

**DHS Faces Challenges
in Meeting the
Responsibilities of the
Geospatial Data Act of 2018**





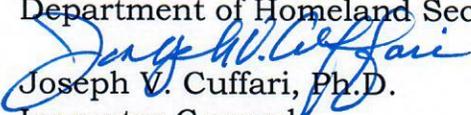
OFFICE OF INSPECTOR GENERAL

Department of Homeland Security

Washington, DC 20528 / www.oig.dhs.gov

September 24, 2020

MEMORANDUM FOR: Karen Evans
Chief Information Officer
Department of Homeland Security

FROM: 
Joseph V. Cuffari, Ph.D.
Inspector General

SUBJECT: *DHS Faces Challenges in Meeting the Responsibilities of the Geospatial Data Act of 2018*

For your action is our final report, *DHS Faces Challenges in Meeting the Responsibilities of the Geospatial Data Act of 2018*. We incorporated the formal comments provided by your office.

The report contains three recommendations aimed at improving DHS' compliance with the 13 responsibilities of the *Geospatial Data Act of 2018*. Your office concurred with all three recommendations. Based on information provided in your response to the draft report, we consider all three recommendations open and resolved. Once your office has fully implemented the recommendations, please submit a formal closeout letter to us within 30 days so that we may close the recommendations. The memorandum should be accompanied by evidence of completion of agreed-upon corrective actions and of the disposition of any monetary amounts. Please send your response or closure request to OIGAuditsFollowup@oig.dhs.gov.

Consistent with our responsibility under the *Inspector General Act*, we will provide copies of our report to congressional committees with oversight and appropriation responsibility over the Department of Homeland Security. We will post the report on our website for public dissemination.

Please call me with any questions, or your staff may contact Sondra McCauley, Assistant Inspector General for Audits, at (202) 981-6000.



DHS OIG HIGHLIGHTS

DHS Faces Challenges in Meeting the Responsibilities of the Geospatial Data Act of 2018

September 24, 2020

Why We Did This Audit

The Geospatial Data Act of 2018 (the Act) requires each covered agency to comply with 13 responsibilities to foster efficient management and use of geospatial data—information linked to specific geographic locations. The Act also mandates the Office of Inspector General to submit to Congress a biannual audit report on the agency’s progress in fulfilling the Act’s requirements. This is the first in a series of audits assessing DHS’ compliance with the Act.

What We Recommend

We made three recommendations that focus on increasing the resources necessary to comply with DHS’ 13 responsibilities under the Act.

For Further Information:

Contact our Office of Public Affairs at (202) 981-6000, or email us at DHS-OIG.OfficePublicAffairs@oig.dhs.gov

What We Found

The Department of Homeland Security has not fulfilled most of the 13 responsibilities required of it under the Act. To comply with one responsibility, DHS took steps to establish a Geospatial Information Officer and a dedicated Geospatial Management Office to oversee the Act’s implementation and coordinate with other agencies. However, DHS has only partially met, or not met, the remaining 12 responsibilities. Primarily, DHS does not have an inventory of its geospatial assets, a published strategy for advancing geospatial information within the Department, or data sharing capabilities.

DHS’ lack of progress in complying with its responsibilities in the Act can be attributed to multiple external and internal factors. External factors include the need for additional guidance from the Federal Geographic Data Committee and the Office of Management and Budget to properly interpret and implement certain requirements. Internal factors include competing priorities that diverted resources away from fulfilling the Act’s 13 responsibilities.

DHS’ limited compliance hampers its components and Program Offices from realizing the Act’s intended benefits. Until the Department undertakes key steps to complete a Geospatial Data Strategy and an inventory, DHS will not be in compliance with the Act and, thus, cannot achieve more efficient management of geospatial data, technologies, and infrastructure as intended.

DHS Response

DHS concurred with all three recommendations. Appendix B contains the Department’s response in its entirety. All recommendations will remain open pending evidence to support completion of the corrective actions.



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Background

Geospatial data¹—information linked to specific geographic locations—is invaluable in carrying out the various missions of Federal agencies, as well as contributing positively to the United States economy. The Federal Government collects, maintains, and uses geospatial data to improve decision making and to support numerous functions, including national security, law enforcement, and health care. Many activities depend on critical analysis of geospatial data, such as maintaining transportation infrastructures and quickly responding to natural disasters, such as floods, hurricanes, and fires. However, some data is collected multiple times by Federal, state, and local entities, resulting in duplication of effort and resources.

On October 5, 2018, Congress enacted the *Geospatial Data Act of 2018* (the Act)² to promote more efficient management of geospatial data, technologies, and infrastructure through enhanced coordination among Federal, state, local, and tribal governments, including the private sector and academia. The Act is intended to improve access and use of government geospatial data. The Act expands upon previous Federal initiatives³ intended to improve the management of geospatial data.

The collection and use of geospatial data is especially critical for the Department of Homeland Security to support its diverse range of missions encompassing law enforcement, border protection, emergency management, critical infrastructure protection, and national operations. For example, after Hurricane Harvey in 2017, the Federal Emergency Management Agency used geospatial data to assist in response and recovery efforts. The Act requires that each covered agency,⁴ including DHS, comply with 13 responsibilities to

¹ Geospatial data refers to information that is tied to a location on the Earth, including by identifying the geographic location and characteristics of natural or constructed features and boundaries on the Earth, and that is generally represented in vector datasets by points, lines, polygons, or other complex geographic features or phenomena; may be derived from, among other things, remote sensing, mapping, and surveying technologies; includes images and raster datasets, aerial photographs, and other forms of geospatial data or datasets in digitized or non-digitized form. See generally *FAA Reauthorization Act of 2018*, Pub. L. No. 115-254, Subpt. F, §§751-759 (establishing procedures and infrastructure to promote greater public access to federal geospatial data) (“The Geospatial Data Act of 2018”) (hereinafter “The Act”).

² Pub. L. No. 115-254, Subpt. F, §§751-759, enacted in October 2018.

³ The Act codifies aspects of Office of Management and Budget Circular A-16 that established the Federal Geographic Data Committee. See e.g., Congressional Research Service, “The Geospatial Data Act of 2018,” at p. 2 (Oct. 22, 2018).

⁴ The Act, section 752 defines “covered agency” as: (A) (Covered agency” (A) means—(i) an Executive department, as defined in section 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,



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promote integration of geospatial data from all sources and to collect, maintain, disseminate, and preserve that data. Appendix C lists all 13 responsibilities included in Section 759(a) of the Act.

In 2015, the Government Accountability Office (GAO) reported on the progress that select Federal agencies made toward identifying geospatial expenditures, building and utilizing a data infrastructure, and reducing duplicative efforts.⁵ Specifically, GAO reported that the Federal Geographic Data Committee⁶ and selected Federal agencies had made progress in implementing their responsibilities for the National Spatial Data Infrastructure as outlined in Office of Management and Budget (OMB) guidance; however, critical items remained incomplete. GAO made two recommendations to DHS to improve the Department's efforts to improve geospatial coordination and reduce duplication. Specifically, GAO recommended that DHS set a schedule for developing and implementing a policy to make geospatial data available on the GeoPlatform, and establish internal policies aimed at avoiding the collection of duplicative geospatial data. The Department concurred and subsequently implemented both GAO recommendations.

Section 759(c) of the Act mandates that not less than once every 2 years, the Inspector General of each covered agency submit an audit of its agency's collection, production, acquisition, maintenance, use, distribution, and preservation of geospatial data to Congress. In addition to measuring the Department's fulfillment of the 13 responsibilities in section 759(a), the Act also specifically requires the Inspector General to assess the Department's compliance related to standards pertaining to geospatial data metadata.⁷ This report is the Office of Inspector General's (OIG) first in the series of required audits.

institution of higher education, business partner or contractor of the Federal Government, and the public; (ii) the National Aeronautics and Space Administration; or (iii) the General Services Administration; and (B) does not include the Department of Defense (including 30 components and agencies performing national missions) or any element of missions or the intelligence community.

⁵ GAO, Report No. 15-193, *Geospatial Data: Progress Needed on Identifying Expenditures, Building and Utilizing a Data Infrastructure, and Reducing Duplicative Efforts* (GAO-15-193), February 12, 2015.

⁶ The Federal Geographic Data Committee, an interagency committee with the Department of Interior, is the lead executive branch entity responsible for developing, implementing, and reviewing policies, practices, and standards related to geospatial data. See The Act at § 753 (a).

⁷ See The Act at § 759(c)(1-2).



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Results of Audit

DHS Took Initial Steps, But Has Not Fully Accomplished Most Responsibilities Required under the Geospatial Data Act of 2018

DHS has not fulfilled most of its 13 responsibilities in Section 759(a) of the Act. To comply with one of its responsibilities, DHS took steps to establish a Geospatial Information Officer and a dedicated Geospatial Management Office to oversee the Act's implementation and coordinate with other agencies. However, DHS only partially met, or has not met, the remaining 12 responsibilities.

DHS Took Initial Steps to Comply with the Act

In accordance with responsibility 13, DHS established an organizational structure to facilitate management of geospatial duties. This includes central leadership and support at the DHS Headquarters level and a number of geospatial activities and programs managed by the components.

Steps Taken at the Headquarters Level

The Act requires covered agencies to appoint a contact to coordinate with other lead covered agencies for collection, acquisition, maintenance, and dissemination of the National Geospatial Data Asset data themes used by the covered agency.⁸ Accordingly, DHS appointed a Geospatial Information Officer (GIO) in April 2019 whose duties include overseeing DHS' geospatial information technology program. The GIO provides leadership and coordination for the Department and serves as the DHS representative on the Federal Geographic Data Committee Executive Steering Committee and other committees. The DHS GIO also provides strategic direction, policy, technical assistance, and oversight to ensure DHS geospatial information, and technology assists in DHS' core missions.

The GIO heads the Geospatial Management Office (GMO), located within the Office of the Chief Information Officer. Since the GMO was established, the office has worked with the Federal Geographic Data Committee to gain an understanding of agency responsibilities outlined in the Act. Most importantly, the GMO has sought clarification on the definition of geospatial data, and on

⁸ See the Act at § 759(a)(13).
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the potential requirement that DHS broadly share law enforcement-sensitive geospatial information.

Steps Taken at the DHS Component Level

The Act established key responsibilities of the lead covered agencies accountable for National Geospatial Data Asset data themes.⁹ As of August 2019, there were 17 data themes covering diverse areas, including elevation, climate and weather, transportation, and utilities. The Act requires the Federal Geographic Data Committee to develop data standards for each data theme and, among other requirements, provides that agencies use national and international standards to the maximum extent possible.¹⁰

Although DHS is not designated as a lead covered agency or theme lead, the Federal Emergency Management Agency (FEMA) is responsible for maintaining the National Flood Hazard Layer of the Elevation Theme. The Elevation Theme focuses on datasets detailing the Earth's natural and manmade altitudes, such as buildings. The National Flood Hazard Layer is centered on the National Flood Insurance Program, which is responsible for preparing and maintaining flood hazard maps. Flood hazard mapping is the basis of the National Flood Insurance Program regulations and flood insurance requirements.

The National Flood Insurance Program has prepared flood hazard data maps for at least 18,000 communities. The maps outline the physical parameters of these communities' flood risk areas. As required in the Act, FEMA currently uses international metadata¹¹ standards for its geospatial data shared on the public-facing website referred to as the GeoPlatform.¹² FEMA officials confirmed they coordinate with the "Elevation Theme" lead.¹³ In fact, FEMA has been involved in geospatial data efforts since the year 2000, and is actively involved in related meetings and working groups.

⁹ The term "National Geospatial Data Asset data theme" is defined as the National Geospatial Data Asset core geospatial datasets (including electronic records and coordinates) related to a topic or subject designated under section 756. See the Act at § 752(12); see also *id.* at § 756(b).

¹⁰ The Act §§757(a)(2) & (b)(2).

¹¹ Metadata is defined as data that provides background information, such as source, content, and vintage, about the geospatial data. Geographic metadata documents the attributes of geographic data. See *e.g.*, the Act at § 752(11).

¹² The Act at Sections 752(4) & Section 758(a) - The Committee shall operate an electronic service that provides access to geospatial data and metadata for geospatial data to the general public, to be known as the GeoPlatform.

¹³ Within the Department of Commerce, the National Oceanic and Atmospheric Administration is the lead covered agency responsible for the Elevation data theme to develop, maintain, coordinate, and disseminate data using the GeoPlatform.

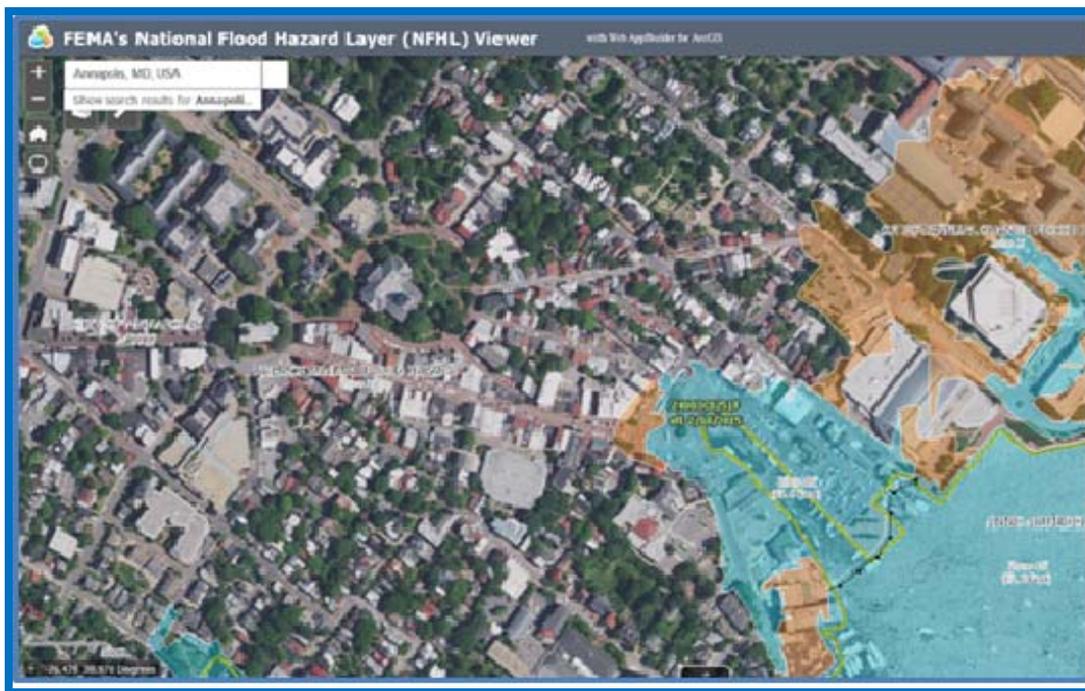


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The Act requires covered agencies to share all geospatial data not explicitly excluded by Sections 752(5) (D) and 757(c) on the GeoPlatform website.¹⁴ We confirmed that FEMA’s Flood Hazard layer map and related data standards are available to the public on the GeoPlatform. Having this data available to the public is important to assist in mitigation actions and potentially reduce duplication of efforts with academia. Figure 1 provides an example of FEMA’s Flood Hazard layer map, and depicts various flood zones and boundaries for Annapolis, Maryland.

Figure 1. FEMA National Flood Hazard Layer Map



Source: GeoPlatform.gov

¹⁴ Section 752(5)(D)(i-vi) of the Act excludes: 1) geospatial data and activities of an Indian tribe not carried out, in whole or in part, using Federal funds, as determined by the tribal government; 2) classified national security-related geospatial data and activities of the Department of Defense, unless declassified; 3) classified national security-related geospatial data and activities of the Department of Energy, unless declassified; 4) geospatial data and activities under chapter 22 of title 10, United States Code (U.S.C.), or section 110 of the *National Security Act of 1947* (50 U.S.C. 3045); 5) intelligence geospatial data and activities, as determined by the Director of National Intelligence; and 6) certain declassified national security-related geospatial data and activities of the intelligence community, as determined by the Secretary of Defense, the Secretary of Energy, or the Director of National Intelligence. Similarly, Section 757(c) of the Act prevents the Secretary of the Interior from allowing public disclosure of information that “could reasonably be expected to cause damage to the national interest, security, or defense of the United States....” Such determination is made in consultation with the Director of National Intelligence.



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Other DHS components also collect and use geospatial data to execute distinct mission operations to secure the Nation from threats. For example, U.S. Customs and Border Protection (CBP) uses geographic data to monitor activities along the U.S. border for potential vulnerabilities, border incidents, and relevant events (such as arrests and seizures). Additionally, the United States Coast Guard (Coast Guard) creates and collects geospatial data using buoy locations in open waters in support of the Marine Transportation System. The Coast Guard also uses geospatial data to identify potentially dangerous areas necessary for its search-and-rescue efforts. The Transportation Security Administration, the United States Secret Service, and other DHS components, also rely on geospatial data to carry out their day-to-day mission operations. However, FEMA is the only component to share geospatial data on the GeoPlatform. According to CBP and the Coast Guard, most, if not all, geospatial data is classified as law enforcement sensitive. As such, sharing their geospatial data could compromise their missions or impact the safety of personnel.

DHS Has Not Met Most of Its Responsibilities under the Geospatial Data Act

At the time of our audit in February of 2020, DHS had not yet fully met 12 of the 13 responsibilities required by Section 759(a). Primarily, DHS did not have an inventory of department-wide geospatial assets, and had not developed or published a Geospatial Strategy for advancing geospatial information and products within the Department. DHS had not fully accomplished data sharing as required by the Act. Additionally, DHS did not oversee geospatial data activities at the component level, even though it had issued a management directive in 2016 requiring the Department to search available sources before procuring geospatial assets.¹⁵ See appendix D for details about DHS' compliance with each of the responsibilities mandated in the Act.

Inadequate Identification of Geospatial Assets

DHS has not conducted a systematic inventory of its geospatial assets and its metadata, which is needed to enable the Department to meet several key requirements of the Act. For example, responsibility 3 states that covered agencies should promote the integration of geospatial data from all sources, while responsibility 4 mandates that geospatial data and activities be included on agency record schedules approved by the National Archives and Records Administration. Additionally, responsibility 6 calls for agencies to share metadata on the GeoPlatform. To meet these three responsibilities, agencies must understand the totality of their geospatial data assets (e.g., have an

¹⁵ DHS Directive Instruction 034-01-001, *Instruction for Identifying and Acquiring Unclassified Geospatial Information*.
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inventory of geospatial data assets). This inventory should include, at minimum, an explanation of geospatial data and the standards used.

DHS was unable to provide us with a listing of its geospatial data assets. DHS had not taken actions to ensure that data products arising from geospatial data activities were included on the agency's record schedules. Moreover, without an accurate and complete inventory, DHS had not taken actions to promote the integration of geospatial data from all sources, ensure information was on agency record schedules, or share geospatial data on the GeoPlatform.

No Strategy for Advancing Geospatial Information

Responsibility 1 requires that agencies prepare, maintain, publish, and implement a strategy for advancing geographic information and related geospatial data and activities in line with the strategic plan for the National Spatial Data Infrastructure (NSDI).¹⁶ On a related note, responsibility 10 requires that covered agencies participate in determining whether declassified data can contribute to and become a part of the NSDI. However, we found that DHS has not taken actions to develop, or publish, a strategy for advancing geospatial information and products within the Department in line with these requirements.

Restricted Data Sharing with Federal Agencies and Non-Federal Stakeholders

DHS partially met responsibility 2, which mandates covered agencies to collect, maintain, and disseminate geospatial data with other Federal agencies and non-Federal users. As discussed previously, FEMA widely shares flood mapping data on the public-facing GeoPlatform website. However, we found that other DHS components with law enforcement mission operations generally share geospatial data on a more restricted platform called the Homeland Security Information Network (HSIN). According to DHS, HSIN is a trusted information sharing platform containing Sensitive But Unclassified information available to Federal, state, local, territorial, tribal, international, and private sector partners. Despite the responsibility to share geospatial data, DHS officials stated they had reservations about sharing sensitive data related to law enforcement activities on a website such as the GeoPlatform, which is available to the public and other organizations with no specific access requirements.

¹⁶ The National Spatial Data Infrastructure is defined as the technology, policies, standards, and human resources necessary to acquire, process, store, distribute, and improve utilization of geospatial data. The NSDI is the vehicle used for facilitating seamless data development, information sharing, and collaborative decision making across multiple sectors of the economy. The Federal Geographic Data Committee is the coordinating body for the NSDI.



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External and Internal Influences Hindered DHS' Compliance

DHS' lack of progress in complying with its 13 responsibilities under the Act can be attributed to multiple external and internal factors. External factors include the need for additional guidance from both the Federal Geographic Data Committee and OMB to properly interpret and implement certain requirements. Internal impediments stem from competing priorities that have diverted resources away from fulfilling all requirements mandated by the Act.

External Influences Impeded DHS' Compliance

A number of external influences beyond DHS' control have impeded DHS' progress in achieving compliance with the Act. Most notably, the GMO is waiting for the Federal Geographic Data Committee to complete a national strategy. The GMO is also waiting for OMB to provide clarification on how the definition of geospatial data applies in a circumstance when DHS alters geospatial data from another source.

National Strategy Needed to Support DHS Development of an Agency Plan

At the time of this audit, the Federal Geographic Data Committee, the entity responsible for publishing the NSDI strategic plan, had not yet released or implemented a national strategy. DHS GMO officials stated they were dependent on the committee to issue a nation-wide geospatial data strategy before DHS could draft and implement its own agency-level strategy. Specifically, before taking steps to coordinate across DHS components to identify a strategy for advancing geospatial data and activities, DHS will need to understand and identify how it supports the goals and objectives outlined in the national plan. The Federal Geographic Data Committee's target date to establish the NSDI strategic plan is December 31, 2020. Consequently, DHS officials did not envision issuing a strategic plan before fiscal year 2021.

Clarification Needed Before Sharing Geospatial Data

DHS needed additional guidance from OMB on the definition of geospatial data, which is essential for the GMO to complete an inventory of its geospatial assets. Specifically, the Act defines geospatial data as information tied to a location on Earth. However, GMO officials expressed concerns that this definition is overly broad and can create an unnecessary burden on DHS. DHS officials informed us they had asked, and were still waiting, for OMB to clarify the definition of geospatial data before they could carry out the required responsibilities.

Further, DHS officials stated clarification was needed to determine what data should be shared on the GeoPlatform website. While GMO officials understood



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that the flood layer data FEMA collects should be shared on the GeoPlatform, they were not certain as to how broadly to interpret this requirement. For example, the GMO was seeking guidance on whether combining FEMA flood data with a public address database for analytical purposes might create another set of geospatial data that would need to be documented, maintained, and shared on the GeoPlatform. DHS officials stated that, without clear parameters for defining geospatial assets and products, they were unable to identify and account for all geospatial assets.

Provisions Needed to Protect Sensitive Information

DHS and several of its components expressed concerns about the Act not containing explicit provisions excluding Law Enforcement Sensitive data from the geospatial information sharing requirement. Because the Act does not specifically exclude Law Enforcement Sensitive data from being shared on the GeoPlatform, their presumption was that this information must be shared. However, DHS classifies Law Enforcement Sensitive data as sensitive unclassified information that could adversely impact a person's privacy or welfare, the conduct of Federal programs, or other programs or operations essential to the national interest if disclosed without authorization. DHS considers this type of data, which could potentially include the locations of law enforcement assets, to be extremely sensitive. As such, DHS officials believed sharing this data could compromise law enforcement activities and have detrimental consequences.

In July 2019, DHS and the Federal Geographic Data Committee submitted revisions for OMB Circular A-16, to delegate authority to the committee to decide what and when data used for law enforcement purposes should be excluded from the GeoPlatform. In February 2020, DHS officials confirmed the recommended changes to OMB Circular A-16 with respect to law enforcement data were still under review at OMB.

Internal Influences Impeded DHS' Compliance

According to GMO officials, DHS had prioritized fulfilling at least two other legislative requirements competing for the same resources as those needed for the Act's implementation. Specifically, GMO officials stated they had been asked to support internal efforts to ensure DHS compliance with the *Digital Accountability and Transparency Act of 2014* and the *Foundations for Evidenced-Based Policymaking Act of 2018*. GMO officials added that many requirements of these two acts are intertwined with the *Geospatial Data Act* and reliant upon the same or similar resources and information. The GMO does not lead efforts to implement either the *Digital Accountability and Transparency Act of 2014* or the *Foundations for Evidenced-Based Policymaking*



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Act of 2018. However, the GMO assists the Office of the Chief Data Officer with implementing requirements related to both Acts.

Further, DHS officials informed us the GMO needed additional resources to effectively fulfill the responsibilities of geospatial data collection and stewardship. At the time of our audit in February 2020, the GMO had three part-time staff that collectively accounted for less than one full-time equivalent (FTE). Ensuring compliance with all 13 responsibilities in the Act, which involves coordination with multiple components and offices, would require a significant increase in staff allocations. For example, according to GMO officials, additional resources were needed for them to effectively communicate the Act's requirements to components with geospatial data. Additional staff were needed to identify the concerns unique to each component and compile a comprehensive inventory of geospatial assets and their metadata department-wide. Finally, with a shortage of resources, the GMO could not provide the necessary oversight to ensure personal privacy protections and inclusion of geospatial data products, assets, and other records created by DHS on agency record schedules approved by the National Archives and Records Administration.

Noncompliance with the Act Has Hindered Effective Management of Geospatial Data

DHS' limited compliance with the Act to date has hampered its components, program offices and all stakeholders from realizing the intended benefits of *The Geospatial Act of 2018*. Primarily, until the Department completes the fundamental requirements to complete a strategy and an inventory, the GMO cannot begin to perform important oversight functions necessary to comply fully with the Act, such as verifying the Department is collecting, maintaining, disseminating, and preserving geospatial data to ensure information and products are readily shared with other Federal agencies and non-Federal users. Without additional coordination, DHS components risk expending valuable time and money to collect and maintain geospatial data that may already be collected by another component or government agency. Moreover, DHS should expand its resources to comply with its responsibilities under the Act. Without taking steps to fully comply with the Act, DHS cannot achieve more efficient management of geospatial data, technologies, and infrastructure.



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Recommendations

We recommend the DHS Chief Information Officer:

Recommendation 1: Identify and apply the resources needed in the Geospatial Management Office to the Department to fulfill covered agency responsibilities under Section 759 of the *Geospatial Data Act of 2018*.

Recommendation 2: Take the steps needed to ensure communication with all DHS components to determine the extent to which geospatial data and standards are used so the Department can integrate geospatial data from all sources and collect, maintain, disseminate, and preserve the data as required by the Act.

Recommendation 3: Work with the Geospatial Information Officer to coordinate with internal and external stakeholders to ensure a common definition of geospatial data, including the classification of Law Enforcement Sensitive Information, as it applies to the DHS mission and operating environment.

Management Comments and OIG Analysis

DHS Response and OIG Analysis

DHS concurred with all three recommendations. Appendix B contains a copy of the Department's response in its entirety. We also received technical comments and incorporated changes to the report where appropriate. A summary of the Department's responses to the recommendations and our analysis follows.

DHS Response to Recommendation 1: Concur. No later than October 30, 2020, the DHS OCIO will announce one job opening for a full-time Equivalent employee to support the GMO implementation of the Geospatial Data Act. Additionally, by February 26, 2021, OCIO will coordinate with DHS' Management Directorate and Components to request a Geospatial Data Act-based workforce assessment to identify staffing resources needed to implement all requirements of the Act. This assessment will be completed by June 30, 2021. Based on the outcome of this assessment, OCIO may initiate additional hiring actions, manpower adjustments, and onboarding of new GMO staff. The estimated completion date is January 31, 2022.

OIG Analysis: The Department's corrective action is responsive to the recommendation. The recommendation will remain open and resolved until the Department provides evidence to support that corrective actions are completed.



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DHS Response to Recommendation 2: Concur. In July 2020, the OCIO's GIO held information meetings with geospatial leads across DHS components to coordinate responses to the Act's documentation requirements. The GIO will develop a DHS Headquarters Geospatial Data Management Plan and collect existing data management plans from DHS components to support required annual reporting by April 30, 2021. Furthermore, the GIO will develop an integration plan including strategies for collaborating within domain areas (e.g., Homeland Infrastructure Foundation-Level Data Subcommittee). The estimated completion date is July 31, 2021.

OIG Analysis: The Department's corrective action is responsive to the recommendation. The recommendation will remain open and resolved until the Department provides evidence to support that corrective actions are completed.

DHS Response to Recommendation 3: Concur. The OCIO's GIO will coordinate with OMB to obtain a clarified definition of geospatial data by December 31, 2020. The GIO plans to modify the Information Technology Acquisition Review Process as a means of enforcing the Act's requirements for geospatial data acquisitions by December 2021. The GIO will coordinate with the DHS Office of Legislative Affairs to pursue a legal change adopting the revised definition of geospatial data into the Act. Furthermore, the GIO will collaborate with FGDC to delineate operating procedures for the responsibilities outlined in OMB Circular A-16, where the FGDC Chair (i.e. Secretary of the U.S. Department of Interior) exempts protected or sensitive datasets from compliance. The estimated completion date is December 31, 2022.

OIG Analysis: The Department's corrective action is responsive to the recommendation. The recommendation will remain open and resolved until the Department provides evidence to support that corrective actions are completed.



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Appendix A

Objective, Scope, and Methodology

The Department of Homeland Security Office of Inspector General was established by the *Homeland Security Act of 2002* (Public Law 107-296) by amendment to the *Inspector General Act of 1978*. This is one in a series of audit, inspection, and special reports prepared as part of our oversight responsibilities to promote economy, efficiency, and effectiveness in the Department's operations.

The objective of our audit was to assess DHS' progress in fulfilling the requirements of the *Geospatial Data Act of 2018*. The scope of this initial audit was DHS' initial efforts to comply with the requirements under section 759(a) as required by section 759(c) to be completed every 2 years.

We conducted our fieldwork at DHS Headquarters in Washington, D.C. To answer our objective, we interviewed selected officials from DHS' Geospatial Management Office. We also met with officials at DHS' Cybersecurity and Infrastructure Security Agency, FEMA, CBP, Coast Guard, and the Executive Director and Deputy Executive Director of the Federal Geographic Data Committee. We interviewed or distributed surveys to all DHS components to obtain information about their geospatial data and the requirements of the Act. We used the interviews and survey responses to assess DHS' compliance with each requirement under section 759(a) of the Act. Specifically, we applied a rating system using "Meets," "Partially Meets," and "Does Not Meet" to each of the 13 covered agency responsibilities. See appendix D for the ratings. Finally, we met with officials from DHS' GMO to review the requirements of the Act and confirm the accuracy of our results. During the meeting, we discussed whether any action had occurred since our entrance conference. We did not rely on any computer-processed information from DHS or DHS components.

We conducted this compliance audit between October 2019 and February 2020 pursuant to the *Inspector General Act of 1978*, as amended, and according to 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 upon our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based upon our audit objectives.

The Office of Audits major contributors to this report are Tuyet-Quan Thai, Director; Beverly Burke, Audit Manager; Jaquone Miller, Audit Manager; Corinn King, Auditor in Charge; Gaven Ehrlich, Senior Program Analyst; Deborah Mouton-Miller, Communications Analyst; and Swati Nijhawan, Independent Referencer.



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Appendix B
DHS Response to the Draft Report

U.S. Department of Homeland Security
Washington, DC 20528



Homeland Security

September 9, 2020

MEMORANDUM FOR: Joseph V. Cuffari, Ph.D.
Inspector General

FROM: Jim H. Crumpacker, CIA, CFE
Director
Departmental GAO-OIG Liaison Office

SUBJECT: Management Response to Draft Report: "DHS Faces Challenges in Meeting the Requirements of the Geospatial Data Act of 2018" (Project No. 19-072-AUD-DHS)

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Thank you for the opportunity to review and comment on this draft report. The U.S. Department of Homeland Security (DHS or the Department) appreciates the work of the Office of Inspector General (OIG) in planning and conducting its review and issuing this report.

The Department is pleased to note OIG's recognition that DHS has appointed a Geospatial Information Officer (GIO) and created a Geospatial Management Office (GMO) to oversee implementation of the Geospatial Data Act of 2018 (GDA) and coordinate with other agencies, including the Federal Geographic Data Committee (FGDC). DHS's Office of the Chief Information Officer (OCIO) is committed to working with DHS Components and collaborating with other federal agencies to fulfill the Department's responsibilities under the GDA, as appropriate.

OIG's report helps bring to the public and Congress' attention that there is both ambiguity in the law and external factors beyond DHS's control that have slowed the Department's implementation of the GDA to date. The GMO, via the FGDC, is partnering with DHS leadership and the Office of Management and Budget's (OMB) OCIO to address these critical issues. For example, the FGDC is engaging with OMB OCIO on potential revisions to OMB Circular A-16, "Coordination of Geographic Information and Related Spatial Data Activities," that could provide relief for Federal agencies from having to widely share sensitive but unclassified data, such as "For Official Use Only" and "Law Enforcement Sensitive" geospatial information. Also, the GMO has had preliminary discussions with DHS OCIO's Attorney-Advisor, assigned to the DHS Office of General Counsel, on what, if any, legislative petition options are available for DHS to receive the same GDA exemptions that the Department of Defense



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and other intelligence agencies have received. Working with stakeholders, DHS will meet the GDA's intent – accessibility to open, standardized, and high-quality geospatial data – while still protecting the American people from threats to their security.

The draft report contained three recommendations, with which the Department concurs. Attached find our detailed response to each recommendation. DHS previously submitted technical comments under a separate cover for OIG's consideration.

Again, thank you for the opportunity to review and comment on this draft report. Please feel free to contact me if you have any questions. We look forward to working with you again in the future.

Attachment



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Attachment: Management Response to Recommendations Contained in 19-072-AUD-DHS

OIG recommended the DHS Chief Information Officer:

Recommendation 1: Identify and apply the resources needed in the Geospatial Management Office to the Department to fulfill covered agency responsibilities under Section 759 of the *Geospatial Data Act of 2018*.

Response: Concur. No later than October 30, 2020, the DHS OCIO will announce one job opening for a Full Time Equivalent employee to support GMO implementation of the GDA. Additionally, by February 26, 2021, OCIO will coordinate with DHS's Management Directorate and Components to request a GDA-based workforce assessment to identify staffing resources needed to implement all GDA requirements. This assessment will be completed by June 30, 2021. Based on the outcome of this assessment, OCIO may initiate additional hiring actions, manpower adjustments, and onboarding of new GMO staff.

Estimated Completion Date (ECD): January 31, 2022.

Recommendation 2: Take the steps needed to ensure communication with all DHS components to determine the extent to which geospatial data and standards are used so the Department can integrate geospatial data from all sources and collect, maintain, disseminate, and preserve the data as required by the Act.

Response: Concur. In July 2020, DHS OCIO's GIO held information meetings with geospatial leads across DHS Components to coordinate responses to GDA-related documentation requirements. Additionally, the GIO will develop a DHS Headquarters Geospatial Data Management Plan and collect existing data management plans from DHS Components to support GDA annual reporting by April 30, 2021. Furthermore, the GMO will develop an integration plan to include strategies for collaborating within domain areas (e.g., Homeland Infrastructure Foundation-Level Data Subcommittee).

ECD: July 30, 2021.

Recommendation 3: Work with the GIO to coordinate with internal and external stakeholders to ensure a common definition of geospatial data, including the classification of Law Enforcement Sensitive Information, as it applies to the DHS mission and operating environment.

Response: Concur. DHS OCIO's GIO will coordinate with OMB to obtain a clarified definition of geospatial data by December 31, 2020. The GIO also plans to modify the



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Information Technology Acquisition Review Process to enforce GDA requirements for geospatial data acquisitions by December 31, 2021. Additionally, the GIO will coordinate with the DHS Office of Legislative Affairs to pursue a legal change that adopts the revised definition of geospatial data into the GDA. Furthermore, the GMO will collaborate with FGDC to delineate operating procedures for the responsibilities outlined in OMB Circular A-16, where the FGDC Chair (i.e., the Secretary of the U.S. Department of the Interior) exempts protected or sensitive datasets from GDA compliance.

ECD: December 31, 2022.



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Appendix C
Section 759(a) of the *Geospatial Data Act of 2018*
Responsibilities

1. Prepare, maintain, publish, and implement a strategy for advancing geographic information and related geospatial data and activities appropriate to the mission of the covered agency, in support of the strategic plan for the National Spatial Data Infrastructure prepared under section 755(c);
2. Collect, maintain, disseminate, and preserve geospatial data such that the resulting data, information, or products can be readily shared with other Federal agencies and non-Federal users;
3. Promote the integration of geospatial data from all sources;
4. 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 (NARA);
5. 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 Committee;
6. Use the geospatial data standards, including the standards for metadata for geospatial data, and other appropriate standards, including documenting geospatial data with the relevant metadata and making metadata available through the GeoPlatform;
7. Coordinate and work in partnership with other Federal agencies, agencies of State, tribal, and local governments, institutions of higher education, and the private sector to efficiently and cost effectively collect, integrate, maintain, disseminate, and preserve geospatial data, building upon existing non-Federal geospatial data to the extent possible;
8. Use geospatial information to—
 - a. make Federal geospatial information and services more useful to the public;
 - b. enhance operations;
 - c. support decision making; and
 - d. enhance reporting to the public and to Congress;
9. Protect personal privacy and maintain confidentiality in accordance with Federal policy and law;
10. Participate in determining, when applicable, whether declassified data can contribute to and become a part of the National Spatial Data Infrastructure;
11. 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;
12. To the maximum extent practicable, ensure that a person receiving Federal funds for geospatial data collection provides high-quality data;
13. Appoint a 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 covered agency.



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Appendix D
DHS Compliance with *Geospatial Data Act of 2018*
Responsibilities

Section 759(a) Covered Agency Responsibilities	DHS Compliance	Details
<i>(1) prepare, maintain, publish, and implement a strategy for advancing geographic information and related geospatial data and activities appropriate to the mission of the covered agency, in support of the strategic plan for the National Spatial Data Infrastructure prepared under section 755(c)</i>	Does Not Meet	External Cause- The national strategy for the National Spatial Data Infrastructure (NSDI) is under development per the Federal Geospatial Data Committee. Therefore, at this time, DHS cannot create a strategic plan "in support of the strategic plan for the NSDI."
<i>(2) collect, maintain, disseminate, and preserve geospatial data such that the resulting data, information, or products can be readily shared with other Federal agencies and non-Federal users</i>	Partially Meets	FEMA, as a data set owner for the National Flood Hazard Layer theme, has placed information on the GeoPlatform. In addition, DHS shares law enforcement sensitive data via HSIN upon request. DHS has not collected geospatial data from its components or provided guidance to DHS components about placing data on the GeoPlatform.
<i>(3) promote the integration of geospatial data from all sources</i>	Does Not Meet	DHS has not promoted the integration of data from all sources. At this time, DHS is unaware of all geospatial data maintained, collected, and used by the components.
<i>(4) 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 (NARA)</i>	Does Not Meet	DHS has not confirmed that geospatial products and other records are maintained on agency record schedules that are approved by NARA.
<i>(5) 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 Committee</i>	Does Not Meet	DHS has not allocated adequate resources to fulfill its responsibilities for effective stewardship.



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Section 759(a) Covered Agency Responsibilities	DHS Compliance	Details
<i>(6) use the geospatial data standards, including the standards for metadata for geospatial data, and other appropriate standards, including documenting geospatial data with the relevant metadata and making metadata available through the GeoPlatform</i>	Partially Meets	DHS has not ensured it complies with geospatial data standards, including standards for metadata when available. FEMA has published data on the GeoPlatform that complies with international data standards. However, DHS has no oversight mechanism in place to ensure that all components dealing with geospatial data adhere to this requirement.
<i>(7) coordinate and work in partnership with other Federal agencies, agencies of State, tribal, and local governments, institutions of higher education, and the private sector to efficiently and cost effectively collect, integrate, maintain, disseminate, and preserve geospatial data, building upon existing non-Federal geospatial data to the extent possible</i>	Partially Meets	DHS shares information through the Homeland Infrastructure Foundation Level Data (HIFLD) Subcommittee, including local partners, but does not share law enforcement information outside Federal and designated communities. Additionally, pre-procurement processes are in place to facilitate this responsibility, such as Information Technology Acquisition Reviews, market research, and DHS Enterprise-Wide Mandatory Strategic Procurement Vehicles. However, FEMA has provided information on the GeoPlatform that is available to everyone.
<i>(8) use geospatial information to— (A) make Federal geospatial information and services more useful to the public; (B) enhance operations; (C) support decision making; and (D) enhance reporting to the public and to Congress</i>	Partially Meets	DHS makes geospatial information and services available through its HSIN website. Through HSIN, DHS shares geospatial information with law enforcement and government entities to enhance operations and support decision making. However, with the exception of FEMA, which makes geospatial information available to the public via the GeoPlatform, DHS has not shared other information with the public or reported its geospatial activities to Congress.
<i>(9) protect personal privacy and maintain confidentiality in accordance with Federal policy and law</i>	Partially Meets	FEMA maintains confidentiality in products published on the GeoPlatform. For example, flood hazard layer maps do not include addresses. Through HSIN, DHS also protects personal privacy. However, as DHS has not identified all of its geospatial assets, it cannot certify that it has taken the actions needed to protect personal privacy and maintain confidentiality in accordance with policy and law.



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Section 759(a) Covered Agency Responsibilities	DHS Compliance	Details
<i>(10) participate in determining, when applicable, whether declassified data can contribute to and become a part of the National Spatial Data Infrastructure</i>	Does Not Meet	External Cause- The NSDI is currently under development per the Federal Geographic Data Committee.
<i>(11) 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</i>	Partially Meets	DHS MD 034-01-001 requires all components of DHS to search all sources before expending funds for geospatial data collection. However, the Acting Geospatial Information Officer informed us that acquisition requests involving geospatial data are not reviewed by the GMO to ensure that components properly search all sources before expending funds.
<i>(12) to the maximum extent practicable, ensure that a person receiving Federal funds for geospatial data collection provides high-quality data</i>	Partially Meets	DHS has identified authoritative data sources from which they acquire geospatial data. However, DHS does not monitor the acquisition or quality of component geospatial data.
<i>(13) appoint a 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 covered agency (Appoint a contact to coordinate with other lead covered agencies)</i>	Meets	DHS designated a Geospatial Information Officer for coordination purposes. In addition, as a component responsible for a data set, FEMA coordinates with the Federal Geographic Data Committee and the data theme owner.
Section 759A. Limitation on Use of Federal Funds	N/A	This section does not require compliance for 5 years after the date on which standards for each National Geospatial Data Asset data theme are established under section 757.



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