



Audit Report



OIG-22-040

Audit of the Department of the Treasury's Compliance with the Geospatial Data Act of 2018

September 26, 2022

Office of Inspector General
Department of the Treasury

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Abbreviations

AVA	American Viticultural Area
CFR	Code of Federal Regulations
CIGIE	Council of the Inspectors General on Integrity and Efficiency
ESRI	Environmental Systems Research Institute
FGDC	Federal Geographic Data Committee
GAO	Government Accountability Office
GDA	Geospatial Data Act of 2018
IAA	Interagency Agreement
NARA	National Archives and Records Administration
NSDI	National Spatial Data Infrastructure
OCIO	Office of the Chief Information Officer
OMB	Office of Management and Budget
TDF	Treasury Data Framework
Treasury	Department of the Treasury
TTB	Alcohol and Tobacco Tax and Trade Bureau
U.S.C.	United States Code

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Audit Report

September 26, 2022

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This report presents the results of our audit of the Department of the Treasury's (Treasury) compliance with the Geospatial Data Act of 2018 (GDA).¹ Title VII, Subtitle F, Section 759(c) of GDA requires the Inspector General of a covered agency to submit to Congress an audit of the collection, production, acquisition, maintenance, distribution, use, and preservation of geospatial data by the covered agency on a biennial basis. As a covered agency defined in Section 101 of Title 5, United States Code (U.S.C.),² Treasury is responsible for complying with geospatial data requirements outlined in Section 759(a) of GDA. Section 759(c) requires that Inspectors General review the respective covered agency's compliance with the following: (1) standards for geospatial data, including metadata³ for geospatial data,

¹ P.L. 115-254 (October 5, 2018)

² The term "covered agency" means— (i) an executive department, as defined in Section 101 of Title 5, U.S.C., that collects, produces, acquires, maintains, distributes, uses, or preserves 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; (ii) the National Aeronautics and Space Administration; or (iii) the General Services Administration; and does not include the Department of Defense or any element of the intelligence community.

³ GDA describes metadata for geospatial data as information about geospatial data including the content, source, vintage, accuracy, condition, projection, method of collection, and other characteristics or descriptions of the geospatial data.

established under Section 757; (2) the 13 covered agency responsibilities under Section 759(a); and (3) limitations on the use of federal funds under Section 759A.⁴

Treasury's Office of the Chief Information Officer (OCIO) is responsible for the oversight of implementing GDA. Treasury's Chief Information Officer serves as Treasury's Senior Appointed Official for Geospatial Information, and has agency-wide responsibility, accountability, and authority for geospatial information issues. Treasury has limited geospatial data as defined in Section 759(b) of the GDA. Since geospatial data is part of Treasury's data inventory, OCIO has a strong partnership with Treasury's Chief Data Officer in implementing the GDA. The Chief Data Officer is responsible for managing and improving Treasury's ability to leverage data as a strategic asset and enforces Treasury's open data plan and strategy, including management of a centralized comprehensive data inventory accounting for all data assets across Treasury. Of the Treasury bureaus and offices, only the Alcohol and Tobacco Tax and Trade Bureau (TTB) currently has reportable geospatial data. TTB's Director of the Office of Analytics is responsible for ensuring that TTB's geospatial data complies with GDA requirements.

The objective of our audit was to assess the extent to which Treasury complied with the 13 covered agency responsibilities as identified under Section 759(a) of GDA. To accomplish our objective, we interviewed key Treasury and TTB officials and personnel responsible for implementing GDA requirements. We reviewed applicable laws, regulations, and policies and procedures related to GDA. In addition, we reviewed internal controls to ensure effective and efficient program administration, and reviewed relevant reports and applicable websites including, but not limited to, the 2021 and 2020 Treasury Covered Agency Annual Report and Self-Assessment, and the GeoPlatform.⁵

The scope of our audit included, but was not limited to, reviewing documentation governing Treasury's collection, production,

⁴ Except as provided otherwise, on and after the implementation date, a covered agency may not use federal funds for the collection, production, acquisition, maintenance, or dissemination of geospatial data that does not comply with the applicable standards established under Section 757.

⁵ The GeoPlatform is a website that provides access to geospatial data and metadata to the general public.

acquisition, maintenance, distribution, use, and preservation of geospatial data; related policies and procedures; and other implementing activities since the GDA's enactment in October 2018. Additionally, we evaluated TTB's internal controls to administer its geospatial data. We did not evaluate the requirements included in Sections 759(c)(1) and 759(c)(3) because comprehensive geospatial data standards had not been established by the Federal Geographic Data Committee (FGDC),⁶ which was awaiting further guidance from the Office of Management and Budget (OMB).⁷ Additionally, the audit scope did not include documentation and activities of the Internal Revenue Service, the Troubled Asset Relief Program, and certain pandemic programs under the respective jurisdictional oversight of the Treasury Inspector General for Tax Administration, the Special Inspector General for the Troubled Asset Relief Program, and the Special Inspector General for Pandemic Recovery.⁸ Due to the Coronavirus Disease 2019 pandemic, fieldwork was conducted remotely from February 2022 through July 2022. Appendix 1 provides a more detailed description of our audit objectives, scope, and methodology.

⁶ FGDC is an interagency committee established within the Department of the Interior which acts as the lead entity in the executive branch for the development, implementation, and review of policies, practices, and standards relating to geospatial data.

⁷ Please refer to appendix 6 for a letter, dated October 18, 2021, from the Council of the Inspectors General on Integrity and Efficiency (CIGIE) Chairs to the Ranking Members of the Committee on Commerce, Science, and Transportation and the Committee on Science, Space, and Technology. The letter informs Congress of the fiscal year 2022 mandatory audit scope period overlap with the estimated GDA implementation period established by FGDC; and discusses how conducting the mandatory audits as prescribed by GDA would result in reports being inconclusive for two of the three audit requirements. To address this challenge, CIGIE created a working group with representatives from the covered agencies' Offices of Inspectors General, who reached a consensus on an audit approach for the fiscal year 2022 audits. The audit approach focused on the covered agencies' progress towards compliance with GDA, including the agencies' compliance with the requirements under subsection (a).

⁸ The Special Inspector General for Pandemic Recovery has jurisdiction over pandemic programs under the Coronavirus Economic Stabilization Act of 2020. This Act is contained within the Coronavirus Aid, Relief, and Economic Security Act.

Results in Brief

We found that Treasury complied with the applicable 13 covered agency responsibilities identified under Section 759(a) of GDA.⁹ For example, Treasury published and implemented its Geospatial Data Strategy, which aligns with the National Spatial Data Infrastructure (NSDI) Strategic Plan and follows the framework and strategy set forth by the Treasury Data Framework (TDF). Treasury also established an Enterprise Data Inventory; which identifies data sets available for sharing with the public. Additionally, Treasury established a Data Governance Board to promote better, more frequent, and more comprehensive use of quality data in decision-making and operations. Furthermore, Treasury appointed a Senior Official as the point of contact for Geospatial Information who has agency-wide responsibility, accountability, and authority for geospatial information issues. Treasury also entered into an Inter-Agency Agreement (IAA) with the Department of the Interior's United States Geological Survey. Treasury also pays its annual shared services contribution towards FGDC which provides shared services on geospatial data. This shared services initiative is designed to assist agencies to more effectively produce and share their geospatial data, services, and applications across government and externally. These and other activities Treasury performed to comply with GDA are further detailed in appendix 2 of this report.

We evaluated TTB's internal controls to administer its American Viticultural Area (AVA)¹⁰ program. We noted that TTB established an organizational structure that consisted of personnel with defined roles and responsibilities to support the implementation of GDA. Additionally, TTB has internal procedures related to AVA petition and rulemaking; digitizing an AVA boundary; and uploading AVAs to the geospatial information system. TTB communicates AVA

⁹ Sections 759(a)(4), 759(a)(9), 759(a)(10), 759(a)(11), and 759(a)(12) were not applicable to Treasury. Please refer to appendix 2 for further detail regarding these sections.

¹⁰ An AVA is a delimited growing region having a name, a delineated boundary, and distinguishing features. Per 27 Code of Federal Regulations (CFR), Part 9, Chapter 1, distinguishing features may include climate, geology, soils, physical features, and elevation. An AVA designation allows vintners and consumers to attribute a quality, reputation, or other characteristic of wine made from grapes grown in an area to the wine's geographic origin. The establishment of an AVA allows vintners to more accurately describe the origin of their wines to consumers and helps consumers identify wines that they may purchase.

boundaries to the public through the AVA Map Explorer online application.¹¹ Furthermore, TTB works with a contractor¹² on application system updates, and maintenance of the Map Explorer.

However, we found that standard quality review procedures performed by TTB for ensuring that AVAs are mapped correctly in the AVA Map Explorer were not formally documented. TTB management stated that although these quality review procedures are not formally documented, the AVA Program Manager follows standard procedures for every AVA in the Map Explorer. TTB management further explained that the AVA petition and rulemaking procedures are due for sunset review in September 2022; as the AVA Map Explorer was created in 2018 after the last review cycle. TTB management plans to incorporate and document these quality review procedures related to the AVA Map Explorer in the revised standard operating procedures or a standalone standard operating procedure during the next review cycle, which begins in September 2022. Clearance and finalization of the revised procedures will then follow.

We recommend that the Administrator of TTB ensures that TTB documents its standard quality review procedures for mapping AVAs in its AVA Map Explorer.

As part of our reporting process, we provided Treasury OCIO and TTB management an opportunity to comment on a draft of this report. In written responses, both Treasury OCIO and TTB management concurred with our recommendation. In addition, TTB outlined its planned corrective action. Specifically, in response to our recommendation, TTB is currently updating its AVA program procedures as part of the bureau's sunset review process. TTB anticipates finalizing the updated program documentation, including quality control procedures for AVA mapping, by December 31, 2022. Treasury OCIO management also stated that they will help ensure TTB complies with our recommendation. Treasury OCIO and

¹¹ The Map Explorer is an interactive map tool on TTB's website that can be used to view the boundaries of all established and proposed AVAs. The Map Explorer has information about each AVA, including its state and county, when it was established, other AVAs it contains or is within, and a link to its codified official boundary description.

¹² TTB currently contracts directly with Blue Raster, LLC to develop the AVA Map Explorer application and digitize new AVA boundaries.

TTB's management responses, in their entirety, are included as appendix 3.

Management's response and planned corrective action meet the intent of our recommendation. Management will need to record the actual date of its corrective action in the Joint Audit Management Enterprise System (JAMES), Treasury's audit recommendation tracking system.

Background

On October 5, 2018, GDA was enacted to foster efficient administration of geospatial data, technologies, and infrastructure by improving the coordination and partnerships between the producers and consumers of geospatial information in federal, state, tribal, and local governments; the private sector; and academia. GDA defines geospatial data as information that is tied to a location on the Earth, including the geographic location and characteristics of natural or constructed features and boundaries on the Earth, and is generally represented in vector datasets by points, lines, polygons, or other complex geographic features or phenomena. Geospatial data may be derived from, among other things, remote sensing, mapping, and surveying technologies; and includes images and raster datasets, aerial photographs, and other forms of geospatial data or datasets in digitized or non-digitized form.

GDA requires covered agencies to comply with the following 13 responsibilities under Section 759(a):

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 NSDI 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;

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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 FGDC;
 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 NSDI;
 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;

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12. to the maximum extent practicable, ensure that a person receiving federal funds for geospatial data collection provides high-quality data; and
 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.

Treasury's OCIO is responsible for the oversight of implementing GDA. Treasury's Chief Information Officer serves as Treasury's Senior Appointed Official for Geospatial Information, and has agency-wide responsibility, accountability, and authority for geospatial information issues. Treasury has limited geospatial data in accordance with Section 759(b) of the GDA. Of the Treasury bureaus and offices, only TTB currently has reportable geospatial data. TTB's Director of the Office of Analytics ensures that TTB's geospatial data complies with GDA requirements.

TTB's geospatial data consists of boundary descriptions, known as shapefiles, which graphically represent areas that are designated as AVAs. The official boundaries recognized by TTB are those codified in Chapter 1, of Title 27 Code of Federal Regulations (CFR), Part 9, – *American Viticultural Areas*. The AVA Map Explorer on TTB's website¹³ allows users to view AVAs within the United States using geographic information software.

Audit Results

We found that Treasury complied with the applicable 13 covered agency responsibilities required under Section 759 (a) of GDA, as detailed in appendix 2 of this report.¹⁴ In summary, Treasury published and implemented its Geospatial Data Strategy in May 2021, which aligns with the NSDI Strategic Plan and follows the framework and strategy set forth by TDF. Treasury will also align responsibilities from GDA to TDF to maximize the utility of Treasury's geospatial data assets, particularly as such assets

¹³ <https://www.ttb.gov/wine/ava-map-explorer>

¹⁴ Sections 759(a)(4), 759(a)(9), 759(a)(10), 759(a)(11), and 759(a)(12) were not applicable to Treasury.

increase in scope. Additionally, Treasury established an Enterprise Data Inventory, which identifies data sets available for sharing with the public. Treasury's Geospatial data inventory is available on Data.gov¹⁵ and on GeoPlatform. Treasury's geospatial metadata descriptions are published in the appropriate format, as required by the Project Open Data Metadata Schema for Data.gov¹⁶, and International Organization for Standardization guidance for the GeoPlatform.

Treasury established a Data Governance Board to promote better, more frequent, and more comprehensive use of quality data and geospatial data in decision-making and operations. Treasury also allocated resources to effectively fulfill GDA in terms of budget, personnel and infrastructure; as well as appointed a Senior Official as the point of contact for Geospatial Information who has agency-wide responsibility, accountability, and authority for geospatial information issues. Additionally, Treasury entered into an IAA with the Department of the Interior's United States Geological Survey. Furthermore, Treasury pays its annual shared services contribution towards FGDC which provides the shared services on Geospatial Data. This shared services initiative is designed to assist agencies to more effectively produce and share their geospatial data, services, and applications across government and externally.

During our evaluation of TTB's internal controls to administer the AVA program, we found that that TTB established an organizational structure consisting of personnel with defined roles and responsibilities to support the implementation of the GDA. Additionally, TTB has internal procedures related to AVA petition and rulemaking; digitizing an AVA boundary; and uploading AVAs to the geospatial information system. TTB also communicates AVA boundaries to the public through the AVA Map Explorer online application. Further, TTB works with a contractor on application system updates and maintenance of the Map Explorer. However, as discussed further below, we found that standard quality review procedures performed by TTB for ensuring that AVAs are mapped correctly in its AVA Map Explorer were not formally documented.

¹⁵ Data.gov is the Federal Government's open data site, and aims to make government more open and accountable.

¹⁶ US Schema v.1.1

Finding 1**TTB Did Not Formally Document Certain Quality Control Procedures Performed Related to the AVA Program**

TTB's AVA Program Manager is responsible for simple mapping, working with contractors on system maintenance of the application, updating the Map Explorer, and updating status of AVAs on TTB's website. As part of meeting these responsibilities, TTB personnel perform quality review procedures for mapping AVAs in the Map Explorer. We noted that these quality review procedures were not formally documented. TTB management stated that although these quality review procedures are not formally documented, the AVA Program Manager follows these standard procedures for every AVA in the Map Explorer. The AVA Program Manager also confirmed that these procedures are not formally documented and noted that having established quality review procedures would be helpful for TTB to train personnel in the event that the AVA Program Manager is absent.

TTB management further explained that the AVA petition and rulemaking procedures are due for sunset review in September 2022; as the AVA Map Explorer was created in 2018 after the last review cycle. TTB management plans to incorporate and document these quality review procedures related to the AVA Map Explorer in the revised standard operating procedures or a standalone standard operating procedure during the next review cycle, which begins in September 2022. Clearance and finalization of the revised procedures will then follow.

Government Accountability Office's (GAO) *Standards for Internal Controls in the Federal Government* (Green Book)¹⁷ provides the overall framework for establishing and maintaining an effective internal control system. Section 12.02 of the Green Book states that:

"Management documents in policies, the internal control responsibilities of the organization."

¹⁷ GAO, *Standards for Internal Controls in the Federal Government*, GAO-1-704G, September 2014

OMB Circular A-123 – *Management’s Responsibility for Enterprise Risk Management and Internal Control*,¹⁸ provides guidance to federal managers on improving the accountability and effectiveness of federal programs and operations by establishing, assessing, correcting, and reporting on internal control. Section IV. Assessing Internal Controls, A. Documentation Requirements states:

“Documentation is required to demonstrate the design, implementation, and operating effectiveness of an entity’s internal control system. The Green Book includes minimum documentation requirements as follows:

- *If management’s assessment determines that a principle is not relevant, management supports that determination with documentation that includes the rationale of how, in the absence of that principle, the associated component may be designed, implemented, and operated effectively.*
- *Management develops and maintains documentation of its internal control system.*
- *Management documents in policies the internal control responsibilities of the organization.*
- *Management evaluates and documents the results of ongoing monitoring and separate evaluations to identify internal control issues.*
- *Management evaluates and documents internal control issues and determines appropriate corrective actions for internal control deficiencies on a timely basis.*
- *Management completes and documents corrective actions to remediate internal control deficiencies on a timely basis.”*

Without formal documentation of the quality review procedures for mapping the AVAs, there may be: (1) a lack of standardization in TTB’s quality review processes; and (2) a lack of staff knowledge of the AVA mapping quality review processes, especially if the AVA program manager is not present.

¹⁸ OMB Circular A-123, M-16-17 – *Management’s Responsibility for Enterprise Risk Management and Internal Control*, (July 15, 2016)

Recommendation

We recommend that the Administrator of TTB ensures that TTB documents its standard quality review procedures for mapping AVAs in its AVA Map Explorer.

Management Response

In written responses, both Treasury OCIO and TTB management concurred with our recommendation. In addition, TTB outlined its planned corrective action. Specifically, in response to our recommendation, TTB is currently updating its AVA program procedures as part of the bureau's sunset review process. TTB anticipates finalizing the updated program documentation, including quality control procedures for AVA mapping, by December 31, 2022. Treasury OCIO management also stated that they will help ensure TTB complies with our recommendation.

OIG Comment

Management's response and planned corrective action meet the intent of our recommendation. Management will need to record the actual date of its corrective action in JAMES, Treasury's audit recommendation tracking system.

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We appreciate the courtesies and cooperation provided to our staff during the audit. If you wish to discuss the report, you may contact me at (202) 270-2766 or Veleria Tettey, Audit Manager, at (202) 597-1811. Major contributors to this report are listed in appendix 4. A distribution list for this report is provided as appendix 5.

/s/

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Director, Resource Management and Procurement Audits

Appendix 1: Objectives, Scope, and Methodology

The objective of our audit was to assess the extent to which the Department of the Treasury (Treasury) complied with the 13 covered agency responsibilities as identified under Section 759(a) of the Geospatial Data Act of 2018 (GDA).

The scope of our audit included, but was not limited to, reviewing documentation governing Treasury's collection, production, acquisition, maintenance, distribution, use, and preservation of geospatial data; related policies and procedures; as well as other implementing activities since the GDA's enactment in October 2018. Additionally, we evaluated the Alcohol and Tobacco Tax and Trade Bureau's (TTB) internal controls to administer its geospatial data. The audit scope did not include documentation and activities of the Internal Revenue Service, the Troubled Asset Relief Program, and certain pandemic programs under the respective jurisdictional oversight of the Treasury Inspector General for Tax Administration, the Special Inspector General for the Troubled Asset Relief Program, and the Special Inspector General for Pandemic Recovery.

Limited Scope

Section 757 of the GDA requires the Federal Geographic Data Committee (FGDC) to develop and issue standards for geospatial data in accordance with the Office of Management and Budget's (OMB) Circular A-119 and, once such standards exist, the covered agency Inspector General must audit all three areas noted above biennially. As of the time of our audit, FGDC had not established comprehensive geospatial data standards because the committee was awaiting further guidance from OMB. Therefore, we could not evaluate the audit requirements included in Sections 759(c)(1) and 759(c)(3) of GDA. Additionally, please refer to appendix 6 for a letter from the Council of the Inspectors General on Integrity and Efficiency Chairs to Congress regarding a mandatory audit scope period overlap with the estimated GDA implementation period established by FGDC; and the Inspectors General inability to conclusively report on two of the three audit requirements.

Appendix 1: Objectives, Scope, and Methodology

To accomplish our objective, we performed the following activities during audit fieldwork conducted from February 2022 through July 2022:

- i. Reviewed applicable federal laws, regulations, and guidance, including, but not limited to:
 1. *Geospatial Data Act of 2018* (P.L. 115-254, Title VII, Subtitle F);
 2. Government Accountability Office's (GAO) *Standards for Internal Control in the Federal Government*, GAO-14-704G (September 10, 2014);
 3. OMB Circular A-123 – *Management's Responsibility for Enterprise Risk Management and Internal Control*, (July 5, 2016);
 4. 27 CFR Part 9 – *American Viticultural Areas (AVA)* (Chapter 1, 4-1-21 Edition);
 5. 44 United States Code (U.S.C.), 3301, *Definition of Records*; and
 6. FGDC's *National Spatial Data Infrastructure Strategic Plan 2021-2024* (November 2020).
- ii. Reviewed Treasury and TTB policies, procedures, and guidelines established for Treasury's GDA implementation activities including:
 1. *Treasury Geospatial Data Strategy* (May 2021) under the Office of the Chief Information Officer (OCIO);
 2. *Treasury Data Governance Body Charter* (January 2021) under Office of the Chief Data Officer;
 3. *Advisory Council Charter* (November 2020) under Office of the Chief Data Officer;
 4. *American Viticultural Area Standard Operating Procedure* (September 2017); and
 5. *Treasury Privacy Program Plan* (May 2020).

Appendix 1: Objectives, Scope, and Methodology

- iii. Interviewed Treasury and TTB key personnel involved with the GDA including:
 - 1. Director, Office of Strategic Planning and Program Evaluation, TTB;
 - 2. Director, Office of Analytics, TTB;
 - 3. AVA Program Manager, TTB;
 - 4. Auditor, OIG Liaison, TTB; and
 - 5. Supervisory Information Technology Program Manager, Geospatial Point of Contact, Treasury OCIO.
- iv. Reviewed key documents related to implementation of the GDA, including:
 - 1. *Treasury Covered Agency Annual Report and Self-Assessment* (2020, 2021);
 - 2. *FGDC GDA Report to Congress – Phase 1 and 2* (2020, 2021);
 - 3. TTB’s *National Archives and Records Administration Record Schedule DAA-0564-2013-0005* (September 23, 2014); and
 - 4. TTB contracts with Environmental Systems Research Institute (ESRI) and Blue Raster, LLC.
- v. Reviewed related websites including:
 - 1. TTB’s websites for the AVAs and AVA Map Explorer;
<https://www.ttb.gov/wine/ava-establishment-dates>
<https://www.ttb.gov/wine/ava-map-explorer>
 - 2. Federal government open data website for TTB’s dataset and schema used for documenting and listing datasets on data.gov;
<https://catalog.data.gov/dataset/ava-map-explorer>

Appendix 1: Objectives, Scope, and Methodology

<https://resources.data.gov/resources/dcat-us/#main-content>

3. GeoPlatform for TTB's Geospatial data and metadata;

<https://www.geoplatform.gov/metadata/de1bbc0a-440c-590a-8df6-a0581bf8b20e/full#gn-tab-metadata>

4. FGDC website for geospatial and meta data standards; and

<https://www.fgdc.gov/resources/download-geospatial-standards>

5. The International Organization for Standardization website for the schema used to describe geographic information and services.

<https://www.iso.org/standard/26020.html#:~:text=ISO%2019115%3A2003%20defines%20the,distribution%20of%20digital%20geographic%20data>

- vi. We assessed the reliability of data used in our audit by reviewing existing information about the data and the system that produced the data, and by interviewing agency officials knowledgeable about the data for TTB's AVA Map Explorer and the ESRI base map, and accordingly:
 1. Provided TTB with GAO's data reliability questionnaire which provides guidance on identifying controls within the system under audit; reviewed TTB's responses, and identified controls established within the AVA Map Explorer application.
 2. Traced all data from the AVA Map Explorer to 27 CFR Part 9 and determined that all established AVAs and their requisite information are correctly plotted and published on the AVA Map Explorer.
 3. Reviewed December 2021 Service Organization Controls 3 report on ESRI's Managed cloud services advanced system, based on Trust Services Principles Section 100 (American Institute of Certified Public

Appendix 1: Objectives, Scope, and Methodology

Accountants Trust Services Criteria), for reasonable assurance that the data was reliable.

- vii. Reviewed GAO's *Standard for Internal Control in the Federal Government* to identify the components of internal control and principles that related to the context of the audit objective. Specifically, evaluated the control environment, risk assessment, control activities, information and communication, and monitoring against the following principles: (1) establishing an organizational structure, assigning responsibility, and delegating authority to achieve the entity's objectives within the control environment component; (2) identifying, analyzing and responding to risks related to achieving the defined objectives; (3) designing control activities to achieve objectives and respond to risk and designing the entity's information system and related control activities to achieve objectives within the control activities component; (4) internally and externally communicating the necessary quality information to achieve the entity's objectives within the information and communication component; and (5) monitoring the internal control system, evaluating the results, and remediating identified internal control deficiencies on a timely basis.

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Appendix 2: Assessment of 13 Covered Agency Responsibilities

Requirements under the Geospatial Data Act of 2018 (GDA)	Treasury Compliance	Results
Section 759(a)(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 (NSDI) prepared under Section 755(c) geospatial strategy.	Met	Treasury published and implemented its Geospatial Data Strategy – May 2021, which aligns with the NSDI Strategic Plan and follows the framework and strategy set forth by the Treasury Data Framework (TDF).
Section 759(a)(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.	Met	Treasury established an Enterprise Data Inventory, which identifies data sets available for sharing with the public. Treasury’s Geospatial data inventory is available on Data.gov and on GeoPlatform.
Section 759(a)(3) - Promote the integration of geospatial data from all sources.	Met	Treasury established a Data Governance Board to promote better, more frequent, and more comprehensive use of quality data and geospatial data in decision-making and operations.
Section 759(a)(4) – Ensure that data information products and other records created with geospatial data and activities are included on agency record schedules that have been approved by the National Archives and Records Administration (NARA).	N/A	The American Viticultural Area (AVA) Map Explorer, which is created using geospatial data, is a non-record under 44 U.S.C. 3301 because it consists of "extra copies of documents preserved only for convenience of reference." The AVA Map Explorer was created for referencing AVA boundaries and is a copy of all the AVA boundaries, as such boundaries are delineated in Treasury’s Alcohol and Tobacco Tax and Trade Bureau (TTB)

Appendix 2: Assessment of 13 Covered Agency Responsibilities

		regulations that are part of TTB's NARA-approved records schedule.
Section 759(a)(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 Federal Geographic Data Committee (FGDC).	Met	Treasury allocated resources to effectively fulfill GDA in terms of budget, personnel and infrastructure. The Office of Chief Information Officer's (OCIO) GDA activities are met through the use of existing resources from the OCIO Enterprise Technology Governance program and also through collaboration with Treasury's Office of the Chief Data Officer. Treasury organizational chart for GDA responsibilities lists assigned personnel and their specific responsibilities related to GDA implementation.
Section 759(a)(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.	Met	Treasury's geospatial metadata descriptions are published on the GeoPlatform in an FGDC-compliant format as required by Data.gov Project Open data Metadata Schema-US Schema v.1.1, and GeoPlatform International Organization for Standardization-19115:2003.
Section 759(a)(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.	Met	Treasury entered into an Inter-Agency Agreement (IAA) with the Department of the Interior's United States Geological Survey. Treasury pays its annual shared services contribution towards the Federal Geospatial Data Committee. This committee provides the shared services on Geospatial Data. This shared services initiative is designed to assist agencies to more effectively produce and share their geospatial data, services, and applications

Appendix 2: Assessment of 13 Covered Agency Responsibilities

		<p>across government and externally. Treasury's Senior Appointed Official for Geospatial Information or a representative attends the monthly FGDC working group. Treasury's Chief Data Officer is actively involved in the operations of the federal Chief Data Officer Council, which collaborates with FGDC on stakeholder integration issues. TTB publishes new geospatial data on the AVA Map Explorer based on the proposed and/or final AVA boundary descriptions created during the rulemaking process. The AVA Map Explorer was created at TTB as a service to the public to address limited access to the paper United States Geological Survey maps depicting the AVA boundaries, and is available to the public. Treasury's geospatial data is published on the GeoPlatform.</p>
<p>Section 759(a)(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.</p>	<p>Met</p>	<p>Treasury's current strategy is to ensure that Treasury's geospatial datasets, currently quite limited, will follow the framework and strategy set forth by the Treasury Data Framework (TDF). Treasury will also align responsibilities from the GDA to the TDF to maximize the utility of Treasury's geospatial data assets, particularly as such assets increase in scope. Treasury's TTB employs the AVA Map Explorer tool in its review of petitions to establish new AVAs to confirm overlapping and/or embedded AVAs and to ensure any concerns with the boundaries</p>

Appendix 2: Assessment of 13 Covered Agency Responsibilities

		are aired for public comment through the rulemaking process.
Section 759(a)(9) – Protect personal privacy and maintain confidentiality in accordance with federal policy and law.	N/A	Treasury does not handle privacy-related or confidential information related to geospatial data.
Section 759(a)(10) – Participate in determining, when applicable, whether declassified data can contribute to and become a part of the NSDI.	N/A	Treasury’s geospatial dataset does not contain classified data.
Section 759(a)(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.	N/A	Treasury does not collect geospatial data. Treasury’s TTB utilizes an existing data source from the ESRI mapping software to map AVA boundaries published in 27 CFR part 9- <i>American Viticultural Areas</i> .
Section 759(a)(12) – Ensure that to the maximum extent practicable, a person receiving federal funds for geospatial data collection provides high-quality data.	N/A	Treasury does not expend federal funds for collecting geospatial data from non-federal sources. Treasury’s TTB utilizes an existing data source from ESRI mapping software to map AVA boundaries published in 27 CFR part 9- <i>American Viticultural Areas</i> .
Section 759(a)(13) – Appoint a contact to coordinate with the lead covered agencies for the collection, acquisition, maintenance, and dissemination of the National Geospatial Data Asset data themes used by the covered agency.	Met	Treasury appointed a Senior Official for Geospatial Information who has agency-wide responsibility, accountability, and authority for geospatial information issues; oversees, coordinates, and facilitates the agency’s implementation of the geospatial-related requirements, policies, and activities; and appoints Treasury FGDC Coordination Group members.

Appendix 3: Management Response



DEPARTMENT OF THE TREASURY
ALCOHOL AND TOBACCO TAX AND TRADE BUREAU
WASHINGTON, D.C. 20005

September 21, 2022

Mr. Daniel F. Gerges
Director, Resource Management and Procurement Audits
Office of Inspector General
U.S. Department of the Treasury
875 15th Street NW
Washington, DC 20005

Dear Mr. Gerges:

Thank you for providing the Alcohol and Tobacco Tax and Trade Bureau (TTB) with an opportunity to respond to the Office of Inspector General's (OIG) draft audit report, *Audit of the Department of the Treasury's Compliance with the Geospatial Data Act of 2018*. TTB appreciates your audit efforts and is pleased that the OIG found that Treasury complied with the applicable agency responsibilities identified under Section 759(a) of the Geospatial Data Act of 2018 (GDA). TTB is also pleased that the OIG confirmed that all of the American Viticultural Area (AVA) maps currently available in the AVA Map Explorer are correctly plotted and published.

Further, TTB concurs with the OIG's recommendation that TTB formally document its quality control procedures related to AVA mapping. As recognized in the draft report, the AVA Map Explorer was created in 2018, after the last review cycle for the relevant AVA program documentation. TTB is currently updating its AVA program procedures as part of the bureau's sunset review process. We anticipate finalizing the updated program documentation, including quality control procedures for AVA mapping, by December 31, 2022.

TTB would like to thank your office and audit team for helping to ensure Treasury's compliance with the GDA as well as the accuracy of information that TTB provides to the public.

Sincerely,

Mary G. Ryan
Administrator

www.TTB.gov

Appendix 3: Management Response



DEPARTMENT OF THE TREASURY
WASHINGTON, D.C. 20220

September 20, 2022

Mr. Daniel F. Gerges
Director, Resource Management and Procurement Audits
Office of Inspector General
U.S. Department of the Treasury
875 15th Street NW
Washington, DC 20005

Dear Mr. Gerges:

I am pleased to provide an official response of the Department of the Treasury (Treasury) to the Office of Inspector's General's (OIG) draft report entitled, *Audit of the Department of the Treasury's Compliance with the Geospatial Data Act of 2018* (the Report).

The Report provides the results of the OIG's audit of Treasury's compliance with the Geospatial Data Act of 2018 (GDA).¹ Of the Treasury bureaus and offices, only the Alcohol and Tobacco Tax and Trade Bureau (TTB) currently has reportable geospatial data. We are pleased that the Report found that Treasury complied with the applicable agency responsibilities identified under Section 759(a) of the Geospatial Data Act of 2018 (GDA).

Further, the Report confirms that all of the TTB's American Viticultural Area (AVA) maps currently available in the AVA Map Explorer are correctly plotted and published. Treasury concurs with the OIG's recommendation that TTB formally document its quality control procedures related to AVA mapping and will help ensure TTB complies with OIG's recommendation.

Thank you for providing us the opportunity to review the Report.

Antony P. Arcadi
Antony P. Arcadi
2022.09.20 15:18:33
-04'00'
Antony Arcadi
Deputy Assistant Secretary for Information
Systems and Chief Information Officer
Department of the Treasury

¹ P.L. 115-254 (October 5, 2018)

Appendix 4: Major Contributors to This Report

Veleria Tettey, Audit Manager
Hillary Hopper, Auditor-in-Charge
Christopher Young, Auditor-in-Charge
Kevin Smithers, Auditor
Jennifer Cho, Auditor
Justin Bruner, Referencer

Appendix 5: Report Distribution

Department of the Treasury

Secretary

Deputy Secretary

Deputy Assistant Secretary for Information Systems and Chief Information Officer

Office of the Chief Data Officer

Office of Strategic Planning and Performance Improvement

Office of the Deputy Chief Financial Officer, Risk and Control Group

Alcohol and Tobacco Tax and Trade Bureau

Administrator

Office of Strategic Planning and Program Evaluation

Regulations and Rulings Division

Council of the Inspectors General on Integrity and Efficiency

Executive Chair

Office of Management and Budget

Deputy Director

U.S. Senate

Chairwoman and Ranking Member

Committee on Commerce, Science, and Transportation

Chairman and Ranking Member

Committee on Homeland Security and Governmental Affairs

U.S. House of Representatives

Chairwoman and Ranking Member

Committee on Science, Space, and Technology

Chairwoman and Ranking Member

House Committee on Oversight and Reform

Appendix 6: CIGIE Letter to Congress



October 18, 2021

The Honorable Maria Cantwell
Chairwoman
The Honorable Roger F. Wicker
Ranking Member
Committee on Commerce, Science,
and Transportation
United States Senate
Washington, D.C.

The Honorable Eddie Bernice Johnson
Chairwoman
The Honorable Frank Lucas
Ranking Member
Committee on Science, Space,
and Technology
U.S. House of Representatives
Washington, D.C.

Dear Chairwomen and Ranking Members:

The Council of the Inspectors General on Integrity and Efficiency (CIGIE) recognizes and appreciates your leadership on issues of geospatial data. In particular, we believe the enactment of the Geospatial Data Act of 2018 (P.L. 115-254) will improve the continuing development of geospatial data and technology. To make sure this happens, the Geospatial Data Act provides for oversight by way of the Federal Inspectors General. Specifically, the Geospatial Data Act requires the biennial completion of a review of Covered Agencies' compliance with standards established by the Act, Covered Agencies' responsibilities detailed in the Act, and Covered Agencies' compliance with the prohibition of Federal funding for non-compliant datasets.

We are writing this letter on behalf of CIGIE to inform you of an important distinction with the biennial Geospatial Data Act audits by the Inspector General community. Specifically, the Fiscal Year 2022 mandatory audit scope period overlaps with the estimated Geospatial Data Act implementation period established by the Federal Geographic Data Committee (FGDC). As part of the implementation phase, the FGDC is evaluating the existing body of standards, among other items. Due to the continuing implementation of the Geospatial Data Act, conducting the mandatory audits as prescribed by the Act would result in reports submitted by the Inspectors General in October 2022 being inconclusive for two of the three audit requirements.

To address this challenge while continuing to meet the mandatory audit requirements, CIGIE convened a working group with representatives from the Covered Agency Inspectors General to reach a consensus on an audit approach for the Fiscal Year 2022 audits. The Covered Agency Inspectors General determined that audits focused on the Covered Agencies' progress toward compliance with the Geospatial Data Act, including the agencies' compliance with requirements under subsection (a), would likely provide the best value to the Covered Agencies, Congress, and the Public. This is a somewhat narrower approach than what the law requires because it is currently difficult to determine which standards the audits should use in evaluating compliance. Also, because the law establishes a five-year implementation period before limiting the use of Federal funds for non-compliant activities, this requirement would not be evaluated in the Fiscal Year 2022 audits.

This consensus approach will afford each Covered Agency Inspector General latitude to perform additional testing based on the Covered Agency's geospatial footprint, as determined necessary by the applicable Inspector General.

Should you or your staffs have any questions about our approach or other aspects of our collective Geospatial Data Act oversight activities, please do not hesitate to contact us at (703) 292-4978 or (703) 248-2296 respectively.

Sincerely,

Allison C. Lerner
Chair, Council of the Inspectors General on
Integrity and Efficiency
Inspector General, National Science
Foundation

Tammy L. Whitcomb
Chair, Council of the Inspectors General on
Integrity and Efficiency, Technology
Committee
Inspector General, U.S. Postal Service

cc: The Honorable Gary C. Peters, Chairman
The Honorable Rob Portman, Ranking Member
Senate Committee on Homeland Security and Governmental Affairs

The Honorable Carolyn B. Maloney, Chairwoman
The Honorable James Comer, Ranking Member
House Committee on Oversight and Reform

The Honorable Jason Miller, Deputy Director OMB and Executive Chair, Council of the Inspectors General on Integrity and Efficiency

The Honorable Gene Dodaro, Comptroller General, GAO



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