



HOUSE COMMITTEE ON
NATURAL RESOURCES
CHAIRMAN BRUCE WESTERMAN

To: Subcommittee on Energy and Mineral Resources Republican Members
From: Subcommittee on Energy and Mineral Resources Staff: Murray Miller (Murray.Miller@mail.house.gov), Ray Phillips (Ray.Phillips@mail.house.gov), Kenna Cline (Kenna.Cline@mail.house.gov), and Jace McNaught (Jace.McNaught@mail.house.gov); x5-9297
Date: Monday, July 20, 2026
Subject: Legislative Hearing on 3 Bills

The Subcommittee on Energy and Minerals Resources will hold a legislative hearing on three bills: H.R. 8003 (Rep. Deluzio), “*Expanding the Fast Track Act of 2026*”; H.R. 9640 (Rep. Wittman), “*Earth MRI Reauthorization Act of 2026*”; and H.R. 9646 (Rep. Hurd), “*Quantum-Enhanced Critical Minerals Mapping Act of 2026*”.

The hearing will take place on **Tuesday, July 21, 2026, at 10:15 a.m., in room 1324 Longworth House Office Building.**

Member offices are requested to notify Zach Affeldt (Zach.Affeldt@mail.house.gov) by 4:30 p.m. on Monday, July 20, 2026, if their Member intends to participate in the hearing.

I. KEY MESSAGES

- Lowering the cost-estimate threshold for FAST-41 eligibility will strengthen national security, incentivize quick recovery of critical minerals, and help reindustrialize America.
- The U.S. Geological Survey’s (USGS) Earth Mapping Resources Initiative (Earth MRI) modernizes mapping of the nation’s surface and subsurface resources.¹ Earth MRI collects geologic, geophysical, geochemical, topographic, and related data for, among other uses, identifying resources, hazards, mine waste, and abandoned wells.²
- Geologic mapping is one of the first steps in mineral exploration and discovery, and Earth MRI is poised to make vital contributions to future mineral discoveries. Reauthorizing it would strengthen America’s supply chains and support our energy independence.
- Quantum gravity gradiometric surveying detects minute gravity-gradient signals, producing ultra-high-resolution density maps that can pinpoint concealed ore bodies. When combined with geochemical and geophysical data, this mapping can sharpen drill targeting and subsurface models.

¹ Linda Rowan, “The USGS Earth Mapping Resources Initiative,” Congressional Research Service, December 4, 2025, <https://www.crs.gov/Reports/IF13058?source=search&index=0&searchGUID=c4c820e4e4b64f48a5603ba33331490e>.

² *Id.*

II. WITNESSES

Panel I (Members of Congress)

- *To Be Announced*

Panel II (Administration Witness)

- **Ms. Emily Domenech**, Executive Director, Federal Permitting Improvement Steering Council (Permitting Council), Washington, D.C. [*H.R. 8003*]

Panel III (Outside Experts)

- **Mr. Matt Heller**, State Geologist, Virginia Department of Energy, Charlottesville, VA [*H.R. 9640*]
- **Dr. Ruarri Day-Stirrat**, President, Association of American State Geologists, Portland, OR [*H.R. 9640*]
- **Mr. Matthew Kinsella**, CEO, Inflection, Louisville, CO [*H.R. 9646*]
Mr. Eric Beightel, Federal Strategy Director, Environmental Science Associates, Savannah, GA [*H.R. 8003*] [*Minority Witness*]

III. BACKGROUND

H.R. 8003 (Rep. Deluzio), “Expanding the Fast Track Act of 2026”

The Fixing America’s Surface Transportation Act (FAST Act)³ established, in Title 41 (FAST-41), the Federal Permitting Improvement Steering Council (FPISC), which Congress reauthorized in 2021.⁴ FPISC serves as a convenor and project manager for federal agencies and stakeholders to bring efficiency and transparency to the permitting process.⁵ To accomplish these goals, FPISC has created a permitting dashboard to track “the status of federal environmental reviews and authorizations for covered projects.”⁶

For an infrastructure project to be eligible for the FAST-41 permitting processes, it must be in a covered industry sector, and its sponsor must submit a FAST-41 Initiation Notice containing sufficient information about the project.⁷ Further, to qualify under FPISC’s standard pathway, the project must also be subject to the National Environmental Policy Act (NEPA), be likely to require more than \$200 million dollars in total investment, and not qualify for any “abbreviated authorization or environmental review process.”⁸ Together, these requisites greatly limit the infrastructure proposals that can receive FPISC’s permitting fast track.

Despite their importance to many communities, midsized regional infrastructure projects often fail to reach the qualifying standards for FAST-41 coverage. By lowering the estimated cost

³ Pub. L. No. 114-94.

⁴ Pub. L. No. 117-58.

⁵ “Our Mission and What We Do,” Federal Permitting Improvement Steering Council, December 11, 2024, <https://www.permitting.gov/about/our-mission>.

⁶ *Id.*

⁷ “FAST-41 Covered Project Eligibility,” Federal Permitting Improvement Steering Council, accessed July 16, 2026, <https://www.permitting.gov/projects/eligibility>.

⁸ *Id.*

requirement for projects from \$200 million to \$50 million, more midsized infrastructure projects would become eligible for the FAST-41 permitting processes. This streamlined permitting would reduce project timelines, decrease costs, and allow critical infrastructure to be completed more efficiently across the country.

H.R. 8003, introduced by Rep. Chris Deluzio (D-PA-17) and Rep. Jeff Crank (R-CO-05), reduces the investment amount needed for an infrastructure project to qualify for the permitting dashboard and FPISC permitting guidance. By decreasing the investment threshold for projects from \$200 million to \$50 million, a larger number of infrastructure projects—specifically smaller, regional infrastructure projects—can be considered for expedited permitting procedures under the FAST Act.

H.R. 8003 codifies key elements of Executive Order (E.O.) 14241, “Immediate Measures to Increase American Mineral Production.”⁹

H.R. 9640 (Rep. Wittman), “Earth MRI Reauthorization Act of 2026”

The U.S. Geological Survey’s (USGS) Earth Mapping Resources Initiative (Earth MRI) is part of the USGS Mineral Resources Program (MRP) that focuses on mapping the nation’s surface and subsurface resources.¹⁰ Earth MRI collects geologic, geophysical, geochemical, topographic, and related data for, among other uses, identifying mineral, energy, and groundwater resources and natural hazards.¹¹ Our understanding of America’s resources, including potential critical mineral resources, is underpinned by mapping initiatives like Earth MRI.

Earth MRI was conceptualized during the first Trump administration, in response to E.O. 13817, “A Federal Strategy to Ensure Secure and Reliable Supplies of Critical Minerals,” which instituted a federal policy of identifying new sources of critical minerals and pursuing related actions to reduce the nation’s critical mineral vulnerabilities.¹² Subsequently, the U.S. Department of the Interior (DOI) issued Secretarial Order 3359, which highlighted America’s reliance on certain mineral commodities and directed USGS to undertake the efforts outlined in E.O. 13817, including identifying new sources of critical minerals and ensuring that domestic miners and producers have electronic access to the most advanced topographic, geologic, and geophysical data.¹³ Congress authorized Earth MRI in 2021,¹⁴ requiring “an initial comprehensive national modern surface and subsurface map and data integration by November 15, 2031,” and provided it with \$320 million in funding, in addition to annual appropriations.¹⁵

⁹ Executive Order 14241, “Immediate Measures to Increase American Mineral Production,” The White House, March 20, 2025, <https://www.whitehouse.gov/presidential-actions/2025/03/immediate-measures-to-increase-american-mineral-production/>.

¹⁰ *Id.*

¹¹ *Id.*

¹² Executive Order 13817, “A Federal Strategy To Ensure Secure and Reliable Supplies of Critical Minerals,” Federal Register, December 20, 2017, <https://www.federalregister.gov/documents/2017/12/26/2017-27899/a-federal-strategy-to-ensure-secure-and-reliable-supplies-of-critical-minerals>.

¹³ Secretarial Order 3359, “Critical Mineral Independence and Security,” U.S. Department of the Interior, December 21, 2017, <https://www.doi.gov/document-library/secretary-order/so-3359-critical-mineral-independence-and-security>.

¹⁴ Pub. L. No. 117-58.

¹⁵ Linda Rowan, “The USGS Earth Mapping Resources Initiative,” Congressional Research Service, December 4, 2025, <https://www.crs.gov/Reports/IF13058?source=search&index=0&searchGUID=c4c820e4e4b64f48a5603ba33331490e>.

Earth MRI provides valuable, necessary data for the responsible management and development of our surface, subsurface, and mineral estate. The same geologic and geophysical information used to map our mineral resources can also be used to support a wide range of activities outside of mineral exploration.¹⁶ These include studying water resources, identifying sand and gravel deposits for infrastructure development, locating geothermal reservoirs, mapping natural hazards, and planning the development of energy infrastructure.¹⁷

Recognizing these benefits, H.R. 9640, introduced by Rep. Rob Wittman (R-VA-01), reauthorizes Earth MRI for another five years and sets the authorization of appropriations at \$16.8 million per fiscal year. Reauthorizing Earth MRI is important for developing America's critical minerals supply chains to ensure national and economic security and industrial competitiveness. Earth MRI furthers those goals by incentivizing private investment in mineral exploration.

This legislation advances the goals outlined by the Trump administration in E.O. 14154, "Unleashing American Energy,"¹⁸ E.O. 14241, "Immediate Measures to Increase Mineral Production,"¹⁹ and E.O. 14272, "Ensuring National Security and Economic Resilience Through Section 232 Actions on Processed Critical Minerals and Derivative Products."²⁰

H.R. 9646 (Rep. Hurd), "Quantum-Enhanced Critical Minerals Mapping Act of 2026"

The data collected by Earth MRI identify how rocks and minerals are formed, their geochemical composition, geophysical properties, and geologic structure.²¹ This information, and the maps derived from it, are valuable contributors to the exploration and evaluation stage of mineral production.²² Earth MRI data also improves assessments of America's resource assets and their economic viability, while also locating previously undiscovered lode deposits that could incentivize the development of new mining projects.²³

Quantum gravity gradiometry uses ultra-cold atoms and quantum interference to measure tiny spatial changes in Earth's gravitational field, producing ultra-high-resolution maps of subsurface density variations which are useful for geologic mapping, mineral exploration, and locating underground features.²⁴ By some estimates, these quantum sensors could be as high as 10 times

¹⁶ "Meeting Future U.S. Mineral Resource Needs: The Role of the U.S. Geological Survey Mineral Resources Program," National Academies Press, 2025, <https://www.nationalacademies.org/read/29068/chapter/6#37>.

¹⁷ *Id.*

¹⁸ Executive Order 14154, "Unleashing American Energy," The White House, January 20, 2025, <https://www.whitehouse.gov/presidential-actions/2025/01/unleashing-american-energy/>.

¹⁹ Executive Order 14241, "Immediate Measures to Increase American Mineral Production," The White House, March 20, 2025, <https://www.whitehouse.gov/presidential-actions/2025/03/immediate-measures-to-increase-american-mineral-production/>.

²⁰ Executive Order 14272, "Ensuring National Security and Economic Resilience Through Section 232 Actions on Processed Critical Minerals and Derivative Products," The White House, April 15, 2025, <https://www.whitehouse.gov/presidential-actions/2025/04/ensuring-national-security-and-economic-resilience-through-section-232-actions-on-processed-critical-minerals-and-derivative-products/>.

²¹ Linda Rowan, "The USGS Earth Mapping Resources Initiative," Congressional Research Service, December 4, 2025, <https://www.crs.gov/Reports/IF13058?source=search&index=0&searchGUID=c4c820e4e4b64f48a5603ba33331490e>.

²² "Why is Earth MRI Needed?," U.S. Geological Survey, June 19, 2019, <https://www.usgs.gov/special-topics/earth-mri/science/why-earth-mri-needed>.

²³ *Id.*

²⁴ "NASA Aims to Fly First Quantum Sensor for Gravity Measurements," National Aeronautics and Space Administration, April 15, 2025, <https://www.jpl.nasa.gov/news/nasa-aims-to-fly-first-quantum-sensor-for-gravity-measurements/>.

more sensitive at measuring gravity than classical sensors.²⁵ For a previously undeveloped site, a quantum gravity gradiometer survey could produce a detailed gravity-gradient map, highlighting dense anomalies that may correspond to concealed ore bodies.²⁶ These anomalies can be integrated with magnetic, seismic, and geological data to prioritize drill locations and refine subsurface geological modeling.²⁷

USGS has previously partnered with a private company to pioneer quantum sensing and computing applications to improve data collection supporting the discovery and utilization of energy and mineral resources, underground water resource management, and natural-hazard preparedness.²⁸

H.R. 9646, sponsored by Rep. Jeff Hurd (R-CO-03), directs USGS to establish a quantum-enhanced critical minerals survey program. This program would conduct original quantum-enhanced surveys over no fewer than three priority critical minerals focus areas in the western rare earth elements zones, for the discovery and characterization of critical mineral and rare earth element deposits on or adjacent to federal lands. The bill requires this survey data to be publicly accessible and integrated into the existing Earth MRI national minerals database. The legislation also requires USGS to submit, within 24 months of enactment, a report describing the work done in the quantum-enhanced survey program to the House Natural Resources Committee and Senate Committee on Energy and Natural Resources.

H.R. 9646 advances the Trump administration's continued focus on, and investment in, the critical minerals sector by codifying portions of E.O. 14241, "Immediate Measures to Increase American Mineral Production."²⁹ The bill also complements E.O. 14413, "Ushering in the Next Frontier of Quantum Innovation," expanding upon Section 5, "Deploying Quantum-Enabled Sensors and Networks," by including USGS and DOI in quantum-enabled sensor deployment.

IV. MAJOR PROVISIONS & ANALYSIS

H.R. 8003 (Rep. Deluzio), "Expanding the Fast Track Act of 2026"

Section 2. Federal Permitting Improvement

- Amends the FAST Act's definition of "Covered Project" to lower the cost-estimate threshold from \$200 million to \$50 million.
- Lowers, from \$200 million to \$50 million, the project cost threshold that the Executive Director of FIPSC, Secretary, and Secretary of the Army use to consider whether a project should be included on the Permitting Dashboard.

²⁵ *Id.*

²⁶ Ben Stray, et al., "Quantum gravity gradiometry for future mass change science," EPJ Quantum Technology, Vol. 12, Article 35, March 14, 2025, <https://ui.adsabs.harvard.edu/abs/2025EPJQT..12...35S/abstract>.

²⁷ "Mineral Exploration Applications," GEM Systems, <https://www.gemsys.ca/mineral-exploration-applications/>.

²⁸ "Q-CTRL Partners with USGS to Pioneer Quantum Sensing and Computing Applications," Q-CTRL, January 16, 2024, <https://q-ctrl.com/blog/q-ctrl-partners-with-usgs-to-pioneer-quantum-sensing-and-computing-applications>.

²⁹ Executive Order 14241, "Immediate Measures to Increase American Mineral Production," The White House, March 20, 2025, <https://www.whitehouse.gov/presidential-actions/2025/03/immediate-measures-to-increase-american-mineral-production/>.

H.R. 9640 (Rep. Wittman), “Earth MRI Reauthorization Act of 2026”

Section 2. Earth Mapping Resources Initiative Reauthorization

- Expands the scope of Earth MRI to include data derived from modern sensing technologies, including advanced geophysical data acquisition and digital geochemistry, as well as specifically mentioning geothermal and natural hydrogen as uses of the data.
- Adds USGS’s 3D Hydrography Program to the list of data sources to be integrated into Earth MRI.
- Reauthorizes Earth MRI from FY 2027 to FY 2031, with an appropriation level of \$84 million over 5 years, or \$16.8 million per fiscal year. This is in line with President Trump’s FY 2027 budget request and the FY 2027 Interior appropriations bill.

H.R. 9646 (Rep. Hurd), “Quantum-Enhanced Critical Minerals Mapping Act of 2026”

Section 3. Quantum-Enhanced Critical Minerals Survey

- Requires USGS to conduct, in partnership with DOE National Labs, quantum gravity gradiometric surveying via Cooperative Research and Development Agreement (CRADA) agreements with private quantum sensing firms, leveraging private capital to reduce federal outlay.
- Utilizes survey data to be integrated into Earth MRI's national minerals database and made publicly available to industry stakeholders and state geological surveys.
- Mandates a 24-month report to Congress detailing minerals detected, a quantitative comparison study of quantum gravity gradiometry results to classical geophysical surveying, and a roadmap for scaling quantum sensing within Earth MRI nationally.

V. COST

A formal cost estimate from the Congressional Budget Office is not yet available for the bills.

VI. ADMINISTRATION POSITION

The Trump administration’s position on these bills is unknown at this time.

VII. EFFECT ON CURRENT LAW (RAMSEYER)

H.R. 8003

H.R. 9640