



**2020 Covered Agency Annual Report
and Self-Assessment**
for
National Aeronautics and Space Administration

Geospatial Data Act of 2018
Section 759(a) Requirements

March 19, 2021



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Acronyms

Acronym	Definition
ATO	Authorization to Operate
CA	Covered Agency
FGDC	Federal Geographic Data Committee
GDA	Geospatial Data Act
NGAC	National Geospatial Advisory Committee
NGDA	National Geospatial Data Asset(s)
NSDI	National Spatial Data Infrastructure
OIG	Office of the Inspector General
OMB	Office of Management and Budget
Agency Acronym	Agency
DHS	Department of Homeland Security
DOC	Department of Commerce
DOD	Department of Defense
DOE	Department of Energy
DOI	Department of the Interior
DOJ	Department of Justice
DOL	Department of Labor
DOS	Department of State
DOT	Department of Transportation
ED	Department of Education
GSA	General Services Administration
HHS	Department of Health and Human Services
HUD	Department of Housing and Urban Development
NASA	National Aeronautics and Space Administration
Treasury	Department of Treasury
USDA	U.S. Department of Agriculture
USEPA	Environmental Protection Agency
VA	Department of Veterans Affairs

Table of Acronyms.

Introduction

Section 759 (b) of the Geospatial Data Act (GDA) requires each covered agency¹ 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 National Aeronautics and Space Administration’s baseline annual report to the FGDC covering the period from October 5, 2018 – when the GDA was enacted – through Fiscal Year 2020 (September 30, 2020). The report was developed through a self-assessment template developed by the FGDC agencies. Subsequent annual reports will each 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 of 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.

This report is based on a standardized questionnaire and self-assessment score for each covered agency responsibility. The National Aeronautics and Space Administration 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. Please note that covered agencies are not expected to “meet expectations” in all areas for this first reporting cycle.

Where data or datasets are referenced,² information relates to all geospatial datasets owned or managed by the National Aeronautics and Space Administration 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, using the survey, as part of the agency’s submission. If provided, the document may include highlights and examples that can supplement the FGDC report to Congress, support the feedback process with the NGAC, or provide context to Office of the Inspector General (OIG) findings.

The National Aeronautics and Space Administration self-assessment GDA Covered Agency Annual Report was initially submitted during February 2021.

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 National Aeronautics and Space Administration

759(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	Made Progress Towards Expectations
KEY to Self-Assessment	<ul style="list-style-type: none"> • Meets expectations = <ul style="list-style-type: none"> ○ Yes to Question 1.4 • Made progress toward expectations = <ul style="list-style-type: none"> ○ Yes to Questions 1.1, 1.2, or 1.3 • Fails to meet expectations = <ul style="list-style-type: none"> ○ No to Questions 1.1, 1.2, 1.3, and 1.4

Clarifying Text: FGDC developed and released a new national strategic plan for the development of the National Spatial Data Infrastructure (NSDI) [GDA Sec. 755(c)], which was approved by the FGDC Steering Committee in November 2020. Covered Agency Geospatial Strategies [GDA Sec. 759(a)(1)], which will support the goals in the NSDI strategic plan, are 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 Has your agency reviewed the draft NSDI strategic plan?

- Yes

1.2 Has your agency developed a plan and timeline to complete development of the Covered Agency Geospatial Strategy appropriate to the agency's mission as required by GDA Sec.759(a)(1)?

- Yes

1.3 Is your Covered Agency Geospatial Strategy on schedule to be completed and submitted for agency approval by February 26, 2021?

- No

1.4 Has your agency completed and implemented your plan?

- No

1.5 If your plan is online? If yes, please provide the URL:

- No

1.6 Brief Summary (Limit 1000 characters, or approximately 150 words): Please provide a brief description of agency actions and accomplishments in addressing Sec. 759(a)(1), "Prepare and implement a strategy for advancing geospatial data activities appropriate to the agency's mission."

NASA maintains strategic plans for a number of relevant activities, and these are now being consulted and compiled into a comprehensive strategy documenting compliance with the National Spatial Data Infrastructure strategic plan in conjunction with the Agency Chief Data Officer. NASA is compliant with the intent of the Geospatial Act.

759(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	Made Progress Towards Expectations
KEY to Self-Assessment	<ul style="list-style-type: none"> • Meets expectations = <ul style="list-style-type: none"> ○ <i>Data is currently shared</i> selections for all agency appropriate parties for Question 2.1 and Yes to Questions 2.2 and 2.3 • Made progress toward expectations = <ul style="list-style-type: none"> ○ <i>Data is currently shared</i> 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 = <ul style="list-style-type: none"> ○ No to Questions 2.1, 2.2, and 2.3

Clarifying text:

- This section does not include efforts related to partners, which are covered under Question 7, Section 756(a)(7).
- Review the [GDA definition of geospatial data](#) to consider the questions in this section.
- Remember, your answers should include information about all geospatial datasets owned or managed by your agency that are, or should be, available to the public, not just National Geospatial Data Asset (NGDA) Datasets.
- Sharing standards-based data on the Internet using standard 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.
- Data that will not or cannot be distributed to the public does not need to be considered for GDA-related responses.

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

The following items were selected from a picklist:¹

- Data is currently openly shared to the public.

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)?

- Eligible geospatial metadata are shared in open formats, but not all data are open format.

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?

- Some programs/datasets have maintenance processes in place.

2.4 Optional Question: Use the following section to document 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.

Title	Description
Open Data Catalog	An Open Data catalog is available here http://data.nasa.gov/data.json and contains both spatial and non-spatial attributed datasets with 27510 records as of Feb 20, 2021. Additional effort is needed to ensure the proper maintenance/refresh of datasets is done in a timely manner.
Science Mission Directorate Catalog	A catalog that will enable discovery of all of NASA’s science data. This catalog is in the formulation, or development, phase through 2021.
NASA's Common Metadata Repository (CMR)	CMR is a high-performance, high-quality, continuously evolving metadata system that catalogs all data and service metadata records for NASA's Earth Observing System Data and Information System (EOSDIS) https://search.earthdata.nasa.gov/

2.5 Brief Summary (Limit 1000 characters, or approximately 150 words): Please provide a brief description of agency actions and accomplishments in addressing Sec. 759(a)(2), "collect, maintain, disseminate, and preserve geospatial data such that the resulting data, information, or products can be readily shared with other Federal agencies and non-Federal users."

The bulk of the Agency's geospatial Earth observing data are managed within the Distributed Active Archive Centers (DAACs) which strongly promote open sharing and open data standards. The data are cataloged and linked through the NASA Common Metadata Repository (CMR), accessed through EarthData (search.earthdata.nasa.gov/search). The CMR populates the top-level Agency Open Data catalog (data.nasa.gov) which contains both spatial and non-spatial attributed datasets with 27,510 records as of Feb 20, 2021. This populates the catalog of (data.gov) which in-turn populates the GeoPlatform catalog, thus providing a multilevel integrated pathway for broad discovery and use of NASA geospatial data. With very few exceptions, where necessary, those data sets are openly available in FGDC sanctioned open data formats and are made fully and openly available to the user community as soon as such data becomes available with no period of exclusive access.

759(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	<ul style="list-style-type: none"> • Meets expectations = <ul style="list-style-type: none"> ○ Yes to Question 3.1 • Made progress toward expectations = <ul style="list-style-type: none"> ○ Partial to Question 3.1 • Fails to meet expectations = <ul style="list-style-type: none"> ○ No to Question 3.1

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?

The following items were selected from a picklist:ⁱⁱ

- 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.

3.2 Brief Summary (Limit 1000 characters, or approximately 150 words): Please provide a brief description of agency actions and accomplishments in addressing Sec. 759(a)(3), "promote the integration of geospatial data from all sources."

NASA created and maintains api.nasa.gov which allows for machine-readable access to many agency datasets. Data.nasa.gov provides API access to datasets as well as options to download in machine-readable formats. The NASA Distributed Active Archive Centers (DAACs) are responsible for processing, archiving, and distributing NASA’s Earth science data. The primary website for access to all NASA Earth Science data located within DAACs is Earthdata Search (search.earthdata.nasa.gov). NASA endorses a number of standards, including data format standards, to ensure data are described in a consistent and comprehensive manner. The various formats and standards used by NASA include netCDF, OGC KML, HDF5 and GeoTIFF. NASA also invests in advanced specific data integration activities with high value individual data sets such as Harmonized Landsat Sentinel-2 (HLS) and in broadly capable thematic integration and analysis platforms such as the Multi-Mission Algorithm and Analysis Platform (MAAP).

759(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	Made Progress Towards Expectations
KEY to Self-Assessment	<ul style="list-style-type: none"> • Meets expectations = <ul style="list-style-type: none"> ○ Yes to Questions 4.1 and 4.2 • Made progress toward expectations = <ul style="list-style-type: none"> ○ Yes or Partial to Questions 4.1 and 4.2 or ○ No to either 4.1 or 4.2 • Fails to meet expectations = <ul style="list-style-type: none"> ○ No to Questions 4.1 and 4.2

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?

- Partial. Some agency programs are included in the archiving appraisal process for data information products and other records created in geospatial data and activities.

4.2 Are geospatial data assets included on agency record schedules?

- Partial. Some agency record schedules are inclusive of data information products and other records created in geospatial data and activities.

4.3 Brief Summary (Limit 1000 characters, or approximately 150 words): Please provide a brief description of agency actions and accomplishments in addressing Sec. 759(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."

NASA has approved retention schedules for Agency mission-oriented programs and projects that are written to be inclusive of all data products that may be generated. Data are addressed generically with no specification of types of data, but the Agency has begun development of a retention schedule exclusive to data, differentiating between phases of data and data products. The Earth Sciences Division has agreed to collaborate with Agency records management to refine such a data-specific retention schedule describing sets of records and appropriate retentions in order to seek NARA approval. Records appraisals are conducted internally by programs and schedules selected, often in collaboration with Center records management personnel. Because of NARA’s inability to maintain “data” and the fact that NASA maintains well-managed space science data centers, the Agency determined in 2020 that it will explore seeking NARA’s designation of our records centers as NARA affiliated archives.

759(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	<ul style="list-style-type: none"> • Meets expectations = <ul style="list-style-type: none"> ○ Yes to Question 5.1 • Made progress toward expectations = <ul style="list-style-type: none"> ○ Partial to Question 5.1 • Fails to meet expectations = <ul style="list-style-type: none"> ○ No to Question 5.1

5.1 Are adequate 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?

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 2-page PDF.

- Yes

5.2 Brief Summary (Limit 1000 characters, or approximately 150 words): Please provide a brief description of agency actions and accomplishments in addressing Sec. 759(a)(5), "allocate resources to fulfill the responsibilities of effective geospatial data collection, production, and stewardship with regard to related activities of the covered agency, and as necessary to support the activities of the Committee."

NASA routinely provides comprehensive data management resources for all large data generating activities as a part of the project design and budgeting. Most geospatial data within NASA is managed by the Earth Science Data Systems (ESDS) Program (<https://earthdata.nasa.gov/esds>) with a primary goal of Setting the Standard for Efficient Production and Stewardship of Science-Quality Data. The 12 Distributed Active Archive Centers (DAACs) within ESDS manage nearly 12,000 geospatial data sets amounting to more than 40 PB of geospatial and related data and are staffed in partnership with universities, other Federal agencies and NASA Centers. The Agency Chief Data Officer maintains Agency wide oversight for data in general and has consistently promoted effective geospatial data collection, production, and stewardship along with appropriate resources to achieve that.

759(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	<ul style="list-style-type: none"> • Meets expectations = <ul style="list-style-type: none"> ○ Yes to Questions 6.1, 6.2 and 6.3 • Made progress toward expectations = <ul style="list-style-type: none"> ○ Any other combination of Yes, No, and Partial to Questions 6.1, 6.2, and 6.3 • Fails to meet expectations = <ul style="list-style-type: none"> ○ No to Questions 6.1, 6.2, and 6.3

6.1. Are defined data standards used in collecting, processing, and/or disseminating the data being addressed?

The following items were selected from a picklist:ⁱⁱⁱ

- Yes. Eligible geospatial datasets use FGDC-endorsed data standards.
- Yes. Eligible geospatial datasets use data standards that comply with Office of Management and Budget (OMB) Circular A-119.

6.2 Does your agency maintain its metadata in an FGDC-endorsed, or ISO-compliant geospatial metadata standard format?

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/>.

The following items were selected from a picklist:^{iv}

- Yes. Eligible 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, Section 758(b)(1)(A)(iv) provides for “includ[ing] download access to all open geospatial data directly or indirectly collected by covered agencies” and Section 759(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 1000 characters, or approximately 150 words): Please provide a brief description of agency actions and accomplishments in addressing Sec. 759(a)(6), "use the geospatial data standards, including the standards for metadata for geospatial data, and other appropriate standards, including documenting geospatial data with the relevant metadata and making metadata available through the GeoPlatform."

NASA routinely provides comprehensive data management resources for all large data generating activities as a part of the project design and budgeting. Most geospatial data within NASA is managed by the Earth Science Data Systems (ESDS) Program (<https://earthdata.nasa.gov/esds>) with a primary goal of Setting the Standard for Efficient Production and Stewardship of Science-Quality Data. The 12 Distributed Active Archive Centers (DAACs) within ESDS manage nearly 12,000 geospatial data sets amounting to more than 40 PB of geospatial and related data and are staffed in partnership with universities, other Federal agencies and NASA Centers. The Agency Chief Data Officer maintains Agency wide oversight for data in general and has consistently promoted effective geospatial data collection, production, and stewardship along with appropriate resources to achieve that.

759(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	Made Progress Towards Expectations
KEY to Self-Assessment	<ul style="list-style-type: none"> • Meets expectations = <ul style="list-style-type: none"> ○ Yes to Questions 7.1 and Yes or Not applicable to Question 7.2 • Made progress toward expectations = <ul style="list-style-type: none"> ○ Any combination of Yes, Not applicable, Partial, or No to Questions 7.1 and 7.2 • Fails to meet expectations = <ul style="list-style-type: none"> ○ No to Questions 7.1 and 7.2

7.1 Are there 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)?

- Partial. There are processes in place for some agency mission areas, but not others.

7.1.a If yes or partial to Question 7.1, which external partners and stakeholders are involved in data management activities?

Clarifying text: The selection list provided was taken from the GDA Section 754(b)(C).

- Private sector entities
- Geospatial information user industries
- Professional associations
- Scholarly associations
- Nonprofit organizations
- Academia

7.1.b If yes or partial to Question 7.1, what processes are in place to ensure partners and stakeholders are involved?

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
- Feedback opportunities (e.g., contact email/phone, call center)
- Memoranda of Understanding
- Use other public comment processes

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?

- Cooperative data collection or crowd sourcing
- Mission assignments or Interagency Agreements
- MOAs/data sharing agreements

7.3 Brief Summary (Limit 1000 characters, or approximately 150 words): Please provide a brief description of agency actions and accomplishments in addressing Sec. 759(a)(7), "coordinate and work in partnership with other Federal agencies, agencies of State, tribal, and local governments, institutions of higher education, and the private sector to efficiently and cost-effectively collect, integrate, maintain, disseminate, and preserve geospatial data, building upon existing non-Federal geospatial data to the extent possible."

NASA maintains partnerships across the broad spectrum of other Federal agencies such as the National Oceanic and Atmospheric Administration (NOAA) and the United States Geological Survey (USGS), other national Space Agencies such as European Space Agency (ESA) and Japan Aerospace Exploration Agency (JAXA), the hundreds of institutions of higher education receiving funding through NASA research awards and cooperative agreements, and the private sector for geospatial data acquisition and management.

759(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	Made Progress Towards Expectations
KEY to Self-Assessment	<ul style="list-style-type: none"> • Meets expectations = <ul style="list-style-type: none"> ○ Yes to 8.1, 8.2 and 8.3 • Made progress toward expectations = <ul style="list-style-type: none"> ○ Any combination of Yes, Partial and No to Questions 8.1, 8.2 and 8.3 • Fails to meet expectations = <ul style="list-style-type: none"> ○ No to 8.1, 8.2 and 8.3

759(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

759(a)(8) (B) enhance operations;759(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.

759(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?

- Partial. Agency leverages some 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?

- Public reports (e.g., fact sheets, data briefs, Annual reports, other published Agency reports).

8.4 Optional Question: You may 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.

Example
NASA Earth Observatory https://earthobservatory.nasa.gov/
NASA Earthdata https://earthdata.nasa.gov/
Resilience Community curated in Geoplatform.gov https://communities.geoplatform.gov/resilience/
ISS Location Data https://spotthestation.nasa.gov/
NASA COVID 19 Dashboard https://earthdata.nasa.gov/covid19/

8.5 Brief Summary (Limit 1000 characters, or approximately 150 words): Please provide a brief description of agency actions and accomplishments in addressing Sec. 759(a)(8), "use geospatial information to—

- (A) make federal geospatial information and services more useful to the public;**
- (B) enhance operations;**
- (C) support decision making; and**
- (D) enhance reporting to the public and to Congress;"**

NASA commits extensive resources to making geospatial data and services more useful to the public and in decision making (see the table of examples) as well as in enhancing operations. Many other examples can be seen on Earthdata (<https://earthdata.nasa.gov/learn/articles>). With regard to operations, NASA uses geospatial data in Facility Master Plans, Construction of Facilities, Maintenance and Operations, Disaster Mitigation, Safety and Security are all supported by NASA Institutional GIS. In the future, selected portions of this data are expected to be made available in support of regional planning functions.

759(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	<ul style="list-style-type: none"> • Meets expectations = <ul style="list-style-type: none"> ○ Yes to Questions 9.1 and 9.2 • Made progress toward expectations = <ul style="list-style-type: none"> ○ Yes or Partial to Questions 9.1 or 9.2 • Fails to meet expectations = <ul style="list-style-type: none"> ○ No to Questions 9.1 or 9.2

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

Clarifying Text: The Privacy Threshold Assessment/Analysis would be 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 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 1000 characters, or approximately 150 words): Please provide a brief description of agency actions and accomplishments in addressing Sec. 759(a)(9), "protect personal privacy and maintain confidentiality in accordance with Federal policy and law."

NASA's Privacy Program places a high priority on protecting all Controlled Unclassified Information (CUI) created, collected, maintained, and managed by or on behalf of NASA. The Privacy Program develops and maintains Agency policy and procedures to protect information and ensure compliance with Federal laws and relevant privacy requirements. Privacy compliance is an important element of NASA's cybersecurity program, ensuring that employees are protected from embarrassment, identify theft, credit fraud, or other harm. The Office of the Chief Information Officer (OCIO) requires that all system, application, and information owners fully comply with NASA Privacy Policy and Procedures and actively promotes awareness and training for all employees.

NASA's Privacy Statement and Supporting Documentation:

https://www.nasa.gov/about/highlights/HP_Privacy.html#privacy

NASA's System of Records Notices (SORNs):

<https://www.nasa.gov/content/nasa-privacy-act-system-of-records-notice-sorns>

759(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	<ul style="list-style-type: none"> • Meets expectations = <ul style="list-style-type: none"> ○ Yes or Not applicable to Question 10.1 • Fails to meet expectations = <ul style="list-style-type: none"> ○ No to Question 10.1

10.1 If your Agency handles classified geospatial datasets, does it have a process to review 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 classified data.

10.2 Brief Summary (Limit 1000 characters, or approximately 150 words): Please provide a brief description of agency actions and accomplishments in addressing Sec. 759(a)(10), "participate in determining, when applicable, whether declassified data can contribute to and become a part of the National Spatial Data Infrastructure."

Not applicable.

759(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	<ul style="list-style-type: none"> • Meets expectations = <ul style="list-style-type: none"> ○ No to Question 11.1 or ○ Yes to Questions 11.1 and 11.2 and all agency appropriate responses to Question 11.3 • Made progress toward expectations = <ul style="list-style-type: none"> ○ Yes to Question 11.1 and Partial or No to Question 11.2 and agency appropriate responses to Question 11.3 • Fails to meet expectations = <ul style="list-style-type: none"> ○ Yes to Question 11.1 and No to Question 11.2 and <i>No additional assessments are done</i> selected for Question 11.3

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 procurement of data.

- Yes

11.2 As per [OMB Circular A-11 Guidance](#) (Section 25, Page 3), has your agency searched the [GeoPlatform Marketplace](#) prior to making planned geospatial data investments to determine if an existing source for that data is available and meets mission requirements?

- Yes. Agency has searched GeoPlatform Marketplace prior to all geospatial data investments.

11.3 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?

The following items were selected from a picklist:*

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

11.4 Optional Question: You may provide examples of cases where the agency did find existing data that met its needs or partnered on a joint data acquisition.

- Not applicable

11.5 Brief Summary (Limit 1000 characters, or approximately 150 words): Please provide a brief description of agency actions and accomplishments in addressing Sec. 759(a)(11), "Search all sources, including the GeoPlatform, to determine if existing Federal, State, local, or private geospatial data meets the needs of the covered agency before expending funds for geospatial data collection."

NASA considers the GeoPlatform to be among the appropriate resources that are consulted as a matter of due diligence before any major acquisition of geospatial data. Appropriate analysis and community consultation across all relevant sources involved across the many procurement routes. For example, simple procurement follows procedures in the Federal Acquisition Regulation (FAR) which generally include market research and evaluation. When data are acquired through scientific research such as is funded through Research Opportunities in Space and Earth Science (ROSES), the process generally includes evaluation by a panel of scientific experts. Other important avenues such as the Commercial Smallsat Data Acquisition (CSDA) Program (earthdata.nasa.gov/esds/csda) maintain specific sets of communication and evaluation criteria. NASA also maintains close collaborations with other international space agencies such as the European and Japanese Space Agencies which avoids duplication of effort.

759(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	<ul style="list-style-type: none"> • Meets expectations = <ul style="list-style-type: none"> ○ No to Question 12.1 or ○ Yes to Question 12.1 and all appropriate selections for Question 12.2 • Made progress toward expectations = <ul style="list-style-type: none"> ○ Yes to Question 12.1 and some agency appropriate selections for Question 12.2 • Fails to meet expectations = <ul style="list-style-type: none"> ○ Yes to Question 12.1 and <i>No official documented Quality Assurance/Quality Control (QA/QC) process is in place for acquisition of geospatial data</i> selected for Question 12.2

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.

12.2 What methods does your agency employ to ensure quality in geospatial data collected from non-federal sources?

The following items were selected from a picklist:^{vi}

- 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.

12.3 Brief Summary (Limit 1000 characters, or approximately 150 words): Please provide a brief description of agency actions and accomplishments in addressing Sec. 759(a)(12), "to the maximum extent practicable, ensure that a person receiving Federal funds for geospatial data collection provides high-quality data."

NASA employs appropriate community and procurement vehicle specific methods to guarantee geospatial data quality. For example, direct simple procurement follows procedures in the Federal

Acquisition Regulation (FAR) which generally includes quality assurance component. When data are acquired through scientific research such as is funded through Research Opportunities in Space and Earth Science (ROSES), the process generally includes evaluation by a panel of scientific experts. Geospatial data products of those efforts that are held by NASA to be employed in analyses or redistributed are documented with appropriate metadata and are appropriately reviewed according to community norms. For example, peer review is generally employed for publications. Other important avenues such as the Commercial Smallsat Data Acquisition (CSDA) Program (<https://earthdata.nasa.gov/esds/csdap>) maintain specific evaluation criteria.

759(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	<ul style="list-style-type: none"> • Meets expectations = <ul style="list-style-type: none"> ○ Yes to Question 13.1 • Fails to meet expectations = <ul style="list-style-type: none"> ○ No to Question 13.1

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: 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 1000 characters, or approximately 150 words): Please provide a brief description of agency actions and accomplishments in addressing Sec. 759(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."

NASA maintains three National Geospatial Data Assets: Advanced Spaceborne Thermal Emission and Reflection Radiometer (ASTER), Moderate Resolution Imaging Spectroradiometer (MODIS) - Aqua, Moderate Resolution Imaging Spectroradiometer (MODIS) - Terra. Under an MOU with Co-theme-Lead Covered Agency USGS, a POC is supported at the Land Processes Distributed Active Archive Center (LP DAAC) for collection, acquisition, maintenance, and dissemination of the NGDAs.

Appendix A: Survey Picklists

This appendix provides the full set of choices presented in the self-assessment survey as “check all that apply” responses used to generate this covered agency report.

ⁱ Question 2.1 Picklist

- 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).

ⁱⁱ Question 3.1.a. Picklist

- 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 (Textboxes provided)

ⁱⁱⁱ Question 6.1 Picklist

- Yes. Eligible geospatial datasets use FGDC-endorsed data 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.

^{iv} Question 6.2 Picklist

- 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.

^v Question 11.3 Picklist

- 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 (Textboxes provided)

^{vi} Question 12.2 Picklist

- 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 (Textboxes provided).