



Office of Inspector General

OFFICE OF TECHNOLOGY,
FINANCIAL, AND ANALYTICS

AUDIT REPORT

FOLLOWUP ON THE DEPARTMENT OF ENERGY'S
IMPLEMENTATION OF THE GEOSPATIAL DATA ACT
OF 2018

DOE-OIG-22-44
SEPTEMBER 2022



Department of Energy
Washington, DC 20585

September 27, 2022

Memorandum for The Secretary

A handwritten signature in cursive script, appearing to read "Teri L. Donaldson".

From: Teri L. Donaldson
Inspector General

Subject: Audit Report on the Followup on the Department of Energy's
Implementation of the Geospatial Data Act of 2018

Highlights

What We Reviewed and Why

The *Geospatial Data Act of 2018* (Act) was signed into law in October 2018 to help develop, drive, and manage the National Spatial Data Infrastructure, which includes the technology, policies, criteria, standards, and employees necessary to promote geospatial data sharing throughout Federal, state, tribal, and local governments, and the private sector. The Act outlines requirements for Federal geospatial data governance structures, encourages organized use and collaboration within agencies, and promotes broader sharing of geospatial data—information linked to specific geographic locations—across agencies.

The Act requires the Office of Inspector General to report on the Department of Energy's collection, production, acquisition, maintenance, distribution, use, and preservation of geospatial data. In particular, the Office of Inspector General shall evaluate compliance with: (1) standards for geospatial data, including metadata for geospatial data established under the Act; (2) the agency responsibilities and requirements under the Act; and (3) limitations on the use of Federal funds under the Act. In September 2020, we released the results of our inaugural review that evaluated the Department's initial efforts to implement the Act. At that time, we found that although the Department had initiated or completed actions related to each of the covered agency responsibilities, we identified that it had not fully implemented 12 of the 13 requirements outlined in the Act.

We conducted our current audit to determine whether the Department met the requirements of the Act. This report documents the results of our test work.

What We Found

Due to limitations with agencies' abilities to implement the Act, our test work was limited to identifying the Department's efforts to implement the 13 covered agency responsibilities contained in Section 759 of the Act. In particular, the Federal Geographic Data Committee had not yet adopted or endorsed any Geospatial Data Theme Standards at the time of our review. As such, and consistent with current guidance 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 at this time. Our audit found that while the Department had taken some additional steps to implement the Act since our initial report in September 2020, significant work remained to fully implement the Act's requirements. Specifically, the Department 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 (Appendix 1). For instance, we found:

- Although the Department prepared and published a geospatial data strategy in support of the strategic plan for the National Spatial Data Infrastructure, as required by the Act, it had not implemented the strategy to advance geographic information, related geospatial data, and activities appropriate to its mission.
- The Department also had not completed its geospatial data inventory and, therefore, could not optimize data integration between its geospatial users. Further, the Department had not ensured that all geospatial data included metadata and that the metadata was available through the GeoPlatform, as required by the Act.

These concerns occurred, in part, because progress on the development and issuance of an implementation plan for the *Department of Energy Geospatial Data Management Strategy 2021–2025* had been delayed. Additionally, there was confusion among program and site officials about the amount and types of geospatial data that existed within the Department. We also noted a general lack of awareness of the Department's centralized geospatial data information sites dedicated to the sharing of geospatial data best practices and tools.

What We Recommend

Although we determined that the Department had made progress since our last review, significant work remains for it to meet the Act's requirements. We made three recommendations that, if fully implemented, will improve understanding and implementation of the Act. In particular, we recommend that the Department's Chief Information Officer: (1) 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; (2) develop and implement a process to increase engagement with the Department's program offices and field sites to ensure that the requirements of the Act are better understood; and (3) develop a mechanism to ensure all Department program offices and field sites can access the Department's centralized geospatial data information.

Management Comments

Management concurred with the report's recommendations and indicated that corrective actions were planned to address the issues identified in the report. Management's comments and our response are summarized in the body of the report. Management's formal comments are included in Appendix 5.

cc: Deputy Secretary
Chief of Staff
Chief Information Officer

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Background and Objective

Background

Geospatial data¹ 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. The *Geospatial Data Act of 2018* (Act) was signed into law in October 2018 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 agencies² 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 Management Office (GS-PMO) to facilitate the Act's implementation. The GS-PMO provides the Department's overarching governance structure, strategic direction, mission alignment, and communication for implementing geospatial science and technology. The GS-PMO is led by the Geospatial Information Officer who coordinates its activities, including delivery of technical, operations, and administrative support to meet the Department's geospatial science and technology requirements.

The Act requires the Office of Inspector General to report 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 requirements of the Act.

¹ Information that is tied to a location on the Earth, including identifying the geographic location and characteristics of natural or constructed features and boundaries of the Earth, and is generally represented in vector datasets by points, lines, polygons, or other complex geographic features or phenomena.

² An Executive department, as defined in §101 of Title 5, United States Code, that collects, produces, acquires, maintains, distributes, uses, or preserves geospatial data on paper or in electronic form to fulfill the mission of the Executive department, either directly or through a relationship with another organization, including a state, local government, Indian tribe, institution of higher education, business partner or contractor of the Federal Government, and the public.

Results of Review

Our audit found that while the Department had taken additional steps since our initial review in 2020, significant work remained to fully implement the Act. Specifically, although the Department had completed additional actions related to its responsibilities, we identified that it still had not fully implemented 12 of the Act's 13 requirements and was reevaluating its method for tracking progress against each of the remaining responsibilities moving forward. Summary results of our assessment of the Department's progress in implementing the Act's 13 requirements are included in Appendix 1.

At the time of our review, the Federal Geographic Data Committee (FGDC) had not yet adopted or endorsed any Geospatial Data Theme Standards. As such, and consistent with current guidance 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 at this time.

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

Geospatial Strategic Plan

Although the Department had prepared and published a geospatial data strategy in support of the National Spatial Data Infrastructure (NSDI), as required by the Act, it had not implemented the strategy to advance geographic information, related geospatial data, and activities appropriate to its mission. The Department initially issued its *FY21–22 Geospatial Communications Plan* (Communications Plan) in August 2020 with the intention of establishing communication vehicles to share governance and policies across the Department. Subsequently, the *Department of Energy Geospatial Data Management Strategy 2021–2025* (Geospatial Strategy) was released in February 2021 to support geospatial activities, including the development and use of geospatial data, and to provide structure and leadership to ensure coordinated and effective curations, sharing, and innovation for the Department's missions. Despite both documents having been issued almost a year before our current review began, three of the six program offices and field sites reviewed initially indicated they were unaware of either document.

Additionally, while the GS-PMO had created pages on the Department's Innovation Community Center and Powerpedia web pages that shared geospatial data information and other best practices, officials indicated that not all field sites had access to the pages. The GS-PMO was aware of the access limitations, but it had not specifically identified which field sites were unable to access its pages so that the issue could be resolved. During our audit, a Department official informed the GS-PMO that two field sites did not have access to the Powerpedia page. However, it still had not identified which field sites lacked access to the Innovation Community

Center. One of the primary reasons for the access issues was a lack of awareness of the pages, and we found that four of the six program offices and field sites reviewed indicated that they were unaware of either the Powerpedia page or the Innovation Community Center.

Further, progress on the development and issuance of an implementation plan for the Department's Geospatial Strategy had been delayed. Although the implementation plan was originally scheduled to be completed in January 2021, it still had not been issued as of June 2022. The GS-PMO indicated that it was conducting an estimate to determine the actions, milestones, and resources needed to fully implement its Geospatial Strategy and that the implementation plan was expected to be organized according to each of the Geospatial Strategy's goals. The Department's success in meeting the Act's requirements hinges on the issuance of the implementation plan. However, we noted that the implementation plan was incomplete, in part, due to a delay in the Department selecting a new Geospatial Information Officer, which hindered decisions on the Department's path forward for implementing the Act's requirements. While the new Geospatial Information Officer was planned to be in place by December 2020, that position was not filled until January 2022. With the selection of the Geospatial Information Officer, the Department appears to be making progress in its efforts related to the Geospatial Strategy. To its credit, the Department indicated that it intends to include in its implementation plan an updated Communications Plan that the GS-PMO hopes will create more awareness of the Act and its requirements by incorporating regularly scheduled data calls and geospatial user group meetings.

Geospatial Data Records

Although required by the Act, 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. Despite our prior report's³ suggestion that the Department continue to identify all geospatial assets to create a complete inventory, the GS-PMO's last data call to identify geospatial data users was performed in July 2020. The results of that data call identified users across 39 program offices and field sites. However, at the time of our audit, there was still confusion about the amount and types of geospatial data that existed within program offices. Specifically, our request to meet with Headquarters geospatial data officials at the National Nuclear Security Administration and the Office of Science was initially met with negative responses because the organizations did not know that they maintained geospatial data. We were able to meet with geospatial users under the purview of these program offices only after we identified specific field sites that had responded to the GS-PMO's last data call.

Further, confusion remained about the types of data that were required to be maintained under the Act. For example, one respondent indicated that it did not create and share large geospatial datasets, and the research data it did create was small and "not related to the Act's intent." However, the size of a dataset has no impact on whether compliance with the Act is required; any datasets with information linked to specific geographic locations must comply.

³ Special Report on the *Department of Energy's Implementation of the Geospatial Data Act of 2018* (DOE-OIG-20-58, September 2020).

Geospatial Data Integration

The Department had not fully optimized the integration of its geospatial data. As previously discussed, the Department had not completed its geospatial data inventory and, therefore, could not optimize data integration between its geospatial users. According to its Geospatial Strategy, the Department intends to develop and maintain a comprehensive data inventory that accounts for all geospatial data assets created, collected, controlled, directed, or maintained with the anticipated outcome being a unified source of its geospatial assets. Currently, the Department relies on its geospatial information pages and the GS-PMO's Geospatial Community Quarterly newsletter to share its geospatial data sources and information. The GS-PMO anticipates the comprehensive data inventory will make it easier for users to search, discover, and access geospatial data. However, as noted, not all users were aware of the geospatial information pages, and five of the six program offices and field sites we reviewed did not recall ever receiving a Geospatial Community Quarterly newsletter. This lack of awareness is an impediment to the GS-PMO's management and communication of geospatial activities and its ability to promote the integration of geospatial datasets.

Geospatial Records Management

Consistent with our prior review, the Department still had not developed record schedules specific to geospatial data.⁴ The GS-PMO had coordinated with the Department's Enterprise Records Management team to ensure that the field sites reporting geospatial data records followed existing records retention schedules specific to the topic or content involved. However, progress in this area was hindered by the Department's lack of a complete geospatial data inventory, which would have allowed it to ensure that all records were managed appropriately. Instead, the Department's Enterprise Records Management team worked with the program offices and field sites that had responded to its July 2020 data call to ensure compliance with the requirement. As of April 2022, 28 of 39 respondents indicated that they were following approved record retention schedules. Five respondents indicated that they were not in possession of any records because they only used geospatial data from external sources for reference purposes. Of the remaining six respondents, two were working to establish record retention policies for their geospatial information, two were working to include requirements for records retention into their contracts, and two provided incomplete responses to the Enterprise Records Management team. To its credit, the Department was pursuing enterprise agreements with the Environmental Systems Research Institute to assist in defining and maintaining its long-term geospatial records. GS-PMO officials anticipated that geospatial data record maintenance would be enhanced by the enterprise approach.

Geospatial Data Resources

While the Department had established the GS-PMO and made limited progress towards ensuring roles related to geospatial data were properly identified and filled, it had not established

⁴ Section 759(a)(4) of the Act requires covered agencies 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.

dedicated funding to support its efforts to implement the requirements of the Act.⁵ The Geospatial Information Officer indicated that the office would need 10 full-time equivalent personnel to support the Department's implementation of the Act's requirements. He also noted that a budget request was submitted for fiscal year (FY) 2024 to fund those resources and other direct costs. However, until funding is attained, the Geospatial Information Officer requested the use of existing funds from the Office of the Chief Information Officer. The GS-PMO also relied on staff borrowed from other Department program offices and field sites outside of the Office of the Chief Information Officer.

Geospatial Data Standards

The Department had not ensured that all geospatial data included metadata and that the metadata was available through the GeoPlatform,⁶ as required by the Act. We spoke with personnel representing three of the Department's geospatial platforms⁷ who indicated that only one of the platforms that identified geospatial data included the appropriate metadata to ensure the information could be shared to the GeoPlatform. Since our last review, the Department had published updated geospatial metadata policies and guidelines through the Innovation Community Center. However, geospatial users informed us they were not always aware of the geospatial data pages created by the GS-PMO or the requirements for publishing data to the GeoPlatform. While officials told us they were working to implement new processes and procedures to ensure the appropriate metadata was captured to allow the data to be shared as required, additional communication by the GS-PMO was needed to improve application and use of geospatial standards across all the Department's platforms.

Coordination with Other Entities

The Department continued to coordinate and work in partnership with other entities to collect, integrate, maintain, disseminate, and preserve geospatial data. For example, Department program offices and field sites coordinated geospatial activities with other agencies such as the Department of the Interior, National Oceanic and Atmospheric Administration, Army Corps of Engineers, and various state and local governments. We also identified user groups across industry and academia that had accessed the Department's geospatial data platforms.

Additionally, the Department continued to report its status on meeting the requirements of the Act to the FGDC on an annual basis. However, we noted that the progress reported to the FGDC in the *2021 Covered Agency Annual Report and Self-Assessment for Department of Energy* remained largely unchanged from its reported status in 2020. In its 2021 submittal, the Department indicated that it had made partial progress in implementing this requirement and that there were processes in place for some agency-mission areas but not others. While the

⁵ Section 759(a)(5) of the Act requires covered agencies to allocate resources to fulfill the responsibilities of effective geospatial data collection, production, and stewardship with regard to related activities of the covered agency and, as necessary, to support the activities of the FGDC.

⁶ 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.

⁷ Platforms are the main data repositories that offer access to Department-produced geospatial data assets, offering support for geospatial data integration from all sources.

Department had reported progress in this area, the lack of a complete understanding of geospatial data initiatives and activities across the agency could impair its ability to adequately coordinate with other Federal agencies; state, local and tribal governments; and the private sector.

Use and Reporting of Geospatial Data

Since our last review, the Department had made limited progress on the use and reporting of geospatial data.⁸ For example, the Department identified 24 separate platforms that were useful resources for geospatial information, including 10 that it operated and maintained. This information was provided to the Department's geospatial community in Town Hall meetings hosted by the GS-PMO in November and December 2020. We also noted that the Department used some of its geospatial data to support decision making and enhance reporting to the public. Specifically, a member of the GS-PMO was involved in creating a geospatial dashboard that supported the President's Justice40 initiative. The Energy Justice Dashboard (BETA) was a pilot data visualization tool that displayed Department investments in communities across the country with disproportionately high and adverse economic, human health, climate-related, environmental, and other cumulative impacts. The Dashboard displayed Department cost data—grants, cooperative agreements, and contracts—from more than 25 program offices for FY 2019 through FY 2022. The dashboard is expected to continue to provide updates into future FYs.

Despite this progress, additional work was needed to ensure that all projects provided data for public use when appropriate and that the information was shared to GeoPlatform, as required. In particular, the Department continued to pursue enterprise agreements with the Environmental Systems Research Institute to help facilitate data management and sharing of geospatial visualizations. A GS-PMO official indicated that enterprise agreements would help the geospatial program produce data that would increase intra- and inter-agency communication and efficiency. For instance, such an agreement would benefit the Department's ability to manage geospatial data through its lifecycle by providing standard data collection and creation tools to ensure compatibility with data management tools. Using standard tools enhances data governance by enabling a common language and data interoperability to leverage the data in advanced analytical tools. Finally, according to a GS-PMO business case analysis, the standardized approach would also facilitate stakeholder engagement through various products and media outlets that provide an intuitive user experience.

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 specific to geospatial data, as required by the Act. Instead, officials stated that the Department relied on existing general review processes related to personally identifiable information and confidentiality that applied to all agency data. In addition, the Department recently self-reported that its implementation of personal privacy and confidentiality of geospatial data is incomplete. To assist in meeting this requirement, the GS-

⁸ Section 759(a)(8) of the Act requires covered agencies to 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.

PMO intended to publish a list of review criteria on its Innovation Community Center to help geospatial users evaluate data and ensure compliance with the Department's personal privacy and confidentiality policies. However, the Department was unable to provide evidence that this information had been provided. According to the Geospatial Information Officer, the Geospatial Data Strategy implementation plan will include the actions needed to ensure the Department is compliant with this requirement.

Declassification of Geospatial Data

The Department had not developed a process to review declassified datasets for inclusion in the NSDI, as required. According to Department officials, efforts were 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. In particular, officials were awaiting clarification from the FGDC regarding effective contribution of data as implementation of the NSDI strategy begins. The Department indicated that it expects to receive an update on the FGDC standards by the end of calendar year 2022.

Geospatial Data Sources

The Department made some progress related to identifying existing geospatial data sources since our last review.⁹ For instance, Department program office and site officials informed us that they searched sources to determine if existing Federal, state, local, or private geospatial data met their needs before expending funds for geospatial data collection unless the needed information was site-specific. Additionally, as previously noted, the GS-PMO shared with its geospatial users a total of 24 platforms it identified that collect, maintain, and disseminate geospatial data for the Department's use. However, while the Department provided this information in Town Hall meetings hosted by the GS-PMO in November and December 2020, additional methods to communicate these options may help facilitate more robust geospatial data searching and discovery across the enterprise.

Quality of Geospatial Data

The Department had not ensured persons receiving Federal funds for geospatial data collection provided high quality data to the maximum extent practicable, as required by the Act. To be compliant, the Department was mandated to ensure that all contracts for the acquisition of geospatial datasets included requirements to have well-maintained, FGDC-endorsed, or current International Organization for Standardization compliant geospatial metadata. During test work, many field site officials indicated that they did not have a need to procure geospatial data. However, we identified one contract that did not include requirements for the procured data to meet high-quality, geospatial data standards from the program offices and field sites that indicated geospatial data had been procured. In addition, field site officials indicated that they would like the Department to develop guidance for a consistent approach to implementation of geospatial requirements, including specific contract language to incorporate when procuring geospatial data.

⁹ Section 759(a)(11) of the Act requires covered agencies to search all sources, including the GeoPlatform, to determine if existing Federal, state, local, or private geospatial data meets the needs of the covered agency before expending funds for geospatial data collection.

Geospatial Department Point of Contact

As noted in our prior report, the Department had met this requirement by appointing a primary point of contact to coordinate with the lead covered agencies for collection, acquisition, maintenance, and dissemination of the National Geospatial Data Asset data themes used by the Department. During our current test work, we found that the Department further strengthened the program by appointing a Geospatial Information Officer in January 2022 to help with the Act's implementation across the Department. Since the Geospatial Information Officer was appointed, we noted progress in drafting a detailed implementation plan, and the Department was in the process of identifying the remaining actions that need to be completed to achieve compliance with the Act. While these were positive actions, the Geospatial Information Officer should increase engagement with program offices and field sites to ensure the Act's requirements are more widely understood.

Impact to the Department of Energy

Without additional action, the Department will continue to experience shortcomings in meeting the requirements of the Act. Although the Department had made progress since our last review, significant work remained to meet the 12 covered agency responsibilities that have not been fully implemented. Specifically, the Department should complete its evaluation of the path forward for the Act's implementation and complete and share its implementation plan with all Department officials. The Department expects the implementation plan to be organized according to each of the goals in the Department's Geospatial Strategy, which crosswalk to the 13 covered agency responsibilities. As a result, the Department's ability to comply with the Act hinges on the issuance of the implementation plan. Additionally, improved communication across the Department on the agency's collection, production, acquisition, maintenance, distribution, use, and preservation of geospatial data would facilitate better understanding of the Act and its requirements across the enterprise. Finally, a centralized location for geospatial data information that is accessible across the Department would allow geospatial users to remain informed of its progress on meeting the Act's requirements. These actions, if fully implemented, will position the Department to be able to implement the remaining requirements of the Act.

Recommendations

To improve understanding and implementation of the Act, we recommend that the Department's Chief Information Officer:

1. 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;
2. Develop and implement a process to increase engagement with the Department's program offices and field sites to ensure the requirements of the Act are better understood; and
3. Develop a mechanism to ensure all Department program offices and field sites can access the Department's centralized geospatial data information.

Management Comments

Management concurred with our findings and recommendations. Management indicated that the GS-PMO will set milestones for each action identified in the *Department of Energy Geospatial Data Management Strategy 2021–2025*. In addition, management indicated that a communications plan will be incorporated into the implementation plan, which is scheduled to be released during the first quarter of FY 2023. Management also indicated that it intends to develop a Geospatial Science Program SharePoint site to provide the Department’s geospatial community common access to milestone products and access to a centralized geospatial data repository.

Management’s 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 the 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

Appendix 2

Commonly Used Terms

Department of Energy	Department
<i>Department of Energy Geospatial Data Management Strategy 2021–2025</i>	Geospatial Strategy
Federal Geographic Data Committee	FGDC
Fiscal Year	FY
<i>FY21–22 Geospatial Communications Plan</i>	Communications Plan
<i>Geospatial Data Act of 2018</i>	Act
Geospatial Science – Program Management Office	GS-PMO
National Spatial Data Infrastructure	NSDI

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 remotely from February 2022 through August 2022 at Department Headquarters in Washington, DC, and Germantown, Maryland; Fermi National Accelerator Laboratory in Batavia, Illinois; Pacific Northwest National Laboratory in Richland, Washington; 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 A22TG006.

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 the 13 requirements of Section 759 of the Act;
- Identified areas of potential improvement 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 required 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 internal controls and compliance with laws and regulations 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. Because our review was limited, it would not have necessarily disclosed all internal control deficiencies that may have existed at the time of our audit. We did not rely on computer-processed data to satisfy our objective.

Management officials waived an exit conference on September 21, 2022.

Related Reports

Office of Inspector General

- 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 of Energy had taken steps to implement the *Geospatial Data Act of 2018*, 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 *Geospatial Data Act of 2018*, we identified that it had not fully implemented 12 of the requirements. Without adequate progress towards the development and implementation of a geospatial strategy, there is a high risk that the Department will not be able to implement the requirements of the *Geospatial Data Act of 2018*.

Government Accountability Office

- [*GEOSPATIAL DATA: Progress Needed on Identifying Expenditures, Building and Utilizing a Data Infrastructure, and Reducing Duplicative Efforts*](#) (GAO-15-193, February 2015).
- [*GEOSPATIAL INFORMATION: OMB and Agencies Can Reduce Duplication by Making Coordination a Priority*](#) (GAO-14-226T, December 2013).

Management Comments



Department of Energy
Washington, DC 20585

9/15/2022

Teri Donaldson
Inspector General
Office of Inspector General (IG-12)
Department of Energy
Washington, DC 20585

Dear Teri Donaldson,

The Department of Energy (DOE or Department) appreciates the opportunity to provide a response to the Inspector General Office's (IG) Official Draft Report A22TG006 titled, *Follow-up on Energy's Implementation of the Geospatial Data Act of 2018*. DOE concurs with each of the 3 recommendations listed in the report. DOE plans to implement the following activities as described in the enclosure.

IG should direct any questions to Joshua Linard, Geospatial Information Officer, Office of the Chief Information Officer, at 240-220-1349 or via e-mail joshua.linard@hq.doe.gov

Sincerely,

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

Ann Dunkin
Chief Information Officer

Enclosure





Department of Energy

Washington, DC 20585

09/15/2022

MANAGEMENT RESPONSE

IG Draft Report, A22TG006

Follow-up on Energy's Implementation of the Geospatial Data Act of 2018

Recommendation 1: 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.

Management Response: Concur

Action Plan for the recommendation: The Geospatial Data Management Strategy identified 14 objectives for which 58 actions have been associated. Milestones will comprise the scope for completing each action, be identified by the DOE Geospatial Science Program Management Office (GS-PMO) and managed using Agile project management techniques. Release of the Implementation Plan is scheduled to occur in the first quarter of fiscal year 2023, pending GS-PMO approval. A budget request, planned through fiscal year 2027, has received support from the Chief Information Officer and corresponds to Actions identified in the Implementation Plan.

Estimated Completion Date: 12/31/22

Recommendation 2: Develop and implement a process to increase engagement with the Department's program offices and field sites to ensure the requirements of the Act are better understood.

Management Response: Concur

Action Plan for the recommendation: As indicated in the report, the incorporation of the communications plan into the Implementation Plan should better document planned actions to improve awareness of the Act and its requirements. Specifically, each Objective within Goal 4 of the Implementation plan, other than the one devoted to inter-agency communication, will have Milestones aimed at informing, educating, setting goals and vision, defining and solving problems, promoting change, influencing and motivating action, gaining feedback, and generating support within DOE.

Estimated Completion Date: 12/31/2022

Recommendation 3: Develop a mechanism to ensure all Department program offices and field sites can access the Department's centralized geospatial data information.

Management Response: Concur





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Action Plan for the recommendation: Milestones associated with responding to this recommendation include those related to implementing a Geospatial Science Program SharePoint site. The site will provide DOE's geospatial community common access to milestone products and access to a centralized geospatial data repository. SharePoint site development has begun, and a procurement request has been submitted for systems supporting the data repository. Combined, these mechanisms will federate DOE repositories for geospatial science information and assist in establishing a sustainable culture of dialogue and collaboration aimed at reducing organizational silos, encouraging collaboration, and sharing information, to increase the potential for DOE to speak with one voice, clearly and succinctly.

Estimated Completion Date: 06/30/2023



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