



Office of Inspector General

**OFFICE OF CYBER
ASSESSMENTS AND DATA
ANALYTICS**

AUDIT REPORT

**THE DEPARTMENT OF ENERGY HAS MADE LITTLE
PROGRESS IMPLEMENTING THE GEOSPATIAL
DATA ACT OF 2018**

**DOE-OIG-24-35
SEPTEMBER 2024**



Department of Energy
Washington, DC 20585

September 30, 2024

MEMORANDUM FOR THE SECRETARY

SUBJECT: Audit Report: *The Department of Energy Has Made Little Progress Implementing the Geospatial Data Act of 2018*

Geospatial data, location-based information used by decision makers to conduct research and manage health, safety, and security, among other things, is integral to the Department of Energy's mission outcomes, driving ongoing efforts to reduce the threat of nuclear proliferation, overseeing the Nation's energy supply, and spurring scientific and technology innovations. For example, the Office of Legacy Management utilizes geospatial data as a strategic asset for benchmarking the environmental extents of managed sites and assessing changes over time to ensure the future protection of human health and the environment. The Geospatial Data Act of 2018 (Act) was established to develop, drive, and manage the National Spatial Data Infrastructure, which includes the technology, policies, standards, and employees necessary to promote geospatial data sharing throughout Federal, state, tribal, and local governments, and the private sector. As discussed in the attached report, the Department has made little progress in implementing the Act and managing geospatial data as a strategic asset to meet its desired mission outcomes. Our audit determined that although the Department had initiated actions, it still had not fully implemented 12 of the Act's 13 requirements. For instance, the Department had not fully implemented the Geospatial Data Strategy, allocated resources to fulfill the responsibilities of effective geospatial data collection, coordinated and worked in partnership with Federal agencies and other entities, or promoted the integration of geospatial data from all sources.

This report contains four recommendations that, if fully implemented, should improve the Department's ability to manage its collection, maintenance, dissemination, or preservation of geospatial data. We made recommendations to the Department to finalize and distribute its revised *DOE Geospatial Science Program Implementation Plan*, increase engagement with Department program offices and sites, complete a privacy assessment specific to geospatial data, and develop a strategy to incorporate the Act's requirements into the Department's contracts. Management concurred with our recommendations and indicated that corrective actions were planned to address the issues identified in our report.

We conducted this audit from April 2024 through September 2024 in accordance with generally accepted government auditing standards.

We appreciated the cooperation and assistance received during this audit.



Teri L. Donaldson
Inspector General

cc: Deputy Secretary
Chief of Staff



Department of Energy Office of Inspector General

The Department of Energy Has Made Little Progress Implementing the Geospatial Data Act of 2018 (DOE-OIG-24-35)

WHY THE OIG PERFORMED THIS AUDIT

Geospatial data, location-based information used by decision makers to conduct research and manage health, safety, and security, among other things, is integral to the Department of Energy's mission outcomes, driving efforts to reduce the threat of nuclear proliferation, overseeing the Nation's energy supply, and spurring scientific and technology innovations.

The Geospatial Data Act of 2018 (Act) was signed into law to minimize duplication of geospatial activities across agencies, improve collaboration, reduce waste, codify previous executive actions, and give Congress an oversight role for the Federal Government's multibillion-dollar investments in geospatial data.

We conducted this audit to determine whether the Department met the Act's requirements.

What Did the OIG Find?

The Department has made little progress in implementing the Act. Although the Department had taken some additional steps to implement the Act since our previous review in 2022, the Department had not fully implemented 12 of the Act's 13 requirements. For example, the Department had not fully implemented the Geospatial Data Strategy, allocated resources to fulfill the responsibilities of effective geospatial data collection, coordinated and worked in partnership with Federal agencies and other entities, or promoted the integration of geospatial data from all sources. (A complete implementation status is included in Appendix 1.)

What Is the Impact?

Failure to take action will continue to prevent the Department from managing geospatial data as a strategic asset and may impact its ability to achieve mission outcomes. The Department will continue to experience shortcomings and will not be able to adequately manage its collection, maintenance, dissemination, or preservation of geospatial data. Program offices and sites will also continue to be disengaged from activities related to the Act's requirements, resulting in continued weaknesses in the Department's implementation of the Act.

What Is the Path Forward?

Although limited progress has been made since our prior review, we have made four recommendations that, if fully implemented, should help to ensure that the issues identified are corrected. These recommendations include finalizing the *DOE Geospatial Science Program Implementation Plan*, using the *FY24–26 Geospatial Science Program Communications Plan* to increase engagement with Department program offices and sites, completing a privacy assessment specific to geospatial data, and developing a strategy to incorporate the Act's requirements into contracts.

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Background and Objective

Background

Geospatial data, or information tied to a location on the Earth, is integral to the Department of Energy's missions, driving ongoing efforts to reduce the threat of nuclear proliferation, overseeing the Nation's energy supply, and spurring scientific and technology innovations to ensure the Nation's security and prosperity by addressing its energy, environmental, and nuclear challenges. Originally signed into law in October 2018, the Geospatial Data Act of 2018 (Act) is now part of U.S. Code, Title 43 – Public Lands, Chapter 46: GEOSPATIAL DATA. The Act's purpose is to minimize duplication of geospatial activities across agencies, improve collaboration, reduce waste, codify previous executive actions, and give Congress an oversight role for the Federal Government's multibillion-dollar investments in geospatial data. The Act applies to covered agencies that collect, produce, acquire, maintain, distribute, use, or preserve geospatial data (on paper or in electronic form) to fulfill the mission of the Executive Branch, either directly or through a relationship with another organization.

As the Department's lead office for implementing the Act, the Office of the Chief Information Officer established the Geospatial Science Program (GSP) to facilitate the Act's implementation. The Department's Geospatial Information Officer (GIO) is supported by the Geospatial Science – Program Management Office (GS-PMO), which provides the governance structure, strategic direction, mission alignment, and communication for implementing geospatial science and technology. The GIO coordinates activities, including delivery of technical, operational, and administrative support to meet the Department's geospatial science and technology requirements. Since our review in 2022, we were informed that the GIO had been formally detailed to two other vacant positions in the Department for 10 months of the 2-year audit period. A new GIO was hired in June 2024.

The Act requires the Office of Inspector General to report, not less than once every 2 years, on the Department's collection, production, acquisition, maintenance, distribution, use, and preservation of geospatial data. In particular, the Office of Inspector General shall evaluate compliance with the Act's requirements related to: (1) standards for geospatial data, including metadata for geospatial data; (2) agency responsibilities and requirements; and (3) limitations on the use of Federal funds.

Report Objective

We conducted this audit to determine whether the Department met the Act's requirements.

Results of Review

While the Department had taken additional steps toward implementing the Act since our previous report, *Followup on the Department of Energy's Implementation of the Geospatial Data Act of 2018* (DOE-OIG-22-44, September 2022), significant work remains. Specifically, the Department had not achieved the corrective actions needed to address the recommendations in our prior report. The Department reported that it had completed the first recommendation to determine actions, milestones, and resources needed to fully implement the strategic plan. However, our review determined the corresponding *DOE Geospatial Science Program Implementation Plan* (Implementation Plan), which was meant to implement the strategic plan, had not been finalized and distributed. The Department also did not develop and implement a process to increase engagement with its program offices and sites to ensure that the Act's requirements were better understood, as stated in our second recommendation. According to the Department, the corrective action to be taken was, in part, the development and distribution of a communication plan. We noted the *FY24–26 Geospatial Science Program Communications Plan* (Communications Plan) is still in draft form and has not been distributed. Finally, the Department provided assurance that it had developed a mechanism to ensure that all Department program offices and field sites can access the Department's centralized geospatial data information; however, we found that this was not occurring. During our interviews with programs and sites, we noted some individuals were having difficulty accessing the centralized system.

Although the Department reported in its January 2024 Self-Assessment to the Federal Geographic Data Committee (FGDC)¹ that it had met 3 of the Act's 13 requirements, our review found that the Department had only met 1. (Summary results of our assessment of the Department's progress in implementing the Act's requirements are included in Appendix 1.)

At the time of our review, the FGDC had not established any Geospatial Data Theme Standards since the Act's enactment. As a result, and consistent with current guidance² issued by the Council of the Inspectors General on Integrity and Efficiency, we did not evaluate the effectiveness of the Department's efforts to implement these standards or to limit the use of Federal funds for geospatial data.

Covered Agency Responsibilities

The Act requires each covered agency to foster efficient management and use of geospatial data by complying with 13 responsibilities. These responsibilities outline the Department's requirements for the collection, production, acquisition, maintenance, distribution, use, and

¹ Established within the Department of the Interior as an interagency committee known as the FGDC, which shall act as the lead entity in the executive branch for the development, implementation, and review of policies, practices, and standards relating to geospatial data.

² In November 2023, the Council of the Inspectors General on Integrity and Efficiency issued a letter to Congress stating that the full implementation of the Act is delayed, which in turn limits the Inspector General community's ability to conduct a comprehensive biennial audit in fiscal year (FY) 2024.

preservation of geospatial data. We assessed the Department's progress against each of the requirements since our prior review was completed in September 2022. In the sections that follow, we have detailed our conclusions and findings for each area of responsibility.

Geospatial Strategic Plan

Although the Department made progress preparing, maintaining, and publishing a geospatial strategy, it had not fully implemented the strategy. As part of our prior review, we noted that while the *Department of Energy Geospatial Data Management Strategy 2021–2025* had been written and released, the implementation plan was incomplete due, in part, to a delay in the Department selecting a new GIO. This hindered decisions on the Department's path forward for implementing the Act's requirements. As a result, we previously recommended that the Department determine the actions, milestones, and resources needed to fully implement the *Department of Energy Geospatial Data Management Strategy 2021–2025* and issue a corresponding Implementation Plan to the Department's geospatial data users. The Implementation Plan has been developed. However, at the time of our review, the Implementation Plan had not been distributed to the Department's programs and sites because it was awaiting review and approval from the new GIO. Our review of the Implementation Plan also determined that there were no timelines specified to achieve the requirements. Although the Implementation Plan lacked timelines, the Department's estimated time to comply with the Act is 5–10 years, partly because the standards for attaining full-Act compliance are evolving, as determined by the FGDC.

In our prior review, we also recommended that the Department implement a process to increase engagement with program offices and field sites to ensure that the Act's requirements are better understood. The Department drafted a Communications Plan to establish communication vehicles to share Department geospatial governance and policies across the agency. However, not all the programs and sites we interviewed were aware of the Implementation Plan and Communications Plan prepared to further this requirement. Therefore, we are recommending that the Department finalize the Implementation Plan and use the Communications Plan to increase engagement with program offices and sites.

Geospatial Data Records

The Department had not identified a complete and accurate inventory of geospatial data collected, maintained, disseminated, and preserved to successfully share the data with other Federal agencies and non-Federal users, as required by the Act. In its January 2024 Self-Assessment, the Department reported that it had made progress toward this requirement, and that several Department geospatial data repositories had been identified and promoted across the Department's geospatial community. While the Department asserted that only about half of all offices, laboratories, and field sites used geospatial data, it was still developing a catalog and inventory of the geospatial data resources across the agency. Additionally, based on our test work, we found varying degrees of dissemination of geospatial data across the Department's sites. For example, one site described its dissemination as a high level of collaboration with laboratories and having many enhanced geospatial information system repositories. This site

differed from another, where one official stated they were not aware of the requirement to make data available to the public; another official stated that data is only made available to those with a need to know.

Geospatial Data Integration

Although the Department reported that it had made progress promoting the integration of geospatial data from all sources, we determined that it had not fully met this requirement. We found that the Department established plans to integrate geospatial data from all sources. For example, Goal 2 of the Department's Strategic Plan is to promote data sharing to facilitate data discovery, accessibility, use, integrity, and integration. The goal of integration in the Strategic Plan was included in the Implementation Plan. However, the Implementation Plan had not been published or made available to the Department's programs and sites. Program officials also corroborated our finding that the Department was not meeting the Act's data integration requirements. During our test work, an official from one site indicated that their geospatial data is restricted for onsite access only. Another program's response to a GS-PMO quarterly data call indicated that its geospatial data was not integrated with other Department geospatial data platforms.

Geospatial Records Management

The Department had not fully met the Act's requirement to ensure that data information products and other records created in geospatial data and activities are included on agency record schedules that have been approved by the National Archives and Records Administration. While the Department reported that it had made progress towards this expectation, our test work found that it had not completed actions to create a geospatial data catalog and inventory of the geospatial data resources across the Department. The Department also indicated that only some agency record schedules included data information products and records created from geospatial data and activities. The Records Management program office is working with geospatial data owners across the Department and their associated program records managers to address any gaps in the records management schedules for geospatial records. The Records Management program office identified six noncompliant programs and sites. Three of the sites' issues were due to being unable to manage records electronically, as required by the National Archives and Records Administration and the Office of Management and Budget directive. Two other sites were noncompliant because they were waiting for schedule approval by the National Archives and Records Administration. The last noncompliant site was still completing activities to identify its geospatial record content types that needed to be input within an electronic software platform.

Geospatial Data Resources

The Department indicated that it made progress providing sufficient geospatial resources to fulfill geospatial responsibilities and support the FGDC's activities. The Department reported in its Self-Assessment that senior leadership at the GSP is working to ensure funding is available to support governance activities of the GS-PMO and ensuring that each program and site is effectively planning to support geospatial data collection, production, and stewardship. The Department developed the *Department of Energy Geospatial Data Management Strategy 2021–*

2025 to ensure effective execution of its mission and to satisfy the Act's requirements and the National Spatial Data Infrastructure (NSDI). The strategy states that the GS-PMO will provide overarching governance structure, strategic direction, mission alignment, and communications for implementing geospatial science and technology within the Department and will also establish geospatial data management policies and procedures in alignment with Department strategic goals and mission. The strategy includes goals and objectives that are relevant to resources, personnel, information technology, and other geospatial equipment assigned to fulfilling geospatial responsibilities. The Department also developed the Implementation Plan to provide governance, structure, and strategic direction for its geospatial activities. The Department's Implementation Plan outlines a framework and guidelines to help programs and sites carry out the strategy.

The former GIO stated that budget constraints have limited the ability to support the GSP. Long-term budget requests for the GSP were submitted in FY 2023 for internal FY 2025 budget formation but were not included in formal Office of the Chief Information Officer (OCIO) budget requests. According to OCIO officials, at the beginning of FY 2024, the OCIO allocated approximately \$1 million per year to support geospatial activities. Geospatial-related funds are not associated with a line-item in the budget request and result from the OCIO's internal process to obligate funds to unfunded requests. The former GIO also stated that the GSP has been inhibited in its ability to establish an enterprise license agreement with the Environmental Systems Research Institute for their ArcGIS software that would support data management and data sharing, as required by the Act. According to OCIO management, this limitation is a result of competing priorities and limited resources within the Office of Management that can only pursue procurements and negotiations for two enterprise agreements per annum. The lack of resources also impacted contractor support for the geospatial program. One of the contract support personnel was let go at the beginning of our audit because the contract had expired, and the position was left vacant. Further, progress in key areas for implementing the Act has been affected by the GSP's changing leadership.

Geospatial Data Standards

The Department did not require its programs and sites to use FGDC-endorsed geospatial data standards that include the standards for metadata for geospatial data. The FGDC publishes endorsed geospatial and metadata standards and states that covered agencies should continue, to the extent possible in lieu of an active standards process, to develop, review, update, and achieve compliance with existing and pending standards. We reviewed the FGDC's publication of endorsed geospatial and metadata standards as a basis to evaluate the Department's compliance for this requirement. We found that only one of the programs and sites reviewed used endorsed FGDC metadata standards. After reviewing data that had been uploaded by covered agencies on the FGDC's Conformance Checklist website, we found that the Department is not making its geospatial data available on the GeoPlatform.³

³ The GeoPlatform, developed and maintained by the FGDC, is a cross-agency collaborative effort that supports open Government, emphasizing Government-to-citizen communication, accountability, and transparency.

Coordination With Other Entities

The Department had not fully met the Act's requirement to coordinate with external entities. The Act requires that the Department implement interagency cooperation with other Federal agencies, agencies of state, tribal, and local governments, higher education institutions, and the private sector to efficiently and cost-effectively collect, integrate, maintain, disseminate, and preserve geospatial data. The Department indicated in its Self-Assessment that it had made progress toward meeting this requirement; however, it noted that there are processes in place for some agency mission areas but not others. Based on our test work, we determined that programs and sites were not conducting this coordination on a regular basis or with many of the entities mentioned in the Act.

Use and Reporting of Geospatial Data

The Department had made limited progress on the use and reporting of geospatial data. The Act requires that the Department use geospatial information to make Federal geospatial information and services more useful to the public; enhance operations; support decision making; and enhance reporting to the public and to Congress. During our prior review, the Department identified 24 separate platforms that were useful resources for geospatial information, including 10 that it operated and maintained, and was pursuing enterprise agreements with the Environmental Systems Research Institute to help facilitate data management and sharing of geospatial visualizations. Our current review, however, found that the Department had not followed through with its plan to create enterprise agreements or standard tools for data. Rather, each program office and site generally operate independently of others in terms of how their data is used. As previously noted, we were also unable to identify any Department information being shared with GeoPlatform, as required.

Protection of Personal Privacy and Confidentiality of Geospatial Data

The Department had not developed policies and procedures regarding the protection of personal privacy and maintaining confidentiality related specifically to geospatial data, as required by the Act. The Department reported that it had met this requirement in its Self-Assessment and that privacy impact assessment processes in the Department are inclusive of all agency data involving personally identifiable information, which includes geospatial data. According to the former GIO, the Department has its own tracking mechanisms for maintaining internal compliance with Department Order 206.1A, *Department of Energy Privacy Program*, for all agency data, including geospatial data. The GS-PMO determined that having that directive and tracking in place was adequate to report in its Self-Assessment that the Department had met the conditions outlined in the Act. However, we determined that the Department is not actively tracking program and site office compliance against this requirement and relies on them to submit privacy assessments for evaluation when the need arises. We also noted that the Department's Implementation Plan outlines milestones to be completed for achievement of the geospatial data privacy requirement, including that programs and sites create and conduct Privacy Impact Assessments. However, as previously noted, the Implementation Plan has not been distributed to programs and sites because it is awaiting review and approval from the new GIO. To improve

this process, we are recommending the GS-PMO work with the Department's Chief Privacy Officer to complete a privacy assessment that is specific to geospatial data to ensure that personal privacy information is adequately protected in the Department's information systems.

Declassification of Geospatial Data

Consistent with our prior review's results, the Department had not developed a process to review declassified datasets for inclusion in the NSDI, as required. The Department self-assessed that it had failed to meet this Act's requirement. Efforts were still ongoing to refine the current declassification review process to add additional review criteria to determine whether the data can contribute to and become part of the NSDI. Department officials indicated that they were awaiting clarification from the FGDC regarding effective contribution of data as the NSDI strategy begins to be implemented.

Geospatial Data Sources

The Department had only partially met the requirement to search all sources, including the GeoPlatform, to determine if existing geospatial data from other sources meets the needs of the agency before expending funds for geospatial data collection. The Department reported that work is underway to ensure that explicit language for geospatial data is included through the procurement processes and ensure GeoPlatform and other authoritative sources are searched prior to all geospatial data investments. The Department also indicated that lists of common geospatial data sources, comprised of several Federal, state, local, and commercial sources, have been shared across the Department to support these efforts and ensure compliance. Our review verified that the Department's GSP Energy Hub intranet site contained links to resources for identifying relevant geospatial information. The Department's Geospatial User Group also hosted a presentation from another Federal agency on managing the use of external data.

Quality of Geospatial Data

The Department had not ensured that persons receiving Federal funds for geospatial data collection provided high quality data to the maximum extent practicable, as required by the Act. The Department reported that it ensured quality data was collected by specifying geospatial data quality standards in its contracts, evaluating data for quality prior to acquisition, performing data expert review and approval of geospatial data deliverables, and acquiring geospatial data from other Federal agencies that performed their own quality assurance and control review over that data. However, of the six programs and sites we evaluated, only one had geospatial data quality requirements delineated in its contract language. This program included language that required data and metadata to be compliant with the Act. We did not find indications of data quality requirements in place at the other five programs or sites reviewed. Therefore, we are recommending that the Department develop a strategy, in coordination with the Office of Management, to incorporate the Act requirements into the Department's contracts.

Geospatial Department Point of Contact

We determined that the Department had designated a point of contact to coordinate with the lead covered agencies for collection, acquisition, maintenance, and dissemination of the data themes used by the Department. We confirmed that the Department had appointed a Senior Agency Official for Geospatial Information, a newly appointed GIO, and Geospatial Information System Administrator. The former GIO provided evidence of the Department's interactions with the FGDC, and the Department provided contacts that are designated leads for coordinating data themes. While we determined that the Department met this Act's requirement, the lack of a consistent GIO raises concerns about the Department's ability to fully implement all 13 requirements. In our prior review, we recommended that the Department implement a process to increase engagement with the Department's program offices and field sites to ensure the Act's requirements are better understood. To meet this recommendation, the Department drafted the Communications Plan to establish communication vehicles to share Department geospatial governance and policies across the agency. However, our test work found that there had been a lull in communication while the former GIO was on detail, and it appeared that most communication from the GSP occurred in its Geospatial User Group and GS-PMO meetings.

Impact to the Department of Energy

Without additional action, the Department will continue to experience shortcomings in meeting the Act's requirements. Although the Department has made limited progress since our prior report, *Followup on the Department of Energy's Implementation of the Geospatial Data Act of 2018*, significant work remains to meet the 12 covered agency responsibilities that have not been fully implemented. As a result of not meeting the Act's requirements, the Department will not be able to fully collect, maintain, disseminate, or preserve geospatial data. Further, program offices and field sites may continue to feel disconnected and disengaged from activities related to the Act's requirements, resulting in continued noncompliance.

Recommendations

To improve the Department's ability to implement the Act, we recommend that the Department's Chief Information Officer, in coordination with other program elements, as necessary:

1. Finalize and distribute the revised *DOE Geospatial Science Program Implementation Plan*;
2. Use the *FY24–26 Geospatial Science Program Communications Plan* to increase engagement with programs and sites;
3. Complete a privacy assessment specific to geospatial data to ensure that personal privacy information is adequately protected in the Department's information systems; and
4. Develop a strategy, in coordination with the Office of Management, to incorporate the Act's requirements into the Department's contracts.

Management Comments

Management concurred with our findings and recommendations and indicated that it would engage with all Department offices to implement the Act within staffing and financial limitations. Management also stated that the GIO and Senior Agency Official for Geospatial Information would review, finalize, and distribute the Implementation Plan, and then commence using the Communications Plan to increase outreach with programs and sites. The GSP will also work with the Department's Privacy Officer to review the Department's existing geospatial assets and to identify a process for assessing newly created geospatial assets before they are deployed. Management also indicated that it would work to incorporate Act requirements into the *Laws, Regulations, and DOE Directives* clause of the Department's contracts.

Management comments are included in Appendix 5.

Office of Inspector General Response

Management's comments and planned corrective actions were responsive to our recommendations.

Geospatial Data Act of 2018 Implementation Status

Geospatial Data Act, Section 759(a)	Covered Agency Requirement	Fully Implemented (Yes/No)
Part 1	Prepare and implement a strategic plan for advancing geospatial data activities appropriate to the agency's mission.	No
Part 2	Collect, maintain, disseminate, and preserve geospatial data, such that resulting data, information, or products can be shared.	No
Part 3	Promote geospatial data integration.	No
Part 4	Ensure geospatial information is included on agency record schedules.	No
Part 5	Allocate resources to fulfill geospatial data responsibilities.	No
Part 6	Use geospatial data standards.	No
Part 7	Coordinate with other Federal agencies, state, local, and tribal governments, and the private sector.	No
Part 8	Make Federal geospatial information more useful to the public, support decision making, and enhance reporting to Congress.	No
Part 9	Protect personal privacy and maintain confidentiality in accordance with Federal policy and law.	No
Part 10	Participate in determining whether declassified data can become part of the National Spatial Data Infrastructure.	No
Part 11	Search all sources to determine if existing data meets the needs of the covered agency before expending funds.	No
Part 12	Ensure that those receiving Federal funds for geospatial data collection provide high-quality data.	No
Part 13	Appoint a contact to coordinate with other covered agencies.	Yes

Commonly Used Terms

Department of Energy	Department or DOE
<i>DOE Geospatial Science Program Implementation Plan</i>	Implementation Plan
Federal Geographic Data Committee	FGDC
Fiscal Year	FY
<i>FY24–26 Geospatial Communications Plan</i>	Communications Plan
Geospatial Data Act of 2018	Act
Geospatial Information Officer	GIO
Geospatial Science Program	GSP
Geospatial Science – Program Management Office	GS-PMO
National Spatial Data Infrastructure	NSDI
Office of the Chief Information Officer	OCIO

Objective, Scope, and Methodology

Objective

We conducted this audit to determine whether the Department of Energy met the requirements of the Geospatial Data Act of 2018 (Act).

Scope

The audit was conducted mostly remotely from April 2024 through September 2024 at Department Headquarters in Washington, DC; Argonne National Laboratory in Lemont, Illinois; Fermi National Accelerator Laboratory in Batavia, Illinois; Lawrence Berkeley National Laboratory in Berkeley, California; and Lawrence Livermore National Laboratory in Livermore, California. The scope of the audit was limited to the Department's implementation of the Act. This audit was conducted under Office of Inspector General project number A24TG009.

Methodology

To accomplish our audit objective, we:

- Gained an understanding of the Act's requirements;
- Reviewed applicable guidance and standards issued by the Department, Office of Management and Budget, and the National Archives and Records Administration;
- Reviewed prior Office of Inspector General and Government Accountability Office reports and testimonies related to the Act;
- Held discussions with Department officials to gain an understanding of the processes and controls the Department employed to implement the Act's requirements;
- Obtained and evaluated related project plans or strategies that the Department had developed;
- Reviewed and evaluated the Department's implementation status as it related to Act's 13 requirements of Section 759 in U.S. Code, Title 43 – Public Lands, Chapter 46: GEOSPATIAL DATA;
- Identified areas of potential improvements to the Department's implementation of the Act; and
- Held teleconferences with program offices and field sites, as necessary, to discuss information related to geospatial data.

Appendix 3

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objective. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective. Accordingly, we assessed significant internal controls and compliance with laws and regulations to the extent necessary to satisfy the audit objective. In particular, we assessed the following internal control components and underlying principles significant to the audit objective: control activities and the principles related to design control activities and implement control activities; information and communication and the related principle to communicate internally; and monitoring and the related principle to perform monitoring activities. However, because our review was limited to these internal control components and underlying principles, it may not have disclosed all internal control deficiencies that may have existed at the time of this audit. We did not rely on computer-processed data to satisfy our audit objective.

Management officials waived an exit conference on September 27, 2024.

Related Reports

Office of Inspector General

- Audit Report on the [*Followup on the Department of Energy's Implementation of the Geospatial Data Act of 2018*](#) (DOE-OIG-22-44, September 2022). Our follow-up review found that the Department of Energy had completed additional actions related to the 13 covered agency responsibilities; however, we identified that it still had not fully implemented 12 of the requirements. Although we determined that the Department had made progress since our last review, significant work remains for it to meet the Geospatial Data Act of 2018 (Act) requirements. We made three recommendations that, if fully implemented, will improve understanding and implementation of the Act.
- Special Report on the [*Department of Energy's Implementation of the Geospatial Data Act of 2018*](#) (DOE-OIG-20-58, September 2020). Our inaugural review found that while the Department had taken steps to implement the Act, significant work remained. In particular, although the Department had initiated and/or completed actions related to each of the 13 agency responsibilities outlined in the Act, we identified that it had not fully implemented 12 of the requirements. Without adequate progress toward the development and implementation of a geospatial strategy, there is a high risk that the Department will not be able to implement the Act's requirements.

Government Accountability Office

- [*GEOSPATIAL DATA: Progress Needed on Identifying Expenditures, Building and Utilizing a Data Infrastructure, and Reducing Duplicative Efforts*](#) (GAO-15-193, issued February 2015; reissued March 2015).
- [*GEOSPATIAL INFORMATION: OMB and Agencies Need to Make Coordination a Priority to Reduce Duplication*](#) (GAO-13-94, November 2012).
- [*GEOSPATIAL INFORMATION: Better Coordination Needed to Identify and Reduce Duplicative Investments*](#) (GAO-04-703, June 2004).

Management Comments



Department of Energy

Washington, DC 20585

9/26/2024

Teri L. Donaldson
Inspector General
Office of Inspector General

Dear Ms. Donaldson:

The Department of Energy (DOE or Department) appreciates the opportunity to provide a response to the Office of Inspector General's (IG) Draft report titled *A24TG009 The Department of Energy needs to make progress to implement the Geospatial Data Act of 2018*. The DOE Office of the Chief Information Officer (OCIO) concurs with the 4 recommendations listed in the report and will engage with all DOE offices to implement the Geospatial Data Act of 2018 (GDA) within staffing and financial limitations.

Since the passing of the GDA, numerous other information-technology-related statutes and executive orders have passed to oversee the government's digital transformation. As the accountable organization for the Department's information-related compliance, the OCIO has had to strategically adapt to these emergent requirements without increased funding. Such constraints also extend to hiring federal personnel to provide oversight and enhance implementation progress.

DOE plans to implement the activities as described in the enclosure.

The OCIO takes the performance of and compliance with the GDA seriously and as such, has recently brought on a new Geospatial Information Officer (GIO), Kevin Wright. The IG should feel free to engage with Mr. Wright if any questions arise. Mr. Wright may be reached at 202-429-5200 or via e-mail kevin.wright@hq.doe.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Ann Dunkin".

Ann Dunkin
Chief Information Officer

Enclosure

MANAGEMENT Response
OIG Draft Report, A24TG009

The Department of Energy needs to make progress to implement the Geospatial Data Act of 2018.

Recommendation 1. Finalize and distribute the revised DOE Geospatial Science Program Implementation Plan.

Management Response: Concur

The Geospatial Information Officer and Senior Agency Official for Geospatial Information will review the Geospatial Science Program Management Office-approved draft implementation plan, adjudicate any comments or questions, and finalize and distribute the plan.

Estimated Completion Date: February 1, 2025

Recommendation 2. Use the *FY24–26 Geospatial Science Program Communications Plan* to increase engagement with programs and sites.

Management Response: Concur

Outreach based on the Geospatial Science Program’s Communications Plan can commence following approval of the implementation plan. The Communications Plan is inherently linked to Goal 4 of the draft implementation program.

Estimated Completion Date: July 1, 2025

Recommendation 3. Complete a privacy assessment specific to geospatial data to ensure that personal privacy information is adequately protected in the Department’s information systems.

Management Response: Concur

To assess personal privacy information in the Department’s existing geospatial assets, the Geospatial Science Program will engage with the DOE Privacy Officer and the Geospatial Science Program Management Office to develop a plan, execute the assessment, and document the findings. This scope is contingent upon review and approval of the approach to the assessments of the DOE Privacy Office and participation of DOE elements with the Geospatial Assets Catalogs. The GSP will work with the Privacy Officer to identify a process for assessing newly created geospatial assets before they are deployed.

Estimated Completion Date: September 30, 2026

Recommendation 4. Develop a strategy, in coordination with the Office of Management, to incorporate the Geospatial Data Act requirements into the Department’s contracts.

Management Response: Concur

Appendix 5

Incorporate 43 USC 46 et seq., Geospatial Data, into the *Laws, Regulations, and DOE Directives* clause into the Department's contracts.

The strategy will also include direction for modifying current contracts with the 43 USC 46 et seq., Geospatial Data, into the *Laws, Regulations, and DOE Directives* clause.

Estimated Completion Date: July 1, 2026

FEEDBACK

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