Geophysical Data Preservation Program (NGGDPP) to fund the State Geological Surveys to preserve and make critical minerals data, reports, and drill core available to the public. The NGGDPP has an established process to issue competitive grants to the State Geological Surveys through their annual Notice of Funding Opportunity.

USGS Staff
Earth MRI's science-based process relies on the technical expertise of USGS scientists to identify geoscience data needs, run Federal/State collaborations to synthesize existing data and prioritize regions for data collection and mapping, and set priorities for project selection. In addition, USGS is responsible for data integration, interpretation, and data delivery. Dramatically scaling up the amount of data collection would require additional technical staff.

<u>Partnerships</u>
Earth MRI works extensively with partners and is working to broaden those partnerships and better understand joint priorities, to ensure the BIL funding supports as many partners' goals as possible.

State Partnerships
The USGS works closely with the Association of American State Geologists (AASG) and their State Geological Survey members to collaborate on setting the overarching goals and to provide scientific expertise in the design and execution of Earth MRI. The States are funded to conduct geologic and geochemical mapping as well as data preservation activities. The expansion of Earth MRI into characterizing mine waste material would include relevant State agencies (such as Departments of Natural Resources) charged with mine waste characterization and regulation as appropriate. For lidar partnerships, USGS works closely with the National States Geographic Information Association and solicits State and other non-Federal partnerships via the annual 3DEP Broad Agency Announcement public partnership process.

Federal Partnerships
Earth MRI has reached out to DOI's Office of Environmental Policy and Compliance, and plans to reach out to other DOI bureaus, to better understand DOI's data and science needs related to critical mineral resources and mine wastes. For example, Earth MRI investments in characterizing mine wastes would support developing a national mine waste inventory. There may be potential to design that inventory to provide decision support to investments in abandoned mine land remediation.

Earth MRI and the Department of Energy's Office of the Undersecretary for Science are working to coordinate and leverage each other's BIL funding related to critical minerals and abandoned

mine lands. For example, through that coordination process, Earth MRI is building on an existing relationship with the DOE Geothermal Technologies Office to support mapping and research for both critical mineral and geothermal resources. This partnership has already been successful in co-prioritizing and co-funding large data collection and analyses efforts in Nevada and California. Planning is underway to expand the partnership to additional regions with both critical mineral and geothermal resource potential.

The USGS is also seeking broader interagency coordination through existing Federal working groups. These include: (1) the Interagency Policy Committee (IPC) on E.O. 14017 *America's Supply Chains* (Sub-IPC on Sourcing, Working Group on Commodity by Commodity Strategies, which the USGS leads with OSTP and the NEC); (2) the National Science and Technology Council's Subcommittee on Critical Minerals (CMS), which the USGS and DOE co-chair with OSTP to coordinate implementation of the Federal strategy on critical mineral supply chains; (3) the Federal Mining Dialogue, which focuses on abandoned mine lands and includes DOI's BIA, BLM, FWS, NPS, OSMRE, and OEPC; DoD's Army Corps of Engineers; Department of Energy; Department of Justice; EPA; Department of Labor's Mining Safety and Health Administration; and USDA's U.S. Forest Service; and (4) the 3DEP Executive Forum and Working Group, which the USGS chairs to coordinate elevation data strategies and partnerships with 15 Federal agencies.

Tribal Partnerships

Tribal outreach and engagement are fundamentally important to ongoing activities for both the subsurface and mine waste mapping objectives of Earth MRI, which can include Tribal lands. In areas of interest that include Tribal reservation lands, and ceded lands in some States, USGS follows the Bureau notification process, inviting the Tribes to discuss the projects early in the planning process. USGS works with the Tribes to meet concerns regarding access and data release issues and solicits Tribal partnerships to co-fund elevation data acquisition through its Broad Agency Announcement partnership process. With expanded and accelerated data acquisition through BIL funding, USGS would invest in staffing and processes for enhanced Tribal consultation, including early invitations for communication about Tribal geoscience needs and interests and opportunities for dedicated studies in support of those needs.

Earth MRI would seek opportunities to support Tribes through workshops, training, and capacity building opportunities. The goals of the training efforts would be to (1) help build capacity for the interested Tribes to utilize Earth MRI data to inform their land and resource management science needs; and (2) help Tribes understand potential critical mineral resources and environmental challenges associated with mine waste on Tribal lands. The training topics could include review of the types of geophysical and lidar surveys used by Earth MRI and the information they provide. For 3DEP, the NGP has a network of geospatial liaisons that can assist Tribes with questions about lidar, and NGP also publishes a series of lidar training videos. Similar video training could be used for other Earth MRI activities.

Industry Partnerships

Earth MRI contracts with private sector companies that specialize in high-quality airborne geophysical data and lidar data collection. The USGS experience is that over time, the BIL

funding is likely to significantly restructure this surveying industry. Ten years ago, the Nation had not invested in modern digital elevation surveys at scale. Since the creation of the USGS 3DEP program, which has provided steady funding and consistent quality standards, the American lidar surveying industry has strengthened and diversified. To date, the Nation has not invested in geophysical surveys at the scale envisioned through BIL-related activities. As a consequence, there are few American surveying companies with appropriate geophysical expertise. Earth MRI expects the BIL funding to alter the landscape for this industry.

In addition, Earth MRI works with mineral exploration companies to gain access to existing geophysical survey data and to help offset costs for large geophysical surveys. USGS also coordinates with MAPPS, a private mapping industry association whose members are contracted to acquire the lidar and geophysical data for Earth MRI.

Performance

The USGS plans to work with the Department of the Interior, as necessary, to develop performance measures and monitor progress toward achieving program objectives.