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FEDERAL GEOGRAPHIC DATA COMMITTEE

2023 Covered Agency Annual Report and Self-Assessment

for

U.S. Department of Agriculture

Geospatial Data Act of 2018

Section USC 43 Sec 2808(a) Requirements

January 19, 2024

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Introduction

The Geospatial Data Act of 2018 (GDA) was signed into law on October 5, 2018. The GDA was included as a component of the FAA Reauthorization Act (H.R. 302, P.L. 115-254). The GDA is now in U.S. Code, Title 43 – Public Lands, Chapter 46: GEOSPATIAL DATA.

USC 43 Sec 2808(b) of the Geospatial Data Act (GDA) requires each covered agency[1] to submit to the Federal Geographic Data Committee (FGDC) "an annual report regarding the achievements of the covered agency in preparing and implementing the strategy described in subsection (a)(1) and complying with the other requirements under subsection (a)." [https://fgdc.gov/gda/online]

This document serves as the U.S. Department of Agriculture's annual report to the FGDC covering Fiscal Year 2023, October 1, 2022 through September 30, 2023. The report was developed through a self-assessment template developed by the FGDC agencies. Annual reports span one fiscal year. The report includes a rating for each covered agency responsibility of "meets expectations," "made progress toward expectations," or "fails to meet expectations," as required by the GDA. A summary and evaluation of all the covered agency reports will be generated by FGDC and provided to the National Geospatial Advisory Committee (NGAC) for review and comment. The summary reports, along with the NGAC comments, will also become part of the biennial FGDC GDA Report to Congress and will be published online via the FGDC GDA pages [https://fgdc.gov/gda].

This report is based on a standardized questionnaire and self-assessment score for each covered agency responsibility. The U.S. Department of Agriculture has maintained documentation supporting the responses provided for this assessment. This information may be reviewed as part of the biennial Inspector General (IG) audits of covered agencies.

A recommended self-assessment key has been provided for each responsibility. In some cases, optional text is provided for additional insights or to justify a self-assessment selection. Any optional responses provided are not a factor in the self-assessment.

Where data or datasets are referenced,[2] information relates to all geospatial datasets owned or managed by the U.S. Department of Agriculture that are, or should be, available to the public.

To support a more comprehensive picture of agency compliance and related activities, each agency had the option to submit up to a 2-page document as part of the agency's submission. If provided, the document may include highlights and examples that can supplement the FGDC annual summary report, the FGDC biennial Report to Congress, support the feedback process with the NGAC, or provide context to Office of the Inspector General (OIG) findings.

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[1] GDA definition of *agency*: https://www.fgdc.gov/gda/online#the-term-‘‘covered-agency’’—means—an-executive-department-as-def

[2] GDA definition of *geospatial data*: https://www.fgdc.gov/gda/online#the-term-%E2%80%98%E2%80%98geospatial-data%E2%80%99%E2%80%99%E2%80%94means-information-that-is-tied-to-a

Self-Assessment for Department of Agriculture

USC 43 Sec 2808(a)(1) Covered Agency Geospatial Strategies

GDA Requirement	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
Agency Self-Assessment	**Meets Expectations**
KEY to Self-Assessment	• **Meets expectations =** ○ Yes to Question 1.1 and 1.2 • **Made progress toward expectations =** ○ Yes to Question 1.1 **and** No to Question 1.2 • **Fails to meet expectations =** ○ No to Question 1.1 and 1.2

Table 1. GDA USC 43 Sec 2808(a)(1) Covered Agency Geospatial Strategies Requirement and Self-Assessment Criteria.

Clarifying Text: FGDC developed and released a national strategic plan for the development of the National Spatial Data Infrastructure (NSDI) [the GDA, USC 43 Sec 2804(c)], which was approved by the FGDC Steering Committee in November 2020. Covered Agency Geospatial Strategies [the GDA, USC 43 Sec 2808(a)(1)], which will support the goals in the NSDI strategic plan, were due to be completed and submitted for agency approval by February 26, 2021, per FGDC guidance. For more information, please visit http://fgdc.gov/nsdi-plan.

1.1 Is your agency's strategy complete, approved, and being implemented?

- Yes

1.2 Is your agency's strategy published? If yes, please provide the URL or briefly describe how public access is being provided.

- Yes
- https://www.usda.gov/sites/default/files/2021-12/Enterprise%20Geospatial%20Strategic%20Plan_Final.pdf

USC 43 Sec 2808(a)(2) Support Data Sharing

GDA Requirement	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.
Agency Self-Assessment	**Meets Expectations**

KEY to Self-Assessment	• **Meets expectations =**
	  ○ *Data is currently shared* selections for **all** agency appropriate parties for Question 2.1 and Yes to Questions 2.2 and 2.3
	• **Made progress toward expectations =**
	  ○ *Data is currently shared* selections for **some** appropriate parties for Question 2.1, **or** Question 2.2 and 2.3 have a mix of answers
	• **Fails to meet expectations =**
	  ○ No to Questions 2.1, 2.2, and 2.3

Table 2. GDA USC 43 Sec 2808(a)(2) Support Data Sharing Requirement and Self-Assessment Criteria.

Clarifying text:

- ✓ This section does not include efforts related to partners, which are covered under Question 7, USC 43 Sec 2808(a)(7).
- ✓ Review the GDA definition of geospatial data to consider the questions in this section.
- ✓ Remember, your agency's answers should include information about all geospatial datasets owned or managed by your agency that are, or should be, available to the public in accordance with agency statutory authorities and missions; not just National Geospatial Data Asset (NGDA) Datasets.
- ✓ Sharing data on the Internet using open standards, protocols and formats makes it part of the NSDI.
- ✓ Additional detail on the definition of geospatial data may be provided by OMB Circular A-16 when finalized.
- ✓ Geospatial data that will not or cannot be distributed to the public does not need to be considered for GDA-related responses as per the GDA.

2.1 Does your agency ensure that all eligible geospatial data is managed so it can be readily shared and is it provided in open formats, as appropriate? (This will include agency open government and transparency guidelines.) (Select all that apply)

- Data is currently openly shared to the public.
- Data is currently shared on a limited basis with federal partners.
- Data is currently shared on a limited basis with non-federal users.

2.2 Does your agency disseminate eligible geospatial data in a way that can be readily shared in open formats (for example, using machine readable formats or searchable metadata)?

- Yes, eligible geospatial data and metadata are shared in open formats.

2.3 Are maintenance processes in place to ensure other federal agencies and non-federal users have access to the most recent data in addition to data and metadata updates and corrections?

- Yes, agency policies exist to ensure all programs implement data maintenance processes.

2.4 Optional Question: Would the agency like to provide up to 5 key examples of ongoing or planned activities that ensure eligible geospatial data and associated metadata can be easily shared, understood, and re-used by others, now and in the future?

- Yes

Planned or Ongoing Activities	Description
Food & Nutrition Service (FNS) Supplemental Nutrition Assistance Program (SNAP) Retailer	FNS issues permits to qualified stores (retailers) to accept SNAP benefits, monitors SNAP stores to ensure they follow program rules, and withdraws or disqualifies SNAP stores who have broken the rules or no longer qualify to accept SNAP benefits. Users access the interactive map to locate retailers in their area who accept SNAP benefits. The backend for retailers is updated every 2 weeks. Putting healthy food within reach for those in need. https://www.fns.usda.gov/snap/retailer
GeoNetwork opensource (GNOS) catalog application to manage spatially referenced resources.	The Economic Research Service (ERS) has tested and started using the USDA National Agricultural Library (NAL) implementation of the https://geonetwork-opensource.org/ system for cataloging and recording datasets and metadata. GeoNetwork opensource (GNOS) is a free, open-source cataloging application that manages spatially referenced resources. It provides access to interactive maps, satellite imagery, and related spatial databases.
Natural Resources Conservation Service (NRCS) Data Gateway	NRCS maintains the NRCS Data Gateway to provide the public and other agencies with geospatial data used by NRCS. The data consists of primarily base layers used in conservation planning activities. https://datagateway.nrcs.usda.gov/. NRCS is also in the process of developing a data schema and user interface for a data cataloging system that will collect the necessary GDA documentation for data assets.
Forest Service (FS) Lidar Data Management	Forest Service (FS) is partnering with U.S. Geological Survey (USGS) to address how to store, process, disseminate, and discover lidar data produced from original lidar data that was collected through its 3D Elevation Program. The effort will develop a publicly available open source toolset for processing lidar data in the cloud, and will formalize processes for publishing the resultant data to GeoPlatform.
Forrest Service (FS) Imagery and Unmanned Aerial Systems (UAS) with GeoPlatform.gov	FS, in partnership w/DOI, is implementing 2 shared interagency imagery publication solutions leveraging the DOI GeoPlatform.gov environment. The 1st supports image service publication. The 2nd supports Unmanned Aerial Systems (UAS) data upload, processing, and distribution. Both efforts will minimize cross-agency imagery data duplication, reduce overall imagery acquisition and storage costs for each respective participating agency, and provide an enterprise imagery data mgmt solution for FS.

***Table 2.a. Optional Information Regarding Ongoing or Planned Geospatial Data Sharing Activities*.**

2.5 Brief Summary (Limit 3000 characters, or approximately 450 words): Please provide a brief description of agency actions and accomplishments in FY2023 in addressing USC 43 Sec 2808(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." If your FY2023 rating has changed since FY2022, please include details on how and why the rating changed.

USDA fully meets all expectations focusing on NGDAs. Our agencies are engaged in multiple areas of data sharing across the enterprise and in collaboration w/external entities. USDA updated its policies to clearly align with the GDA and support for the NSDI via its Departmental Regulation "DR 3465-001 Enterprise Geospatial Data Management". It also published new policies in a regulation, "DM3465-001 Geospatial Metadata Standards."

Examples of our agency work:

• ARS continued the rollout of its initiative to require data mgmt plans (DMPs) for all ARS research projects, wh/will ensure any ARS-generated geo data products will be governed by an approved plan for mgmt and publication. ARS DMPs require info on the types of data being collected and the metadata, wh/are essential for effective data sharing. Importantly, metadata is expected to be both machine-readable and document a minimum set of attributes to advance FAIR. ARS's National Agricultural Library (NAL) provides guidance on where geo data can be stored/managed for research projects, with repositories for sharing/ providing public access. NAL's Ag Data Commons (ADC) serves a vital role in making ARS geo data searchable/publicly accessible. ADC makes data searchable through ADC's user interface and public APIs, as well as by indexing in other public-facing data discovery tools such as data.gov, DataCite, and Google. ARS also updated policy (P&P 630.1) for ARS to include references to the GDA. P&P 630.1 requires ARS's public data assets to have a catalog record in NAL's ADC. This policy, along w/NAL's work for ADC's geo dataset metadata to be harvested by GeoPlatform, ultimately ensures all ARS geo data not subject to privacy or other restrictions are freely available to other Fed agencies/public. ARS held multiple GDA presentations/seminars designed to increase awareness of GDA responsibilities/requirements across its enterprise. ARS is developing a records schedule for geo data and expects to have an updated Schedule of Records to NARA in FY24. ARS also initiated the addition of the GDA to the USDA ARS-ERS-NASS Award Terms and Conditions, Statutory and National Policy Rqmts document for extramural, funded, and non-funded agreements.

• NRCS: Web Soil Survey (WSS) is a publicly available web-based app that allows customers to view soils data stored in the Soil Data Mart database for anywhere in the U.S. and island territories. Users access soils info by creating a user-specified area of interest (AOI). Soil polygons are displayed for the AOI in a map viewer. Users can use navigation tools to browse the map and options are presented to change background layers. A wide range of soil property, interpretation rules (thematic maps), and tabular reports are presented. Users can search rules/reports, choosing which to run for their AOI. WSS allows users to produce professionally formatted printable/downloadable customized reports (Customized Soil Resource Reports or CSRRs) for their AOI.

USC 43 Sec 2808(a)(3) Promote Data Integration

GDA Requirement	Promote the integration of geospatial data from all sources
Agency Self-Assessment	**Meets Expectations**

KEY to Self-Assessment	• **Meets expectations =**
	  ○ Yes to Question 3.1
	• **Made progress toward expectations =**
	  ○ Partial to Question 3.1
	• **Fails to meet expectations =**
	  ○ No to Question 3.1

Table 3. GDA USC 43 Sec 2808(a)(3) Promote Data Integration Requirement and Self-Assessment Criteria.

3.1 Has your agency taken action to promote integration of data from multiple sources?

- Yes. The agency has taken appropriate action to promote data integration.

3.1.a If yes or partial to Question 3.1, in what ways does your agency promote data integration from multiple sources? (Select all that apply)

- Hosts a data sharing infrastructure where partners and/or data users can share and discover data.
- Develops a data integration toolkit or APIs to promote integration of agency data in external applications.
- Develops data integration processes to promote integration of non-agency data into applications.
- Provides data in openly standardized readable formats or as downloadable file packages.
- Develops data sharing agreements or Memoranda Of Agreement (MOA) with public and private partners for ingest or sharing of data.
- Other: OCE integrates a wide variety of geo data to address key questions for the Administration.

3.2 Brief Summary (Limit 3000 characters or 450 words): Please provide a brief description of agency actions and accomplishments in FY2023 in addressing USC 43 Sec 2808(a)(3), "promote the integration of geospatial data from all sources." If your FY2023 rating has changed since FY2022, please include details on how and why the rating changed.

USDA fully meets all expectations related to data integration in support of its NGDAs. Mission Areas responsible for geospatial data products, promote integration of geospatial data, both interdepartmentally, and in conjunction with Federal agencies, academia, tribal communicates, public, private, and professional organizations.

Most USDA agencies integrate large amounts of remote sensing information from U.S. and int'l satellite constellations. It also integrates various satellite imagery derivative products from the private sector. Data from Landsat, Sentinel, DoD, and several private sector satellite constellation outputs are routinely part of work advanced by most mission areas. Additionally, all USDA agencies integrate data from NOAA,

NASA, DOI, DOT, DOC, EPA, FEMA, DHS, Census, United Nations, and dozens of other national/ int'l orgs. Specific examples of 2-way data integration are listed below.

• FS makes data available to others for integration via downloadable files and APIs. FS uses both USGS hydrology data and contributes updates to USGS for streams on the lands FS manages. FS has an MOA with USGS to provide roads, trails, and other recreation data for integration into the USGS National Map. FS participates in the Interagency Land Management Working Group and contributes to the Protected Areas Database – US. The FS CIO's Info, Data & Performance (IDP) Branch has worked to integrate data from numerous data sources across the agency into the USDA Enterprise Data Analytics Platform and Toolset (EDAPT) environment.

• FNS both hosts APIs and integrates data from ESRI Living Atlas and other Federal APIs for both internal and external geospatial Tools. Internally the ArcGIS Online system serves as a way to share and discover data.

• ERS provides access through its ERS Geospatial Resources page to geospatial datasets. They encourage the public to integrate ERS data with other data sources to help inform the public and outside researchers.

• NASS integrates resources for CDL production. FEDERAL: USDA, Foreign Agricultural Service, Satellite Image Archive – Cost-sharing of satellite imagery; USDA, Farm Service Agency – Common Land Unit (CLU) for Ag training and validation; USDA, Forest Service, Tree Canopy Layer; DOI's Bureau of Reclamation – Lower Colorado River Water Accounting System (LCRAS) GIS data layer; USGS, National Land Cover Database (NLCD) for non-ag training and validation, Nat'l Elevation Dataset (NED), and more; STATE – FL Dept of Ag and Consumer Services – FL Statewide Ag Irrigation Demand (FSAID) Geodatabase; WA State Dept of Ag – Crop Geodatabase; CA - LandIQ specialty crops; UT – Dept of Water Resources - crops; and NY – Cornell University grape/vineyard data. UNIVERSITY - Oregon State and Jackson County, Oregon GIS Office – use of Orchards and Vineyard GIS Database; PRIVATE - LandIQ (private org) – use of their CA Statewide Land Use product. CroplandCROS serves CDL data using open API and web service protocols.

USC 43 Sec 2808(a)(4) Ensure Records Retention Schedule for Geospatial Data

GDA Requirement	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
Agency Self-Assessment	**Meets Expectations**

KEY to Self-Assessment	• **Meets expectations =**
	  ○ Yes to Questions 4.1 and 4.2
	• **Made progress toward expectations =**
	  ○ Yes or Partial to Questions 4.1 and 4.2 **or**
	  ○ No to either 4.1 or 4.2
	• **Fails to meet expectations =**
	  ○ No to Questions 4.1 and 4.2

Table 4. GDA USC 43 Sec 2808(a)(4) Ensure Records Retention Schedule for Geospatial Data Requirement and Self-Assessment Criteria.

4.1 To ensure approved National Archives and Records Administration (NARA) schedules are in place, does the appraisal process for your agency to determine which data is archived include geospatial data?

- Yes. The agency program's archiving appraisal process is inclusive of data information products and other records created in geospatial data and activities.

4.2 Are geospatial data assets included on agency record schedules?

- Yes. Agency record schedules are inclusive of data information products and other records created in geospatial data and activities.

4.3 Brief Summary (Limit 3000 characters, or approximately 450 words): Please provide a brief description of agency actions and accomplishments in FY2023 in addressing USC 43 Sec 2808(a)(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." If your FY2023 rating has changed since FY2022, please include details on how and why the rating changed.

All requirements related to NARA obligations were met by USDA related to its NGDAs. USDA Mission Areas, and agencies responsible for NGDA creation/maintenance ensure that all published NGDAs are included on agency record schedules approved by National Archives and Records Administration (NARA). In FY23, all NGDA products at USDA have associated, NARA compliant record schedules. USDA's Enterprise Geospatial Management Office (EGMO) maintains files of all NGDA records and updates that information quarterly.

Below are examples from several Mission Areas about their progress:

• FSA geospatial staff reviewed records schedules with agency records officers to ensure that geospatial data was addressed on existing records schedules and has begun the process of cataloging geospatial data to ensure that appropriate records retention schedules are followed.

• NRCS: Submitted a new NARA record application to the NRCS Record Management Liaison for the FGDC Soil Theme NGDAs (SSURGO, STATSGO2, MLRA, SCD).
NASS confirmed its record schedules for this cropland data records were correct and updates.

• MRP: All geospatial investments are attached to a system that has an Authority to Operate (ATO). Planned action items include: 1) a review of ATO'd systems that can or do engage with geospatial data and address gaps; 2) map all geospatial investments (data, systems, and solutions); and 3) develop a data cataloging system to track and manage the documentation associated with geospatial data to meet the GDA. To support any gaps and existing efforts, MRP plans to formally define "geospatial record" and implement a policy and schedule for those records.

• REE: NARA approved records on NASS Surveys n1-355-86-001_sf115; USDA World Ag Outlook Board n1-355-91- 001_sf115; and N1-355-07-1.

USC 43 Sec 2808(a)(5) Allocate Resources for Geospatial Data Management Responsibilities

GDA Requirement	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
Agency Self-Assessment	**Meets Expectations**

KEY to Self-Assessment	• **Meets expectations =**
	  ○ Yes to Question 5.1
	• **Made progress toward expectations =**
	  ○ Partial to Question 5.1
	• **Fails to meet expectations =**
	  ○ No to Question 5.1

Table 5. GDA USC 43 Sec 2808(a)(5) Allocate Resources for Geospatial Data Management Responsibilities Requirement and Self-Assessment Criteria.

5.1 Are geospatial program resources (including full- or part-time federal employees or contractors) allocated 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? (Select the most appropriate answer and provide context for your agency's response in Question 5.2.)

- Yes

Clarifying text: Analyses of the requirements for the GDA are ongoing and it is anticipated that agencies will answer based on currently understood or anticipated requirements. Additional details can be provided in the 5.2 Brief Summary and in your agency's optional 1- to 2-page Appendix B summary document (if provided).

5.2 Brief Summary (Limit 3000 characters, or approximately 450 words): Please provide a brief description of agency actions and accomplishments in FY2023 in addressing USC 43 Sec 2808(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 Committee." If your FY2023 rating has changed since FY2022, please include details on how and why the rating changed.

Allocation of resources to fulfill GDA responsibilities as relates to its NGDAs was fully met in 2023. Responsibilities of the Enterprise Geospatial Management Office (EGMO) at USDA, laid out in our Geospatial Strategic Plan (GSP), include empowering the USDA geospatial community of practice (CoP) in support of USDA's mission. The GSP elaborates on specific objectives that include providing guidance and education to other agencies, expanding use of geospatial data and access to it, promoting adoption of policies and standard software, securing funding and staff for geospatial initiatives, and otherwise developing partnerships and encouraging geospatial innovation and professional competency. The USDA

Geospatial Information Officer leads EGMO and also serves on the FGDC's Executive Committee as the Senior Agency Officials for Geospatial Information. USDA agency and EGMO staff participate on the FGDC's GDA Working Group. Examples of how our agencies implement their responsibilities include:

• In FY23, FS Geospatial Training and Support staff taught 200 geo training sessions covering geographic info systems (GIS), mobile GIS, remote sensing, & Web GIS. 8,881 student days were taught, an ~increase of 8.7% fr/FY21. Trainings save the agency >$6 million in tuition costs, delivering geo training to >9k employees annually. FS uses internal working groups (WGs) to support best practices for field data collection, data mgmt, analytics, and use of geo data. The GIS Best Practices WG updated its internal SP site to provide info on the transition from Citrix to VDI and ArcGIS to ArcGIS Pro. WebGIS WG supported migration of FS internal accounts to eAuth to meet Cybersecurity requirements. Metadata WG provided content for an awareness training metadata hub site as well as reviewed templates for ISO metadata implementation. FS participates in the following interagency WGs whose aim is to share knowledge and best practices: 3DEP (fed civ agency - elevation), NDOP (fed civ agency - remote sensing), Civil Applications Committee (classified remote sensing), Tactical Fire Remote Sensing Advisory Committee – AKA: TFRSAC (remote sensing support to wildland fire), and Applied Earth Observations Innovation Partnership (satellite remote sensing collab).

• RMA Combined Mapping Team established the RMA Geo Data memo for defining data standards for Reinsurance Year 2023, highlighting what data sources/projections are used as a standard process for RMA, RMA partners, contractors, & Approved Insurance Providers.

• USDA's EGMO provided training to >40k data managers, supervisors and geo data creators and users on the GDA. EGMO also provided FGDC-informed metadata training to all NGDA data creators, managers, and supervisors. In addition to creating the training modules within USDA's department wide AgLearn training system it also developed standard operating procedures to provide permanent ongoing training as part of onboarding processes as well as refresher training.

USC 43 Sec 2808(a)(6) Use Data Standards

GDA Requirement	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
Agency Self-Assessment	**Meets Expectations**

KEY to Self-Assessment	• **Meets expectations =**
	  ○ Yes to Questions 6.1, 6.2 and 6.3
	• **Made progress toward expectations =**
	  ○ Any other combination of Yes, No, and Partial to Questions 6.1, 6.2, and 6.3
	• **Fails to meet expectations =**
	  ○ No to Questions 6.1, 6.2, and 6.3

Table 6. GDA USC 43 Sec 2808(a)(6) Use Data Standards Requirement and Self-Assessment Criteria.

Clarifying Text:

- ✓ The FGDC Executive Committee has established a Standards Task Team to evaluate the requirements, options, processes, resources, and decision structure required to establish an operational and sustainable FGDC standards process.
- ✓ The FGDC has not yet established any standards under the GDA, USC 43 Sec 2806.
- ✓ Refer to the FGDC Standards webpage (https://www.fgdc.gov/standards) for additional information.
- ✓ Answers should include information about all geospatial datasets owned or managed by your agency that are, or should be, available to the public in accordance with agency statutory authorities and missions; not just National Geospatial Data Asset (NGDA) Datasets.

6.1. Are defined data standards used in collecting, processing, and/or disseminating the data being addressed? (Select all that apply)

- Yes. Eligible geospatial datasets use FGDC endorsed data standards under OMB A-16, 2002, or more current versions of those endorsed standards.
- Yes. Eligible geospatial datasets use data standards that comply with OMB Circular A-119.

6.2 Does your agency maintain its metadata in an FGDC-endorsed, or ISO-compliant geospatial metadata standard format? (Select all that apply)

Clarifying text: Question does not include legacy datasets that are static and no longer modified or otherwise managed. Also, see the list of endorsed FGDC-endorsed standards https://www.fgdc.gov/standards/.

- Yes. Eligible non-legacy datasets have well maintained FGDC-endorsed or current ISO-compliant geospatial metadata.

6.3 Is your agency geospatial metadata available through GeoPlatform.gov?

Clarifying Text: For the scope of the requirement, USC 43 Sec 2808(b)(1)(A)(iv) provides for "includ[ing] download access to all open geospatial data directly or indirectly collected by covered agencies" and Sec 2808(a)(6) requires that "metadata [be] available through the GeoPlatform."

- Yes. Metadata for all public datasets are available via GeoPlatform.gov.

6.4 Brief Summary (Limit 3000 characters, or approximately 450 words): Please provide a brief description of agency actions and accomplishments in FY2023 in addressing USC 43 Sec 2808(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." If your FY2023 rating has changed since FY2022, please include details on how and why the rating changed.

All USDA NGDAs and associated metadata are published to GeoPlatform.gov and standards for metadata and others have been met for all USDA NGDAs. The USDA Geospatial Strategic Plan lays out the strategy for advancing geospatial info, related technology, and activities. EGMO updated its Departmental Regulation "DR3465-001 Enterprise Geospatial Data Management," and developed Departmental Manual, "DM3465-001 Geospatial Metadata Standards," both published in FY23. USDA meets expectations; use of the standards is illustrated with examples below.

• FS provided updates to GeoNetwork for NGDA datasets. Metadata standards and user guides were published for FS users to implement ISO and CSDGM metadata elements. Internally, FS continued developing geo data standards following the National GIS Data Dictionary process outlined in the FS Manual. FS data aligns w/data standards. In FY23, the Geo Mgmt Office assisted Fire & Aviation Mgmt staff w/development of transactional data standards for Healthy Forest Restoration Act (HFRA) Wildland Urban Interface (WUI) to meet the Infrastructure Reduction Act. These data will proceed through the Enterprise Data Whse Content Governance Board for publication. Additionally, the GMO assisted the Rangeland Mgmt Program with geo data standards for range allotments, pastures, and improvements.

• ARS's National Agricultural Library (NAL) provided support to EGMO to develop Department-wide training for geo metadata standards content and creation. There are now 2 multi-part courses available on AgLearn: USDA Fundamentals of Geospatial Metadata and Geospatial Metadata Standards. ARS-funded research datasets and publishes metadata for them to the USDA Enterprise Data Inventory (EDI). Dataset metadata from EDI is, in turn, ingested by data.gov catalog. The dataset metadata generated by ADC include geo info to support harvesting from data.gov into GeoPlatform. In FY23, changes were made to ADC's upload interface to better capture geo datasets and to ADC's metadata output to improve compliance with the syntax required by data.gov for GeoPlatform harvesting. Metadata for 1029 ARS geospatial datasets are currently listed on the USDA EDI. Nearly a third (310) of these entries were added or updated in FY23.

• NASS: CDL published in GeoPlatform for Land Use Land Cover Themes via data.gov and GeoPlatform links. CDL NAL Geodata entry (https://geodata.nal.usda.gov/geonetwork/srv/eng/catalog.search#/metadata/ed735798-c133-44f1-a977-ad0c0dcad514), created a Geoplatform.gov record

(https://www.geoplatform.gov/metadata/698b8fae-30de-466d-ba91-8152de666e88), updated data.gov entry (https://catalog.data.gov/dataset/cropscape-cropland-data-layer), and updated metadata records to ISO 19139 (https://geodata.nal.usda.gov/geonetwork/srv/api/records/ed735798-c133-44f1-a977-ad0c0dcad514/formatters/iso19139?output=xml) & 19115-3 (https://geodata.nal.usda.gov/geonetwork/srv/api/records/ed735798-c133-44f1-a977-ad0c0dcad514/formatters/xml) standards.

USC 43 Sec 2808(a)(7) Support Coordination and Partnerships

GDA Requirement	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
Agency Self-Assessment	**Meets expectations**

KEY to Self-Assessment	• **Meets expectations =**
	  ○ Yes to Questions 7.1 and Yes or Not applicable to Question 7.2
	• **Made progress toward expectations =**
	  ○ Any combination of Yes, Not applicable, Partial, or No to Questions 7.1 and 7.2
	• **Fails to meet expectations =**
	  ○ No to Questions 7.1 and 7.2

Table 7. GDA USC 43 Sec 2808(a)(7) Support Coordination and Partnerships Requirement and Self-Assessment Criteria.

7.1 Are processes in place to ensure that, when appropriate, partners and stakeholders have visibility into agency geospatial data management activities (e.g., collection, integration, maintenance, dissemination, and preservation)?

- Yes. There are processes in place for all agency mission areas.

7.1.a If yes or partial to Question 7.1, which external partners and stakeholders are involved in data management activities? (Select all that apply)

Clarifying text: The selection list provided was taken from the GDA, USC 43 Sec 2803(b)(C).

- Other federal agencies
- States
- Local governments
- Regional governments
- Tribal governments
- Private sector entities
- Geospatial information user industries
- Professional associations
- Scholarly associations
- Nonprofit associations
- Academia
- Licensed geospatial data acquisition professionals
- Other: Approved Insurance Providers (AIPs).

7.1.b If yes or partial to Question 7.1, what processes are in place to ensure partners and stakeholders are involved? (Select all that apply)

Clarifying text: When answering this question think about activities such as using surveys, listening sessions, Request for Information, booths at stakeholder conferences.

- Market research
- Partnership outreach activities
- Expert consultations
- Advisory committee(s)
- Working group(s) and sub-committee(s)
- Steering committees
- Councils
- Engage with trade groups
- Feedback opportunities (e.g., contact email/phone, call center)
- Federal Register Notices
- Memoranda of Understanding
- Use other public comment process
- Other: Collect stakeholder feedback from CDL web portals and NASS Public Affairs Office.

7.2 Does your agency build upon existing non-federal geospatial data?

- Yes. Agency builds upon existing non-federal geospatial data to the extent possible.

7.2.a If yes or partial to Question 7.2, what ways do you build upon existing non-federal geospatial data? (Select all that apply)

- Procurement/acquisition/grant
- Research partnership
- Cooperative data collection or crowd sourcing
- Mission assignments or Interagency Agreements
- MOAs/data sharing agreements

7.3 Brief Summary (Limit 3000 characters, or approximately 450 words): Please provide a brief description of agency actions and accomplishments in FY2023 in addressing USC 43 Sec 2808(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." If your FY2023 rating has changed since FY2022, please include details on how and why the rating changed.

Geospatial initiatives at USDA's mission areas with large geospatial asset investments are delivered in coordination with tribal, state, academic partners, and Federal agencies. For all USDA mission areas, the requirements for coordination and partnership are fully met relative to its NGDAs. Our Strategic Plan provides a roadmap to strengthen the value of geo data and technology across the enterprise, implement collaborative partnerships to create cost efficiencies, and empower the USDA geospatial CoP to provide effective mission support. Some Mission Areas cannot share internal data. USDA meets

expectations as documented below at the same that it continues to expand and improve inventories and data lifecycle management for expanded data sharing. Examples of cooperation:

• FS is an active participant in the 3D Elevation Program WG, an interagency program led by the USGS to coordinate acquisition, use, and dissemination of lidar data. Work continues to scan and make available the vast FS archive of Historic Aerial Photography. This is a 10-year effort to scan 20,000 cannisters of aerial film, followed by the production orthoimagery for ultimate best use of this imagery by federal and state governments and the public. Once complete, the imagery will be preserved in perpetuity and much more accessible for projects involving land cover change and other resource management activities. FS publishes FS land ownership data on a weekly basis for integration into the USGS Protected Areas of the US dataset (PAD-US). FS Geospatial Office (GO) administers and manages the National Geospatial Services project, which is a Multiple Award Schedule (MAS) 5-year Indefinite Delivery-Indefinite Quantity (IDIQ) contract. The purpose of this contact is to provide easy access to geospatial services, e.g., remote sensing, GIS, and cartography, and to promote geo standards, policies, and guidelines for all FS program area needs. The Geospatial Office led the inter-agency (USFS, BLM, USBR, NPS, USFWS, USACE, USGS) implementation of the rqmts of the Modernizing Access to Our Public Land (MAPLand) Act. Instituted a core team of reps from responsible agencies and led teams that successfully analyzed MAPLand requirements compared to current standards, resulting in the creation of draft interoperable geo data standards to meet MAPLand rqmts/timelines.

• NRCS partners w/other Feds to acquire High Value Assets including NAIP imagery and LiDAR elevation data. NRCS Soil & Plant Sciences Div meets w/partners at various levels, ranging fr/local to international, including National Cooperative Soil Survey, regional NCSS Meetings, and Global Soil Partnerships.

• FNS collaborates w/NGOs & makes datasets available to the public at large. Public tools utilize data fr/Census, NOAA, AMS, NASA, CISA, DOI, CDC and others.

• ARS manages multiple Long-Term Agroecosystem Research sites; many co-located with Long-Term Ecological Research sites &/or university-managed research projects.

USC 43 Sec 2808(a)(8) Promote Application of Geospatial Data Assets

GDA Requirement	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;
Agency Self-Assessment	**Meets Expectations**

KEY to Self-Assessment	• **Meets expectations =**
	  ○ Yes to 8.1, 8.2 and 8.3
	• **Made progress toward expectations =**
	  ○ Any combination of Yes, Partial and No to Questions 8.1, 8.2 and 8.3
	• **Fails to meet expectations =**
	  ○ No to 8.1, 8.2 and 8.3

Table 8. GDA USC 43 Sec 2808(a)(8) Promote Application of Geospatial Data Assets Requirement and Self-Assessment Criteria.

USC 43 Sec 2808(a)(8)(A) make Federal geospatial information and services more useful to the public;

8.1 Does your agency leverage geospatial information to make federal geospatial information and services more useful to the public?

- Yes

Clarifying Text: A number of examples of leveraging geospatial information for public use include, but are not limited to:

- ✓ Making the data accessible
- ✓ Providing data in ingestible services
- ✓ Providing maps or visualizations of geospatial data - like a map of an agency's jurisdictional regions so the public can identify their region on a website
- ✓ Provided data in an online application
- ✓ Outreach/communications for user feedback
- ✓ Making data open, standardized, or machine readable

USC 43 Sec 2808(a)(8)(B) enhance operations; USC 43 Sec 2808(a)(8)(C) support decision making

8.2 Does your agency leverage geospatial information to improve operations and decision-making?

- Yes. Agency broadly leverages geospatial information in operations improvements or decision-making.

USC 43 Sec 2808(a)(8)(D) enhance reporting to the public and to Congress

8.3 Does your agency leverage geospatial information to enhance reporting to the public or to Congress?

- Yes. Agency broadly leverages geospatial information to enhance public and Congressional reporting.

8.3.a If yes or partial, for which of these audiences does your agency leverage geospatial information to enhance reporting? (Select all that apply)

- Public reports (e.g., fact sheets, data briefs, Annual reports, other published agency reports).
- Congressional reports.
- Internal agency and leadership plans, reports and communications.

8.4 Optional Question: Would the agency like to provide up to 5 key examples and links that demonstrate how geospatial data assets are used, internally and externally, to make federal geospatial information and services more useful to the public; enhance operations; support decision making; and/or enhance reporting to the public and to Congress?

- Yes

Example	Link
Farm Service Agency (FSA) County Committees are a critical component of the day-to-day operations of FSA and allow grassroots input and local administration of federal farm programs. FSA's County Committee Election local administrative areas are published as an interactive map so that producers can more fully participate in the county committee election process.	https://usdaonline.maps.arcgis.com/apps/instant/lookup/index.html?appid=c0a64eda87824ce68fe36b5ad622d6ab
Food and Nutrition Service (FNS) answers the call to help. FNS coordinates with state, territory, tribal, and voluntary organizations to provide nutrition assistance to families and individuals affected by a disaster or emergency. FNS utilizes geographic information systems (GIS) before, during and after disasters to prepare communities, provide situational awareness and communicate FNS' response to disasters.	https://www.fns.usda.gov/da/disaster-assistance
Forest Service (FS) delivers public-facing geospatial information products on climate change & forests through its U.S. FS Climate Gallery. These products are used to inform carbon stewardship and climate adaptation plans and actions across National Forest System lands. Among these products is the Forest Service Climate Risk Viewer, which the agency is using to develop policy recommendations for climate resilience and carbon stewardship as directed by USDA Secretary Memorandum 1077-004.	https://usfs.maps.arcgis.com/apps/MinimalGallery/index.html?appid=46e069c721bb49c6abe5a9d57e3a365f , https://storymaps.arcgis.com/collections/87744e6b06c74e82916b9b11da218d28?item=4

Example	Link
Economic Research Service (ERS) publishes a Food Access Research Atlas (FARA) user guideline. The 2008 U.S. Farm Bill requested USDA measure the extent of “food deserts” and discuss consequences and causes. As a result, ERS publishes FARA, which provides a glimpse into a neighborhood or community’s access to food stores that offer a variety of healthy, nutritious, and affordable food. ERS's visual representation (map) of supermarket access is described textually in a Congressional report.	https://gisportal.ers.usda.gov/portal/apps/experiencebuilder/experience/?id=a53ebd7396cd4ac3a3ed09137676fd40
USDA's Agricultural Marketing Service (AMS) works to improve market access for local and regional food producers. The Seeds of Success series highlights the accomplishments and lessons learned from Farmers Market and Local Food Promotion Program (FMLFPP) grant recipients. Learning from one another, we can build stronger local food systems across the nation Explore the interactive map on the website to learn about the work of and advice from some grant recipients.	https://storymaps.arcgis.com/stories/9b2acce5605942b68eddc1ac8b22c168

Table 8.a. Example Benefits of Federal Geospatial Data Assets.

8.5 Brief Summary (Limit 3000 characters, or approximately 450 words): Please provide a brief description of agency actions and accomplishments in FY2023 in addressing USC 43 Sec 2808(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;"

If your FY2023 rating has changed since FY2022, please include details on how and why the rating changed.

USDA fully met its obligation to leverage its geospatial data assets to enhance and support data sharing, operations, decisions, and reporting. USDA leverages geospatial information collected across the Department to assist USDA customers in exercising good land stewardship, increase the accuracy of the information needed for informed, agile decision-making in the face of disasters or emergencies, and improves customer access to USDA programs and services. A strong geospatial framework ensures safe agricultural import trade and strengthens U.S. agricultural export posture, an impact measured in the hundreds of billions of dollars. Geospatial apps lead the way in USDA’s ability to respond to emergencies, saving human lives, property, livestock, crops, and wildlands. Many USDA data products have tens of thousands of users throughout the year with significant private sector applications.

Examples include:

• FSA published an interactive county committee election map to engage with stakeholders, so producers can more fully participate in the election process.

• At NASS, Hurricane Idalia in September 2023 was assessed for flooding and potential agricultural losses in Florida using the CDL. In June 2023, a Midwestern Derecho was assessed for widespread destructive winds damaging several forested and Ag areas and Ag infrastructure. In August, an assessment was made of the Hawaiian Wildfires driven by high wind conditions that impacted agricultural lands. In July, Crop Sequence Boundaries were made publicly available for visualization and download on the NASS and CroplandCROS portals.

• RD promotes economic dev by providing loans to businesses through banks/community-managed lending pools, while also assisting communities to participate in community empowerment programs. Eligibility maps are used as a step to help determine partial eligibility. Along w/location, many loan/grant products are driven by income/financial records to enhance operations/decision making.

• ERS provides a web mapping product published as an ESRI Story map to guide on usage and background info of the Food Access Research Atlas.

• FAS developed online geospatial apps that allow the public to explore/use data. Many web mapping apps also include the ability to share georeferenced images or some downloadable data so that these data can be incorporated into SW apps used by Fed agencies/public. Data are sometimes used to support decision making on crop production for official USDA World Ag Supply & Demand Estimates, and coordination w/DOS.

• FS updated and published scientific geo datasets through the Research Data Archive, updated/published enterprise geospatial data in the Enterprise Data Warehouse and FS Geodata Clearinghouse. FS delivered public-facing geospatial data/info products on climate change and forests through the Forest Service Climate Gallery. FS provided on-demand geo analysis of population to support implementation of environmental justice in decision-making.

USC 43 Sec 2808(a)(9) Protection of Privacy and Confidentiality

GDA Requirement	Protect personal privacy and maintain confidentiality in accordance with Federal policy and law
Agency Self-Assessment	**Meets Expectations**

KEY to Self-Assessment	• **Meets expectations =**
	  ○ Yes to Questions 9.1 and 9.2
	• **Made progress toward expectations =**
	  ○ Yes or Partial to Questions 9.1 **or** 9.2
	• **Fails to meet expectations =**
	  ○ No to Questions 9.1 **or** 9.2

Table 9. GDA USC 43 Sec 2808(a)(9) Protection of Privacy and Confidentiality Requirement and Self-Assessment Criteria.

9.1 Are the agency's Privacy Threshold Assessment or Privacy Impact Assessment (PTA/PIA) processes inclusive of your agency's geospatial data?

Clarifying Text: The Privacy Threshold Assessment/Analysis is the mechanism that agencies use to determine if PII is, or is not, collected and whether a Privacy Impact Assessment needs to be done for an information system.

- Yes. The agency's PTA/PIA processes are inclusive of all agency data.

9.2 Are the IT systems and applications that maintain and support your agency's geospatial data covered by a current Authorization to Operate (ATO)?

- Yes. All agency geospatial data is housed in a system covered by a current ATO and is appropriately protected in accordance with applicable laws and regulations.

9.3 Brief Summary (Limit 3000 characters, or approximately 450 words): Please provide a brief description of agency actions and accomplishments in FY2023 in addressing USC 43 Sec 2808(a)(9), "protect personal privacy and maintain confidentiality in accordance with Federal policy and law." If your FY2023 rating has changed since FY2022, please include details on how and why the rating changed.

USDA fully meets all requirements to protect personal privacy/confidentiality. All who work and access information and geographic IT systems at USDA are required to protect personal privacy and maintain confidentiality in accordance with Federal policy and law. Staff are required to take the annual USDA Information Security Awareness Training, which includes Role-Based Access, a Personally Identifiable Information (PII) Training Course, as well as an annual USDA Records Management refresher course. In accordance with our Geospatial Strategic Plan and in compliance with the GDA, USDA updated its Departmental Regulation, "DR3465-001 Enterprise Geospatial Data Management" (published March 2023). EGMO published "DR3465-002 Privacy, Civil Rights, and Civil Liberties with Unmanned Aerial Systems (UAS)" to specifically address privacy issues related to data captured with Unmanned Aerial Systems. Update to this DR is in process, with expected publication in FY24 Q3. A UAS Working Group has been in place since 2020 to strengthen governance and review cybersecurity requirements related

to UAS equipment and geo SW use for assets produced by foreign sources known to compromise data privacy. Agency comments:

The majority of ARS research and geo data usage does not include PII or other forms of CUI. Neither ARS nor USDA as a whole generates or handles classified geospatial data. Accordingly, ARS's agency-wide infrastructure for high-performance computing, geospatial data hosting, and serving, SCINet and the Partnerships for Data Innovations platform, are FISMA-low environments that operate under a shared ATO. In FY23, ARS pursued an ongoing effort to reduce the number of non-ATO environments in use, continuing in FY24.

• All NASS employees sign annual confidentiality certifications to comply with the law regarding the handling of PII data. Certification covers Title V, 7 & 18 of US law. All handling/processing of Cropland Data Layer (CDL) related confidential data is performed on NASS Federal IT systems. The CDL product once released is a public good and all dissemination portals are not bound by confidentiality or ATO restrictions.

• FSA makes all efforts to protect PII and data covered under 7 USC 8791 (Section 1619 of the 2008 Farm Bill). Requests for protected data are vetted through FPAC-BC FOIA office.

• MRP is working on a full inventory of geo data assets including what is or is not included w/a system w/an ATO. Any identified gaps are prioritized to ensure full compliance. Systems are carefully designed using role-based security models that only allow users access to data needed to complete their work. To protect privacy/confidentiality of producer data, all reporting tools included standardized templates with a disclaimer about appropriate use of data.

• FS: Privacy threshold analysis and privacy impact assessment processes are a standard component of establishing systems. Likewise, for ensuring that systems are supported by an up-to-date ATO.

USC 43 Sec 2808(a)(10) Declassified Data

GDA Requirement	Participate in determining, when applicable, whether declassified data can contribute to and become a part of the National Spatial Data Infrastructure
Agency Self-Assessment	**Meets Expectations**

KEY to Self-Assessment	• **Meets expectations =**
	  ○ Yes or Not applicable to Question 10.1
	• **Fails to meet expectations =**
	  ○ No to Question 10.1

Table 10. GDA USC 43 Sec 2808(a)(10) Declassified Data Requirement and Self-Assessment Criteria.

10.1 If your agency handles declassified geospatial datasets, does it have a process to review these declassified datasets for inclusion in the NSDI?

Clarifying text: Sharing standards-based data on the Internet using standard protocols and formats makes it part of the NSDI.

- Not applicable: The agency does not handle declassified data.

10.2 Brief Summary (Limit 3000 characters, or approximately 450 words): Please provide a brief description of agency actions and accomplishments in FY2023 in addressing USC 43 Sec 2808(a)(10), "participate in determining, when applicable, whether declassified data can contribute to and become a part of the National Spatial Data Infrastructure." If your FY2023 rating has changed since FY2022, please include details on how and why the rating changed.

This is not applicable for all USDA agencies, as none of our agencies are submitting previously classified or newly declassified data for inclusion in the NSDI. USDA does not manage geospatial classified data, nor does it generate or maintain classified geospatial data in support of business functions. Though some Agencies and Mission Areas (MAs) work with the classified community, the derived data that received from that community is unclassified (e.g., Forest Service (FS) for wildfire support). As such, this falls under the "not applicable" response category.

USC 43 Sec 2808(a)(11) Non-Duplication of Data

GDA Requirement	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
Agency Self-Assessment	**Meets Expectations**

KEY to Self-Assessment	• **Meets expectations =**
	  ○ No to Question 11.1 **or**
	  ○ Yes to Questions 11.1 and 11.1.a and all agency appropriate responses to Question 11.1.b
	• **Made progress toward expectations =**
	  ○ Yes to Question 11.1 and Partial or No to Question 11.1.a and agency appropriate responses to Question 11.1.b
	• **Fails to meet expectations =**
	  ○ Yes to Question 11.1 and No to Question 11.1.a and *No additional assessments are done* selected for Question 11.1.b

Table 11. GDA USC 43 Sec 2808(a)(11) Non-Duplication of Data Requirement and Self-Assessment Criteria.

11.1 Has your agency expended funds for geospatial data collection for the reporting period?

Clarifying text: "Expended funds" may include grant distribution, agency collection, or data procurement.

- Yes

11.1.a If yes to Question 11.1, and as per OMB Circular A-11 Guidance (Section 25, Page 3), has your agency searched the GeoPlatform prior to making planned geospatial data investments to determine if an existing source for that data is available and meets mission requirements?

- Partial. Agency has searched GeoPlatform prior to some geospatial data investments.

11.1.b If yes to Question 11.1, has your agency searched other sources to determine if data necessary to meet requirements already exists (either within or outside the agency) before collecting or acquiring new data? (Select all that apply)

- Market research
- Cross-agency or partner coordination
- Expert consultation
- Database search
- Agency follows a documented process or official policy

11.1.c Optional Question: If yes to Question 11.1, would the agency like to provide up to 5 examples of cases where the agency did find existing data that met its needs or partnered on a joint data acquisition?

- Yes

Title	Description
Federal Datasets.	ARS researchers make extensive use of public, federally funded geospatial data and derived products, such as Landsat and MODIS imagery products, NAIP imagery, the NASS Cropland Data Layer, NRCS soils data, NLCD landcover layers, and others. We provide examples of two such publications from 2023; there are many more. Examples: https://doi.org/10.3389/fmicb.2023.1283127, https://doi.org/10.3390/rs15215102.
Foreign Agricultural Service (FAS) worked with NRO/NGA to access existing commercial imagery for Ukraine to document field activity.	FAS accessed Global Enhanced GEOINT Delivery (G-EGD) program organized by NRO/NGA during the war in Ukraine to acquire satellite images of high spatial resolution. The war disrupted Ag activities. Hence, USDA had to assume an amount of “not planted” or “not harvested.” Imagery identified locations where field activity was normal/near normal in 2022-’23, used to support crop production analysis in support of economic analysis for the Dept's World Agricultural Supply and Demand Estimates.
FAS partnered with NASA GIMMS for composite products adapted for use in agricultural assessment.	FAS partnered w/NASA on a joint data acquisition. FAS supports the citizen-facing website GIMMS Global Agricultural Monitoring (GLAM) System, funded through an interagency agreement grant with NASA Goddard Space Flight Center. FAS uses GLAM maps/charts for relative vegetation health comparison to understand relative crop yield performance. USDA Briefings using GLAM data for myriad countries in 2023 include: Sep, Australia; Aug, European Union and Canada; May, Northwest Africa; and Apr, Brazil.
USDA Imagery.	Forest Service (FS) has been using National Agricultural Imagery Data (NAIP) data from USDA Farm Service Agency (FSA) for years. NAIP is a program to acquire aerial imagery during peak growing season, “leaf on”, and deliver this imagery to USDA County Service Centers, to maintain the common land unit (CLU) boundaries and assist with farm programs. The goal of NAIP is to collect 1-meter imagery for the entire conterminous United States.
FAS Acquires European Space Agency Sentinel-2 satellite imagery and US Government Landsat to create Composite Product.	FAS acquired European Space Agency Sentinel-2 satellite imagery and US Government Landsat and then partnered with FAS’s contractor Geospatial Data Analysis Corporation to create a 10-meter, 10-day composite product. FAS uses the 10-meter, 10-day composite product for crop condition analysis at the scale of fields. The products are used to compare year-to-year crop conditions to identify and confirm reports of drought, stress on the crops due to heat and dryness or lack of fertilizers.

Table 11.a. Examples of Successful Data Acquisition Searches and/or Coordination.

11.2 Brief Summary (Limit 3000 characters, or approximately 450 words): Please provide a brief description of agency actions and accomplishments in FY2023 in addressing USC 43 Sec 2808(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." If your FY2023 rating has changed since FY2022, please include details on how and why the rating changed.

USDA fully met all obligations to search all sources before expending funds for geospatial data collection focused on its NGDAs. USDA's geospatial applications allow for the leveraging of complex information sources within an integrated framework. USDA's Geospatial Strategic Plan outlines developing governance to promote and integrate geodata from all sources, including developing processes to promote geo data and tools available within USDA, National Geospatial Data Assets (NGDAs), and the GeoPlatform. USDA's Departmental Regulation, "DR3465-001 Enterprise Geospatial Data Management" specifies the requirement to search all sources before expending funds. Explicitly, the DR states, "USDA EGMO and each USDA Mission Area (MA), agency, and staff office that utilize and collect geospatial data will integrate geospatial data from all sources through collaboration, system architecture, infrastructure, and communications." And "Prior to expending funds for geospatial data collection, USDA MAs, agencies, and staff offices will search all sources, including the FGDC's GeoPlatform and its Marketplace, to determine whether data and associated acquisition suitable for the intended purpose exists." An Acquisition Approval Request (AAR) policy is also in place to ensure alignment with the GDA. MAs and agencies search GeoPlatform and alternate sources, which is vetted and collected independently from open federal, local, and non-government sources.

Examples of activities that allow for oversight and ensuring its staff is checking all sources include those listed below.

• ARS's SCINet Office held multiple training sessions in FY23 to support the use of open geospatial data and open-source geospatial software for ARS research, including on ARS's high-performance computing (HPC) environments. Trainings aim to help ARS researchers use geospatial data more efficiently, which includes reuse of extant geospatial data resources. The SCINet Office continues to develop the Geospatial Common Data Library (GeoCDL) in FY23 (currently in beta). The GeoCDL is a software stack and API (application programming interface) hosted on SCINet's HPC platform that provides easy discovery and reuse of open geo data for HPC geospatial research workflows. The GeoCDL therefore supports the use of open, external geo datasets as well as the efficient use of ARS's computing and data storage resources. GDA informational sessions to various ARS audiences advertised the GeoPlatform and promoted searching it and all sources for geo datasets.

• FAS sources the majority of its data from shared platforms or open data sources. Procuring data is essentially a last resort after confirmation that equivalent data sources are not available through open source or shared channels. The procurement process enforces this via required sole-source justifications. An example is real-time storm and hazard impact tracking and monitoring services available through Kinetic Analysis Corp.

USC 43 Sec 2808(a)(12) Ensuring High-Quality Data

GDA Requirement	To the maximum extent practicable, ensure that a person receiving Federal funds for geospatial data collection provides high-quality data
Agency Self-Assessment	**Meets Expectations**

KEY to Self-Assessment	• **Meets expectations =**
	  ○ No to Question 12.1 **or**
	  ○ Yes to Question 12.1 and **all** appropriate selections for Question 12.2
	• **Made progress toward expectations =**
	  ○ Yes to Question 12.1 and **some** agency appropriate selections for Question 12.2
	• **Fails to meet expectations =**
	  ○ Yes to Question 12.1 and *No official documented Quality Assurance/Quality Control (QA/QC) process is in place for acquisition of geospatial data* selected for Question 12.2

Table 12. GDA USC 43 Sec 2808(a)(12) Ensuring High-Quality Data Requirement and Self-Assessment Criteria.

12.1 Has your agency expended funds for geospatial data collection from non-federal sources during the reporting period?

Clarifying text: The requirement for "a person receiving Federal funds" has been interpreted to mean non-federal organizations or corporations who are, for example, contract or grant recipients.

- Yes

12.1.a If yes to Question 12.1, what methods does your agency employ to ensure quality in geospatial data collected from non-federal sources? (Check all that apply and use the "other" textbox to briefly describe additional methods used to ensure quality for geospatial data acquired by procurement or grant process)

- Evaluate data for quality prior to any acquisition.
- Geospatial data quality standards are specified in contract documents.
- Independent verification and validation (IV&V).
- Staff data experts review and approve geospatial data deliverables.
- Data standards are enforced through automated processes such as database controls or script tools.
- The agency acquires data from another federal agency that is responsible for QA/QC.

12.2 Brief Summary (Limit 3000 characters, or approximately 450 words): Please provide a brief description of agency actions and accomplishments in FY2023 in addressing USC 43 Sec 2808(a)(12), "to the maximum extent practicable, ensure that a person receiving Federal funds for geospatial data collection provides high-quality data." If your FY2023 rating has changed since FY2022, please include details on how and why the rating changed.

USDA fully met its obligations by establishing contractual language and workflows to ensure review of all new acquisitions so that they were subject to the same requirements as Federal staff. In FY23, USDA updated “DR3465-001 Enterprise Geospatial Data Management” to ensure alignment of operations with GDA requirements. This policy sets up formal management oversight for all geospatial data related acquisitions and management. USDA also published a Departmental Manual “DM3465-001 Geospatial Metadata Standards,” to provide guidance for a fundamental aspect of advancing FAIR geospatial data. USDA developed an internal dashboard to ensure consultation with Tribal communities about its data and programs. USDA developed training modules using its official internal workforce development environment, AgLearn, and trained over 45,000 employees that manage or work with geo data directly on the GDA requirements. USDA also worked to optimize the cost of software for data capture, management, and analysis by negotiating a single enterprise agreement for GIS SW for over 70,000 users including Federal staff, cooperators, and contractors.

In FY23, USDA worked to ensure all its national geospatial data assets had documented records schedules, compliant metadata, and that they were available to the public via USDA-based data gateways and from GeoPlatform. This year’s GDA Survey of agencies saw an 11% increase in compliance across the board. Areas of improvement were seen in data integration, records management, and use of FGDC standards (an achievement in concert with meeting/closing OIG Audit corrective actions.)

For example:

• FPAC-BC partnered with a non-federal entity to acquire a higher resolution than the base resolution. QA was performed internally to confirm quality. It was acquired w/in the normal federal contract vehicle. In another instance, we send funds to USGS to acquire elevation across the nation often in partnership with Federal and non-Federal organizations.

• FSA provides funding for NAIP, managed by FPAC GEO. Interagency and cooperative agreements are written with data standards included to achieve procurement of high-quality geospatial data. QA/QC procedures are in place to ensure geospatial products meet the data standards put forth in the agreements.

USC 43 Sec 2808(a)(13) Point of Contact

GDA Requirement	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
Agency Self-Assessment	**Meets Expectations**

KEY to Self-Assessment	• **Meets expectations =**
	  ○ Yes to Question 13.1
	• **Fails to meet expectations =**
	  ○ No to Question 13.1

Table 13. GDA USC 43 Sec 2808(a)(13) Point of Contact Requirement and Self-Assessment Criteria.

13.1 Has your agency appointed a POC to coordinate with the lead covered agencies for collection, acquisition, maintenance, and dissemination of the NGDA data themes used by the covered agency?

Clarifying text: According to the GDA Definitions, USC 43 Sec 2801(12), NGDA data theme means "the NGDA core geospatial datasets including electronic records and coordinates relating to a topic or subject designated under USC 43 Sec 2805." Also, OMB Circular A-16 may include additional guidance on covered agency responsibilities for theme coordination.

- Yes. An agency POC has been appointed.

13.2 Brief Summary (Limit 3000 characters, or approximately 450 words): Please provide a brief description of agency actions and accomplishments in FY2023 in addressing USC 43 Sec 2808(a)(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." If your FY2023 rating has changed since FY2022, please include details on how and why the rating changed.

USDA fully meets this obligation. USDA established an executive position of Geospatial Information Officer, which is the same as the Senior Agency Official for Geospatial Information since FY21. This executive leads the Enterprise Geospatial Management Office and is the lead point of contact responsible for USDA's geospatial portfolio. Throughout USDA Mission Areas, agencies, POCs and secondary contacts are appointed to coordinate collection, acquisition, maintenance, and dissemination of the NDGA data themes developed by the lead covered agency. USDA manages 3 Lead Covered Agency (LCA) Themes: Imagery, Land Use-Land Cover, and Soils. LCA Theme Leads and Dataset Managers are in place for each NGDA. USDA agencies for which this is applicable are FS, FPAC, NASS, and NRCS.

Examples include:

• FS has one NGDA Theme Lead for Land Use and Land Cover. The FS GIO is the lead POC for things geospatial, with specific responsibilities being managed by various folks in the FS GMO. The GDA POC is the FS National Geospatial Data Program Manager. Forest Service has five dataset managers covering eight NGDA datasets spread across three NGDA Themes -- six datasets in Land Use and Land Cover, one dataset in Cadastre, and one dataset in Biodiversity and Ecosystems.

• FPAC’s NRCS has data stewards for Soils and related NGDA data themes, as well as additional identified data stewards for other geospatial data themes not considered NGDAs. • FPAC’s RMA has identified individual "Business Data Stewards" that have the responsibility to coordinate with the lead covered agencies for collection, acquisition, maintenance, and dissemination of the National Geospatial Data Asset data themes used by the LCA.

(Optional) Highlight – a Key GDA-Related Activity or Achievement

This optional section provides an opportunity to briefly highlight a key activity or achievement in making progress toward GDA-related requirements. This submission will be considered for use in the upcoming FGDC Summary Report or the Report to Congress. Please note that this activity or achievement may have already been highlighted in the Brief Summaries or the Optional 2-page Appendix B Document (if provided). (Limit 2000 characters, or approximately 300 words)

Agency Highlights:

• FAS cooperated with OCE in promoting integration of geospatial data in evaluating impacts on production, storage, and exports of grain due to the Russian conflict in Ukraine.

• FPAC is migrating to an Open Data cloud hosting platform, further expanding its data sharing, resulting in even broader access, enabling further data integration. FPAC is also conducting interagency proofs of concept for collecting imagery and elevation on the same platform to explore benefits of this data integration.

• FS Geo Office led the interagency implementation of the Modernizing Access to Our Public Land (MAPLand) Act by coordinating with DOI, USGS, USACE, BLM, BoR, USFWS and NPS. A core team successfully analyzed MAPLand requirements compared to current interagency and internal agency standards, resulting in creation of draft interoperable geo data standards regarding public access to recreation, easements, routes & area closures that meet MAPLand requirements & timelines. The team determined interoperable standards w/be considered transfer standards to meet MAPLand requirements and minimize duplication w/internal agency data.

• ARS implemented a fully automated data-publishing pipeline that will, when fully functional, make it easy for ARS re-searchers to follow best practices/GDA requirements when publishing geo datasets. The Pipeline begins w/the National Agricultural Library's (NAL) Ag Data Commons (ADC), which catalogs ARS-funded research datasets and provides a publicly searchable interface to ARS data, incl geospatial data. Policy requires publicly shared ARS datasets to have a catalog record in ADC, which serves as the backbone for ARS's geo dataset inventory. NAL automatically publishes metadata for datasets in ADC to the USDA Enterprise Data Inventory (EDI). Dataset metadata from EDI is, in turn, ingested by the data.gov catalog. Dataset metadata generated by ADC include geo info to support harvesting from data.gov directly into Geo-Platform.

Appendix A: Survey Picklists

This appendix provides the full set of choices presented in the self-assessment survey for questions that have multiple response options, including those that are "select all that apply."

2.1 Does your agency ensure that all eligible geospatial data is managed so it can be readily shared and is it provided in open formats, as appropriate? (This will include agency open government and transparency guidelines.) (Select all that apply)

- Data is currently openly shared to the public.
- Data is currently shared on a limited basis with federal partners.
- Data is currently shared on a limited basis with non-federal users.
- No data is currently shared to other federal agencies or non-federal users. (Note: For some agencies, this may be an appropriate response).

2.2 Does your agency disseminate eligible geospatial data in a way that can be readily shared in open formats (for example, using machine readable formats or searchable metadata)?

- Yes, eligible geospatial data and metadata are shared in open formats.
- Eligible geospatial data are shared in open formats, but not all metadata is open format.
- Eligible geospatial metadata are shared in open formats, but not all data are open format.
- Some geospatial data, and its metadata, is shared in open formats.
- No geospatial data is shared, or geospatial data is only shared in proprietary formats. (Note: For some agencies, this may be an appropriate response.)

2.3 Are maintenance processes in place to ensure other federal agencies and non-federal users have access to the most recent data in addition to data and metadata updates and corrections?

- Yes, agency policies exist to ensure all programs implement data maintenance processes.
- Some programs/datasets have maintenance processes in place.
- Maintenance processes are in development or are partially implemented.
- No maintenance processes are currently in place or in development.

3.1.a If yes or partial to Question 3.1, in what ways does your agency promote data integration from multiple sources? (Select all that apply and use the "other" textbox to briefly describe additional methods)

- Hosts a data sharing infrastructure where partners and/or data users can share and discover data.
- Develops a data integration toolkit or APIs to promote integration of agency data in external applications.
- Develops data integration processes to promote integration of non-agency data into applications.
- Provides data in openly standardized readable formats or as downloadable file packages.

- Develops data sharing agreements or Memoranda Of Agreement (MOA) with public and private partners for ingest or sharing of data.
- Other (Textbox provided)

6.1. Are defined data standards used in collecting, processing, and/or disseminating the data being addressed? (Select all that apply)

- Yes. Eligible geospatial datasets use FGDC endorsed data standards under OMB A-16, 2002, or more current versions of those endorsed standards.
- Yes. Eligible geospatial datasets use data standards that comply with OMB Circular A-119.
- Partial. Some eligible geospatial datasets use FGDC-endorsed data standards.
- Partial. Some eligible geospatial datasets use data standards that comply with OMB Circular A-119.
- No. Eligible agency geospatial datasets do not use FGDC-endorsed data standards or standards that comply with OMB Circular A-119.

6.2 Does your agency maintain its metadata in an FGDC-endorsed, or ISO-compliant geospatial metadata standard format? (Select all that apply)

Clarifying text: Question does not include legacy datasets that are static and no longer modified or otherwise managed. Also, see the list of endorsed FGDC-endorsed standards https://www.fgdc.gov/standards/.

- Yes. Eligible non-legacy datasets have well maintained FGDC-endorsed or current ISO-compliant geospatial metadata.
- Partial. Some eligible datasets have well maintained FGDC-endorsed or current ISO-compliant geospatial metadata.
- Partial. Some eligible datasets have FGDC-endorsed or current ISO-compliant geospatial metadata, that needs to be reviewed or refreshed.
- No. Agency datasets do not use FGDC-endorsed or current ISO-compliant geospatial metadata standards.

7.1 Are processes in place to ensure that, when appropriate, partners and stakeholders have visibility into agency geospatial data management activities (e.g., collection, integration, maintenance, dissemination and preservation)?

- Yes. There are processes in place for all agency mission areas.
- Yes. There are processes in place, but some mission areas do not have requirements for geospatial data management partnerships.
- Partial. There are processes in place for some agency mission areas, but not others.
- No. There are no processes in place. (Skip to question 7.3)

7.1.a If yes or partial to Question 7.1, which external partners and stakeholders are involved in data management activities? (Select all that apply and use the "other" textbox to add additional partners or stakeholders)

Clarifying text: The selection list provided was taken from the GDA, USC 43 Sec 2803(b)(C).

- Other federal agencies
- States
- Local governments
- Regional governments
- Tribal governments
- Private sector entities
- Geospatial information user industries
- Professional associations
- Scholarly associations
- Nonprofit organizations
- Academia
- Licensed geospatial data acquisition professionals
- Other (Textbox provided)

7.1.b If yes or partial to Question 7.1, what processes are in place to ensure partners and stakeholders are involved? (Select all that apply and use the "other" textbox to add additional processes)

Clarifying text: When answering this question think about activities such as using surveys, listening sessions, Request for Information, booths at stakeholder conferences.

- Market research
- Partnership outreach activities
- Expert consultations
- Advisory committee(s)
- Working group(s) and sub-committee(s)
- Steering committees
- Councils
- Engage with trade groups or communities of interest
- Feedback opportunities (e.g., contact email/phone, call center)
- Federal Register Notices
- Memoranda of Understanding
- Use other public comment processes
- Other (Textbox provided)

7.2 Does your agency build upon existing non-federal geospatial data?

- Yes. Agency builds upon existing non-federal geospatial data to the extent possible.
- Not applicable: no existing applicable data exists.
- Partial. Agency builds upon some existing non-federal geospatial data.
- No. Agency does not build upon existing non-federal geospatial data.

7.2.a If yes or partial to Question 7.2, what ways do you build upon existing non-federal geospatial data? (Select all that apply and use the "other" textbox to add additional ways)

- Procurement/acquisition/grant
- Research partnership
- Cooperative data collection or crowd sourcing
- Mission assignments or Interagency Agreements
- MOAs/data sharing agreements
- Other (Textbox provided)

8.3 Does your agency leverage geospatial information to enhance reporting to the public or to Congress?

- Yes. Agency broadly leverages geospatial information to enhance public and Congressional reporting.
- Not applicable: Agency does not leverage geospatial information in published reports.
- Partial. Agency leverages some geospatial information to enhance either public or Congressional reporting.
- No. Agency does not leverage geospatial information to enhance either public or Congressional reporting.

8.3.a If yes or partial, for which of these audiences does your agency leverage geospatial information to enhance reporting? (Select all that apply)

- Public reports (e.g., fact sheets, data briefs, Annual reports, other published agency reports).
- Congressional reports.
- Internal agency and leadership plans, reports and communications.
- Not applicable: agency does not leverage geospatial information in published reports.

11.3 If yes to Question 11.1, has your agency searched other sources to determine if data necessary to meet requirements already exists (either within or outside the agency) before collecting or acquiring new data? (Select all that apply and use the "other" textbox to briefly describe additional sources)

- Market research
- Cross-agency or partner coordination
- Expert consultation
- Database search
- Agency follows a documented process or official policy
- No additional assessments are done
- Other (Textbox provided)

12.2 If yes to Question 12.1, what methods does your agency employ to ensure quality in geospatial data collected from non-federal sources?

(Check all that apply and use the "other" textbox to briefly describe additional methods used to ensure quality for geospatial data acquired by procurement or grant process)

- Evaluate data for quality prior to any acquisition.
- Geospatial data quality standards are specified in contract documents.
- Independent verification and validation (IV&V).
- Staff data experts review and approve geospatial data deliverables.
- Data standards are enforced through automated processes such as database controls or script tools.
- The agency acquires data from another federal agency that is responsible for QA/QC.
- No official documented QA/QC process is in place for acquisition of geospatial data.
- Other (Textbox provided)

Appendix B: Optional 2-Page Document

Executive Summary

The U.S. Department of Agriculture (USDA) is composed of different agencies. The term 'agencies' in this document refers to components of the Department. This overall document uses a composite approach that includes references to the proportion of its component agencies that characterize a given response that is representative of the Department ("Agency" in the language of the Geospatial Data Act corresponds to USDA).

Geospatial information is critical to USDA's mission; it is ubiquitous and drives how agencies provide disaster response and recovery assistance to agricultural producers; help producers implement conservation practices; oversee timber production in USDA's National Forests, ensure safe trade, advance conservation, combat climate change, support rural development; strengthen its programs in Tribal lands; enhance U.S. export opportunities; support historically underserved communities; protect the security of our agricultural assets, strengthen risk analyses and monitor plant or animal disease outbreaks. It is also widely used to help children and their families find nutritious meals when school is out, and critically during emergencies like the pandemic. Likewise, leveraging geospatial data collected across the Department assists USDA customers to exercise good land stewardship, increase the accuracy of the information needed for informed, agile decision-making in the face of disasters or emergencies, and improves customer access to USDA programs and services. A strong geospatial framework ensures safe agricultural import trade and strengthens U.S. agricultural export posture, an impact measured in billions of dollars.

As part of its efforts to align its operations with the Geospatial Data Act of 2018 (GDA), the Office of Management and Budget (OMB) Circular A-16, and the National Spatial Data Infrastructure (NSDI) guidance, USDA developed a geospatial assessment survey and distributed to its organizational units - USDA agencies and services - that currently use geospatial data, tools, and applications. The survey allows USDA to produce its comprehensive annual geospatial baseline. We used agencies that use Geographic Information Systems software as an indicator of the presence of geospatial data.

The following fifteen USDA agencies were represented within this assessment: Agricultural Marketing Services, Agricultural Research Service, Animal and Plant Inspection Services, Economic Research Service, Farm and Business Production Center, Farm Service Agency, Food and Safety Nutrition Service, Food and Safety Inspection Service, Foreign Agricultural Service, Forest Service, National Agricultural Statistics Service, National Resource Conservation Service, Office of the Chief Economist, Rural Development and Risk Management Agency. After USDA published its first Enterprise Geospatial Strategic Plan to align its operations with guidance from the GDA, OMB Circular A-16, and the National Spatial Data Infrastructure strategy in Fiscal Year (FY) 2021 (FY21), it has continued to update its strategy annually, including in FY23. It also established an executive office as part of the Office of the Chief Information Officer to provide Department-level coordination over USDA's geospatial portfolio, the Enterprise Geospatial Management Office (EGMO).

In FY23, EGMO merged with the Office of the Chief Data Officer as a new unit, Enterprise Data Management Center (EDMC) with EGMO being one branch within EDMC. The merger did not include

strategic changes, rather, it sought to establish cost savings by leveraging complementary workflows such as jointly pursuing data standards for all data types.

EGMO worked to update its internal regulations and policies to provide relevant guidance to its organizational units. Specifically, it updated it geospatial data management regulation and drafted a new Departmental manual that provides guidance on ISO 19115 adoption. Both instruments were published in FY23.

Our FY23 report shows that for all USDA agencies hosting National Geospatial Data Assets (NGDAs), they fully meet all agency requirements identified in the GDA.

In terms of outreach, USDA continues to host department-wide geospatial webinars and conferences. These events allowed for sharing examples of geospatial applications and highlighted USDA geospatial data products. In FY23 EGMO developed training materials to ensure USDA staff understood GDA requirements. It loaded the training module onto its Departmental professional development platform, AgLearn, and completed training for at least 45,000 employees, contractors, and cooperators. EGMO also developed training modules for metadata and similarly made these accessible to all USDA staff. In FY23, EGMO trained all staff associated with NGDAs on the fundamental requirements for metadata. A similar cadence of outreach events is planned for FY24, adding a systematic monthly advanced analytics training sessions to include geospatial artificial intelligence applications.

USDA tracked an overall increase in GDA compliance in FY23, specifically in the systematic alignment of its NGDAs with the GDA. Areas of improvement were documented in expanded inventories, data integration, agency record schedules, and in using Federal Geographic Data Committee (FGDC) geospatial data standards, including the standards for metadata.

Areas of expanded work beyond NGDAs, were reported in sharing data and in coordinating data collection with other Federal organizations across government and external state, tribal and business entities. Also, allocating resources to fulfill the responsibilities of effective geospatial governance at agencies. While expectations for all authoritative NGDAs have been met, with greater understanding came the desire to share and collaborate more to include data that is not an NGDA. Agencies reported exploration of new ways to facilitate broader cooperation between government, public and private sectors, while working with reduced budgets and staff.

FY23 was filled with broad-reach in-depth training, working group and agency collaboration, and information sharing sessions that led to a greater depth of learning about NSDI, GDA, and FGDC geospatial data standards requirements, and about agencies within the Department, in addition to cross-Departmental collaboration and partnerships.

USDA published an updated policy, DR3465-001 Enterprise Geospatial data Management Departmental Regulation, and published a new Departmental Manual, DM3465-001 Geospatial Metadata Standards, and began socializing those via Office Hours, in working groups, webinars and formal training with dedicated, permanent additions to USDA training requirements. Additionally, Mission Areas also led their own training sessions within each agency.

In terms of external oversight, EGMO received audit recommendations and successfully closed all six OIG GDA Audit recommendations and the associated 18 corrective actions. The corrective actions clearly documented strengthened management oversight and other alignment with statutory obligations,

especially in support of the NSDI. Agencies updated GDA Action Plans and began to more fully implement them. GDA training and multiple metadata fundamentals and standards training sessions took place and were integrated into the AgLearn online training tool. An investment in knowledge management - from sharing, brainstorming, training, collaboration, professional workforce development and more is showing up in our areas of increased improvement scores.

FY23 also saw an expanded portfolio, with a greater number of assets under scrutiny and requirements for control. Greater numbers of USDA staff are discovering the vast and robust ways the use of Geographic Information Systems (GIS) can simplify, expand, transform, and support their work in ways they never realized, and can improve the lives of our customers - thus more are using geospatial data and GIS.

At the end of FY23, evidence shows that USDA agencies gained a more comprehensive understanding of geospatial data governance, responsibility, and capabilities, and the desire to do more and to do it better. With leadership, oversight, and execution plans in place, we are establishing clear paths to increasing data sharing, focusing more on USDA customer needs, and maximizing the value of our geospatial assets and investments.