



Climate and Weather Theme Strategic Plan 2025 - 2027

Geospatial Data Act of 2018
Section USC 43 Sec 2805(b)(3) Requirements

September 30, 2024

1. Introduction	2
2. Background	2
I. Goal: 2805(b)(3)(E) – Administer the Theme.....	4
I.A. Objective: 2805(b)(3)(E)(i) – Point of Contact	4
I.B. Objective: 2805(b)(3)(E)(ii)(I) – Annual Reporting.....	4
I.C. Objective: 2805(b)(3)(E)(ii)(II) – Annual Report Comments	5
II. Goal: 2805(b)(3)(B) – Provide leadership and facilitate the development and implementation of a plan for nationwide population of the National Geospatial Data Asset data theme	6
II.A. Objective: 2805(b)(3)(B)(i) – Partnerships.....	6
II.B. Objective: 2805(b)(3)(B)(ii) and 2805(b)(3)(D) – User Needs.....	7
II.C. Objective: 2805(b)(3)(B)(iii) – Human and Financial Resources.....	8
II.D. Objective: 2805(b)(3)(E)(iii) – Publish Maps or Comparable Graphics Online	8
II.E. Objective: 2805(b)(3)(E)(iv) – Provide Access to NGDA Through the GeoPlatform.....	9
II.F. Objective: 2805(b)(3)(E)(v) – Coordinate with the GeoPlatform	10
II.G. Objective: 2805(b)(3)(E)(vi) – Publish Proven Geospatial Practices.....	10
III. Goal: 2805(b)(3)(A), (b)(3)(B)(iv) – Assess Metadata and Data Standards	12
III.A. Objective: 2805(b)(3)(B)(iv) – Metadata Standards	12
III.B. Objective: 2805(b)(3)(A)(i); (ii); (iii) – Data Standards.....	13
Appendix A: NGDA Data Themes (GDA Sec 2805) and NSDI Strategic Plan Crosswalk	15

1. Introduction

This Climate and Weather Theme Strategic Plan (henceforth Plan), developed in Fiscal Year (FY) 2024, spans three years, FY 2025 - FY 2027. The Plan outlines a strategy to achieve progress toward meeting [Section 2805 of the Geospatial Data Act of 2018](#)¹ (GDA). The Plan derives its origin from Sec. 2805 (b)(3)(B) to “provide leadership and facilitate the development and implementation of a plan for nationwide population of the National Geospatial Data Asset data theme.” The Plan is organized by goals, addressing major subsections of Sec. 2805, objectives supporting the goals, and anticipated actions to be taken over the lifecycle of the Plan to achieve progress.² In addition to meeting GDA requirements, these goals and objectives align with the [National Spatial Data Infrastructure \(NSDI\) Strategic Plan](#)³ as required by Section 2805(b)(3)(C). A crosswalk of the GDA and the NSDI Strategic Plan can be found in Appendix A of this document. For each FY covered by the Plan, the lead covered agency theme (see Background below) will generate an annual performance report, as required by the GDA, to inform on progress in achieving the Plan.

2. Background

The Federal Geographic Data Committee (FGDC), henceforth Committee, is composed of both covered and non-covered agencies as defined by the GDA. For each National Geospatial Data Asset (NGDA) data theme (henceforth theme), the Committee designates one or more covered agencies as lead covered agencies (LCA) for the theme. As called for in the [OMB Circular A-16 Supplemental Guidance](#),⁴ the lead covered agencies designate theme leads to oversee the management of the theme. The lead covered agencies have taken a coordinated approach to addressing GDA section 2805.

Starting in late FY 2022 and continuing into FY 2023, lead covered agencies collaborated on a common approach to improving annual performance reporting.⁵ The result is a Theme Strategic Plan template for use by all themes based on a common set of goals and objectives to meet the GDA requirements. This approach ensures the application of a common set of metrics and allows the FGDC Office of the

¹ <https://www.fgdc.gov/gda/43-usc-ch-46-geospatial-data-geospatial-data-act.pdf#page=8>

² Sec 2802(c)(A)(i) an evaluation of the progress of each lead covered agency in achieving the requirements under subparagraphs (A), (B), (C), and (D) of section 2805(b)(3) of this title; and (ii) a determination of whether, for each of subparagraphs (A), (B), (C), and (D) of section 2805(b)(3) of this title, each lead covered agency meets expectations, has made progress toward expectations, or fails to meet expectations.

³ <https://www.fgdc.gov/nsdi-plan>

⁴ https://www.whitehouse.gov/wp-content/uploads/legacy_drupal_files/omb/memoranda/2011/m11-03.pdf.

It should be noted that the revised Circular A-16 is currently in development for release by the Office of Management and Budget for use by the FGDC Community. Associated Technical Guidance may be developed by FGDC once the revised Circular is released.

⁵ NSDI Strategic Plan Goal 1.3. Identify common approaches and tools to meet GDA and related planning and reporting requirements.

Sec 2805 (b)(3)(E)(ii)(I): (ii) submit to the Committee—

(I) a performance report, at least annually, that documents the activities relating to and implementation of the National Geospatial Data Asset data theme, including progress in achieving the requirements under subparagraphs (A), (B), (C), and (D).

Secretariat (FGDC OS) to provide a consistent summary of individual and collective progress made by all themes in meeting GDA requirements. Depending on their complexity, themes may expand beyond the common set of goals, objectives, and actions within the template. In subsequent years, within the lifecycle of the Plan, the Department of Commerce (DOC) for the Climate and Weather Theme will provide an annual report that includes status on identified actions and demonstrates progress made in achieving the Plan goals and objectives aligned to the GDA requirements.

I. Goal: 2805(b)(3)(E) – Administer the Theme

The Committee designates National Geospatial Data Asset data themes (henceforth theme).⁶ The Committee also designates one or more covered agencies as the lead covered agencies for each theme.⁷ Themes may include NGDA datasets that are contributed by other covered agencies and non-covered agencies. The Department of Commerce is designated as the lead for the Climate and Weather Theme.

I.A. Objective: 2805(b)(3)(E)(i) – Point of Contact

The GDA requires lead covered agencies to designate a point of contact within the lead covered agency who shall be responsible for developing, maintaining, coordination relating to, and disseminating data using the GeoPlatform.

GDA Reference

(b) Lead covered agencies

(3) Specific responsibilities

To assist in fulfilling the responsibilities under paragraph (2) with respect to a National Geospatial Data Asset data theme, the lead covered agencies shall—

(E) *as part of administering the National Geospatial Data Asset data theme—*

(i) *designate a point of contact within the lead covered agency who shall be responsible for developing, maintaining, coordination relating to, and disseminating data using the GeoPlatform;*

I.A.i. Action(s) to Meet Objective: 2805(b)(3)(E)(i) – Point of Contact

The Department of Commerce shall designate a point of contact (POC) who shall be responsible for developing, maintaining, coordination relating to, and disseminating data using the GeoPlatform. The POC will be updated and reported annually. In addition to annual reporting, the Department of Commerce shall inform the Committee of interim changes to the POC as necessary to maintain continuity.

I.B. Objective: 2805(b)(3)(E)(ii)(I) – Annual Reporting

The GDA requires lead covered agencies to submit a performance report, at least annually, that documents the activities relating to and implementation of the National Geospatial Data Asset data theme.

GDA Reference

(b) Lead covered agencies

(3) Specific responsibilities

To assist in fulfilling the responsibilities under paragraph (2) with respect to a National Geospatial Data Asset data theme, the lead covered agencies shall—

(E) *as part of administering the National Geospatial Data Asset data theme—*

⁶ Sec 2805(a) the term "National Geospatial Data Asset data theme" is defined as the National Geospatial Data Asset core geospatial datasets (including electronic records and coordinates) relating to a topic or subject designated under section 2805 of this title.

⁷ Sec 2805(b)(1) For each National Geospatial Data Asset data theme, the Committee shall designate one or more covered agencies as the lead covered agencies for the National Geospatial Data Asset data theme.

(ii) submit to the Committee—

(I) a performance report, at least annually, that documents the activities relating to and implementation of the National Geospatial Data Asset data theme, including progress in achieving the requirements under subparagraphs (A), (B), (C), and (D); and

I.B.i. Action(s) to Meet Objective: 2805(b)(3)(E)(ii)(I) – Annual Reporting

The Department of Commerce shall submit a performance report annually, that documents the activities relating to and implementation of the National Geospatial Data Asset data theme, including progress in achieving the requirements under subparagraphs (A), (B), (C), and (D).

I.C. Objective: 2805(b)(3)(E)(ii)(II) – Annual Report Comments

The GDA requires lead covered agencies to submit comments to the Committee about the annual performance summary, as appropriate.

GDA Reference

(b) Lead covered agencies

(3) Specific responsibilities

To assist in fulfilling the responsibilities under paragraph (2) with respect to a National Geospatial Data Asset data theme, the lead covered agencies shall—

(E) as part of administering the National Geospatial Data Asset data theme—

(ii) submit to the Committee—

(II) comments, as appropriate, regarding the summary and evaluation of the performance report provided by the Committee under section 2802(c)(12) of this title;

I.C.i. Action(s) to Meet Objective: 2805(b)(3)(E)(ii)(II) – Annual Report Comments

The Department of Commerce shall submit comments, as appropriate, regarding the summary and evaluation of the performance report provided by the FGDC OS under section 2802(c)(12).

The Department of Commerce will socialize the summary report with Theme leadership and dataset managers.

II. Goal: 2805(b)(3)(B) – Provide leadership and facilitate the development and implementation of a plan for nationwide population of the National Geospatial Data Asset data theme

The Climate and Weather Theme Leads developed this Plan in coordination with the agencies that manage and contribute to NGDA datasets within the Theme. Over the next three years, the Theme Leads shall facilitate the implementation of this Plan through annual performance reporting. Each of the following goals and objectives within this Plan support the nationwide population of the National Geospatial Data Asset data theme in direct correlation with the GDA.

II.A. Objective: 2805(b)(3)(B)(i) – Partnerships

The GDA requires lead covered agencies to provide leadership and facilitate a plan to develop partnership programs with states, Indian tribes, institutions of higher education, private sector entities, other federal agencies, and local governments.

GDA Reference

(b) Lead covered agencies

(3) Specific responsibilities

To assist in fulfilling the responsibilities under paragraph (2) with respect to a National Geospatial Data Asset data theme, the lead covered agencies shall—

(B) provide leadership and facilitate the development and implementation of a plan for nationwide population of the National Geospatial Data Asset data theme, which shall—

(i) include developing partnership programs with States, Indian tribes, institutions of higher education, private sector entities, other Federal agencies, and local governments;

II.A.i. Action(s) to Meet Objective: 2805(b)(3)(B)(i) – Partnerships

The Climate and Weather Theme will provide leadership and facilitate developing partnership programs to support nationwide population of the NGDA data through participation in many groups supporting NGDA data, including applicable FGDC working groups, agency data standards working groups, and international standards bodies. In addition, all agency representatives, dataset owners, and Theme leads will work internally to develop strategic data strategies to make and meet GDA requirements. The DOC participates in the World Meteorological Organization (WMO) and the U.S. Global Change Research Program (USGCRP).

NGDAs housed under the Department of Commerce will also continue to advance the [Commerce Geospatial Strategy for fiscal years 2021-2024](#),⁸ as described by the [Department of Commerce Geospatial Strategic Action Plan](#).⁹ The Strategy includes goals and supporting objectives that directly support the Department of Commerce Data Strategy (2021–2024), the Geospatial Data Act of 2018

⁸ Commerce Geospatial Strategy for fiscal years 2021-2024

<https://www.commerce.gov/sites/default/files/2021-07/US-Dept-of-Commerce-%20Geospatial-Strategy-FY21-24.pdf>

⁹ Department of Commerce Geospatial Strategic Action Plan

<https://www.commerce.gov/sites/default/files/2021-10/US-Dept-of-Commerce-Geospatial-Strategic-Action-Plan.pdf>

(GDA), and the National Spatial Data Infrastructure Strategic Plan (2021–2024). The NGDA theme datasets will continue to offer support and work to advance the strategies and policies as they are updated in FY 24/25. Commerce will continue to enhance the management and promote the use of its geospatial programs, leverage shared services (both within and outside the Department), and continue to lead the national and international geospatial community by engaging with other sectors and users of its geospatial data and services.

II.B. Objective: 2805(b)(3)(B)(ii) and 2805(b)(3)(D) – User Needs

The GDA requires lead covered agencies to provide leadership and facilitate a plan to meet the needs of users of geospatial data including a process to, as necessary, collect and analyze information from users of NGDA within the Theme and incorporate the needs of those users into strategies related to the NGDA data theme.

GDA References

(b) Lead covered agencies

(3) Specific responsibilities

To assist in fulfilling the responsibilities under paragraph (2) with respect to a National Geospatial Data Asset data theme, the lead covered agencies shall—

(B) provide leadership and facilitate the development and implementation of a plan for nationwide population of the National Geospatial Data Asset data theme, which shall—

(ii) meet the needs of users of geospatial data;

AND

(b)(3)(D) as necessary, collect and analyze information from users of geospatial data within the National Geospatial Data Asset data theme regarding the needs of the users for geospatial data and incorporate the needs of users in strategies relating to the National Geospatial Data Asset data theme;

II.B.i. Action(s) to Meet Objective: 2805(b)(3)(B)(ii) and 2805(b)(3)(D) – User Needs

The Climate and Weather Theme leads will customize the new Theme Hub site on the GeoPlatform and update Theme leads and dataset managers' information on an annual basis. Individual NGDA datasets will continue to implement several efforts to address user needs. These include but are not limited to web-based stakeholder engagement and feedback tools, community engagement, trade and industry meetings, and web service feedback forms. The four NGDA datasets under the Climate and Weather Theme, [NOAA Geostationary Operational Environmental Satellite \(GOES\) I-M and N-P Series Imager Data](#),¹⁰ [NOAA High-Resolution Sea Surface Temperature \(SST\) Analysis Products](#),¹¹ [NOAA NEXt-Generation RADar \(NEXRAD\) Products](#),¹² and [NOAA Polar-orbiting Operational Environmental Satellites \(POES\) Radiometer Data](#)¹³ are all sought-after product offerings for a variety of users nationwide and

¹⁰ NOAA Geostationary Operational Environmental Satellite (GOES) I-M and N-P Series Imager Data
<https://www.ncei.noaa.gov/access/metadata/landing-page/bin/iso?id=gov.noaa.ncdc:C00681>

¹¹ NOAA High-Resolution Sea Surface Temperature (SST) Analysis Products
<https://www.ncei.noaa.gov/access/metadata/landing-page/bin/iso?id=gov.noaa.ncdc:C00680>

¹² NOAA NEXt-Generation RADar (NEXRAD) Products
<https://www.ncei.noaa.gov/products/radar/next-generation-weather-radar>

¹³ NOAA Polar-orbiting Operational Environmental Satellites (POES) Radiometer Data
<https://www.ncei.noaa.gov/access/metadata/landing-page/bin/iso?id=gov.noaa.ncdc:C00683>

under many different disciplines, trades, and academia, and government.

This information will be used to update dataset web services, data viewers, and metadata records as well as create new features to support user requests.

II.C. Objective: 2805(b)(3)(B)(iii) – Human and Financial Resources

The GDA requires lead covered agencies to provide leadership and facilitate a plan to address human and financial resource needs for nationwide population of the NGDA data theme.

GDA Reference

(b) Lead covered agencies

(3) Specific responsibilities

To assist in fulfilling the responsibilities under paragraph (2) with respect to a National Geospatial Data Asset data theme, the lead covered agencies shall—

(B) provide leadership and facilitate the development and implementation of a plan for nationwide population of the National Geospatial Data Asset data theme, which shall—

(iii) address human and financial resource needs;

II.C.i. Action(s) to Meet Objective: 2805(b)(3)(B)(iii) – Human and Financial Resources

The Department of Commerce demonstrates leadership by effectively managing existing human and financial resources needed to meet NGDA guidelines and regulations. The Climate and Weather Theme works to optimize available assets and leverage existing resources creatively, ensuring compliance and the highest standards of data integrity. While the core GDA requirements are currently being met, additional resources are still crucial to fully support and sustain NGDA management and ensure continued adherence to standards and regulations as well as address the requirements for implementing a plan for nationwide population of the NGDA theme.

II.D. Objective: 2805(b)(3)(E)(iii) – Publish Maps or Comparable Graphics Online

The GDA requires lead covered agencies to publish maps or comparable graphics online showing the extent and status of NGDA data within the Theme.

GDA Reference

(b) Lead covered agencies

(3) Specific responsibilities

To assist in fulfilling the responsibilities under paragraph (2) with respect to a National Geospatial Data Asset data theme, the lead covered agencies shall—

(E) as part of administering the National Geospatial Data Asset data theme—

(iii) publish maps or comparable graphics online (in accordance with the mapping conventions specified by the Committee) showing the extent and status of the National Geospatial Data Asset data themes for which the covered agency is a lead covered agency;

II.D.i. Action(s) to Meet Objective: 2805(b)(3)(E)(iii) – Publish Maps or Comparable Graphics Online

The Climate and Weather Theme will disseminate NGDA data by publishing maps and graphics through various platforms. NCEI provides a [GIS Mapping service for NEXRAD data](#),¹⁴ as well as the [Optimum Interpolation Sea Surface Temperature \(OISST\)](#)¹⁵ in ERDDAP/griddap. The newer generation satellite data which superseded the legacy GOES and POES NGDAs have online graphics. Dataset websites and [NOAA's GeoPlatform](#)¹⁶ host datasets, web applications, and interactive maps and viewers, allowing users to explore the extent and status of NGDA datasets. NGDAs will be also used to produce static graphics when needed to support focused projects or presentations.

II.E. Objective: 2805(b)(3)(E)(iv) – Provide Access to NGDA Through the GeoPlatform

The GDA requires lead covered agencies to encourage Theme data and metadata sources to share their data via the GeoPlatform.

GDA Reference

(b) Lead covered agencies

(3) Specific responsibilities

To assist in fulfilling the responsibilities under paragraph (2) with respect to a National Geospatial Data Asset data theme, the lead covered agencies shall—

(E) as part of administering the National Geospatial Data Asset data theme—

(iv) encourage individuals and entities that are a source of geospatial data or metadata for geospatial data for the National Geospatial Data Asset data theme to provide access to such data through the GeoPlatform;

II.E.i. Action(s) to Meet Objective: 2805(b)(3)(E)(iv) – Provide Access to NGDA Through the GeoPlatform

The Climate and Weather Theme encourages individuals and entities to provide access to that data and metadata through the GeoPlatform by ensuring metadata records are recorded in the [National Centers for Environmental Information's \(NCEI\)](#)¹⁷ data storage and access services. NCEI maintains one of the most significant archives on Earth, with comprehensive oceanic, atmospheric, and geophysical data, archiving over 229 terabytes of data each month from over 130 observing platforms. NCEI provides access to an extensive archive of environmental data through several platforms. NCEI delivers the climate, coastal, oceanographic, and geophysical data you need in a variety of formats. Metadata records are added into the NOAA Web Accessible Folder (WAF), which data.gov then harvests. The Climate and Weather NGDAs are then pulled into the National GeoPlatform.

NOAA OneStop, through NCEI, can be used to search for any NOAA data with a metadata record. It is an interoperable tool designed to explore data from across scientific disciplines, formats, time periods, and

¹⁴ GIS Mapping service for NEXRAD data

<https://www.ncei.noaa.gov/maps/radar/>

¹⁵ Optimum Interpolation Sea Surface Temperature (OISST)

https://www.ncei.noaa.gov/erddap/griddap/ncdc_oisst_v2_avhrr_amsr_by_time_zlev_lat_lon.graph

¹⁶ National Oceanic and Atmospheric Administration (NOAA). (2024). *NOAA's GeoPlatform*.

<https://noaa.maps.arcgis.com/>

¹⁷ National Centers for Environmental Information's (NCEI)

<https://www.ncei.noaa.gov/>

locations. OneStop’s wide range of filtering options can pinpoint specific collections or granules that may not be discoverable in other mediums, with data visualization tools that can display a variety of data types in the same viewing environment, and correlate information and variables with specific locations (<https://www.ncei.noaa.gov/maps-and-geospatial-products>).

NOAA's Geoplatform provides geospatial data, maps, and analytics in support of the agency's mission. The site is a GIS application using Esri's ArcGIS Online. Prepared products including Maps, Layers, Scenes, and Apps and StoryMaps are available to the public for browsing.

II.F. Objective: 2805(b)(3)(E)(v) – Coordinate with the GeoPlatform

The GDA requires lead covered agencies to coordinate with the GeoPlatform as part of administering the NGDA data theme.

GDA Reference

(b) Lead covered agencies

(3) Specific responsibilities

To assist in fulfilling the responsibilities under paragraph (2) with respect to a National Geospatial Data Asset data theme, the lead covered agencies shall—

(E) as part of administering the National Geospatial Data Asset data theme—

(v) coordinate with the GeoPlatform;

II.F.i. Action(s) to Meet Objective: 2805(b)(3)(E)(v) – Coordinate with the GeoPlatform

As part of administering the NGDA data theme, the Climate and Weather Theme leads will coordinate with the GeoPlatform by attending monthly NGDA Theme meetings, making updates as necessary to the datasets, coordinating annual reporting, and ensuring all datasets meet FGDC Technical Guidance requirements. Theme leads will coordinate with the GeoPlatform Service Desk (servicedesk@geoplatform.gov) to ensure NGDA metadata is properly harvested in data.gov and geoplatform.gov as needed.

The Climate and Weather Theme leads will also coordinate with the NGDA Portfolio Team (NGDATeam@fgdc.gov) and the GeoPlatform Service Desk on issues limiting their ability to maintain and update the Climate and Weather Theme Hub site content. Theme leads will coordinate with NGDA Team, the GeoPlatform Service Desk, and managers of NGDA data to facilitate clear understanding of documented requirements for providing data access through the GeoPlatform (e.g., participation in monthly Theme Community or other meetings and training sessions, feedback on draft and final guidance, participation in small teams developing technical guidance when possible).

II.G. Objective: 2805(b)(3)(E)(vi) – Publish Proven Geospatial Practices

The GDA requires lead covered agencies to identify and publish proven practices for the use and application of geospatial data of the LCA as part of administering the NGDA data theme.

GDA Reference

(b) Lead covered agencies

(3) Specific responsibilities

To assist in fulfilling the responsibilities under paragraph (2) with respect to a National Geospatial Data Asset data theme, the lead covered agencies shall—

(E) as part of administering the National Geospatial Data Asset data theme—

(vi) identify and publish proven practices for the use and application of geospatial data of the lead covered agency.

II.G.i. Action(s) to Meet Objective: 2805(b)(3)(E)(vi) – Publish Proven Geospatial Practices

The Climate and Weather Theme identifies and publishes proven practices for the use and application of its geospatial data by providing guides, best practices, and standard operating procedures. These resources are primarily posted on agency program dataset websites, and/or links are provided in NGDA metadata. Story maps, web pages, or other presentations that provide references and examples of use cases and applications using NGDA datasets will also be created and used as needed for specific projects or presentations.

III. Goal: 2805(b)(3)(A), (b)(3)(B)(iv) – Assess Metadata and Data Standards

To maximize the utility of the theme, the GDA requires lead covered agencies to identify needs related to the following three items: data standards for geospatial data within the NGDA data theme, metadata standards for geospatial data within the NGDA data theme, and access to NGDA data and metadata through the GeoPlatform.

III.A. Objective: 2805(b)(3)(B)(iv) – Metadata Standards

The GDA requires lead covered agencies to identify needs related to standards, metadata for geospatial data within the NGDA data theme, and the GeoPlatform to ensure that the NGDA are Findable, Accessible, Interoperable, and Reusable (FAIR).

GDA Reference

(b) *Lead covered agencies*

(3) *Specific responsibilities*

To assist in fulfilling the responsibilities under paragraph (2) with respect to a National Geospatial Data Asset data theme, the lead covered agencies shall—

(B) *provide leadership and facilitate the development and implementation of a plan for nationwide population of the National Geospatial Data Asset data theme, which shall—*

(iv) *identify needs relating to standards, metadata for geospatial data within the National Geospatial Data Asset data theme, and the GeoPlatform;*

III.A.i. Action(s) to Meet Objective: 2805(b)(3)(B)(iv) – Metadata Standards

The Climate and Weather Theme leads will coordinate with theme dataset managers to update NGDA dataset metadata content as needed to follow the recommended best practices with the [FGDC Technical Guidance: Data.gov and The GeoPlatform Metadata Recommendations Including Guidelines for National Geospatial Data Assets \(NGDA\)](#)¹⁸ while remaining in compliance with ISO 19115-2. The Climate and Weather Theme leads will also maintain the edits made to comply with the FGDC technical guidance. Specific actions include but are not limited to, adding or updating dataset creation and/or publication dates, updating web service documentation (e.g., URLs and Global Change Master Directory (GCMD) Keywords) to increase findability, and providing metadata for individual collection members (child) in addition to the metadata record for the entire collection (parent) when appropriate.

The Department of Commerce is required by the Geospatial Data Act to document geospatial data with standard metadata in the national GeoPlatform. All NGDAs housed under NOAA are required to comply or be interoperable with the ISO 19115-2 metadata standard as per the NOAA Data Management Handbook.

¹⁸ *FGDC Technical Guidance: Data.gov and The GeoPlatform Metadata Recommendations Including Guidelines for National Geospatial Data Assets (NGDA)*

<https://www.fgdc.gov/technical-guidance/metadata/fgdc-technical-guidance-datagov-geoplatform-ngda.pdf>

III.B. Objective: 2805(b)(3)(A)(i); (ii); (iii) – Data Standards

The GDA requires lead covered agencies to develop a plan to originate and implement needed standards consistent with relevant community and international practices in accordance with Office of Management and Budget Circular A–119, or any successor thereto.

GDA Reference

(b) Lead covered agencies

(3) Specific responsibilities

To assist in fulfilling the responsibilities under paragraph (2) with respect to a National Geospatial Data Asset data theme, the lead covered agencies shall—

(A) provide leadership and facilitate the development and implementation of geospatial data standards for the National Geospatial Data Asset data theme, with a particular emphasis on a data content standard for the National Geospatial Data Asset data theme, including by—

(i) assessing existing standards;

(ii) identifying anticipated or needed data standards; and

(iii) developing a plan to originate and implement needed standards with relevant community and international practices—

NGDA Baseline Standards Inventory

In 2021, the lead covered agencies participated in an FGDC-conducted NGDA standards inventory. This inventory was the initial action to identify the standards currently in use, or that needed to be removed or replaced, in the Committee’s list of previously endorsed standards. The inventory will be used to inform the changes required in the FGDC-approved standards list once the Committee implements a process to “establish and maintain geospatial data standards” in accordance with the GDA. The standards inventory results and background information are available on the GeoPlatform NGDA Portfolio [Standards](#)¹⁹ page.

III.B.i. Action(s) to Meet Objective: 2805(b)(3)(A)(i); (ii); (iii) – Data Standards

The Climate and Weather Theme will provide leadership and facilitate the development and implementation of geospatial data content standards by participating in groups supporting NGDA data standards, FGDC working groups, agency data standards working groups, and international standards bodies. These groups may include, but are not limited to the World Meteorological Organization (WMO), International Standards Organization (ISO), International Hydrographic Organization (IHO), International Maritime Organization (IMO), and the [FGDC Marine and Coastal Data Subcommittee](#).²⁰

The Climate and Weather Theme datasets will be reviewed regularly to ensure they follow data content standards consistent with relevant community and international practices. A list of FGDC-endorsed data content standards and/or voluntary consensus standards that are applicable to the Theme’s NGDA Datasets will be published on the Theme Hub Site after the 2024 standards inventory is complete. If standards are changed or modified, these changes will be reflected on the Climate and Weather Theme Hub site by the Theme leads.

¹⁹ <https://ngda-portfolio-community-geoplatfrom.hub.arcgis.com/pages/standards>

²⁰ FGDC Marine and Coastal Data Subcommittee
<https://www.fgdc.gov/organization/working-groups-subcommittees/mcsdsc/index.html>

Individual NGDA datasets will also undertake efforts to establish and/or update geospatial data standards. Specific actions may include, but are not limited to, assessing existing and anticipated data content standards, ensuring NGDA datasets meet these standards, and developing implementation plans to ensure all NGDA datasets meet geospatial data standards. The Climate and Weather Theme leads and dataset managers will work with the Senior Agency Official for Geospatial Information (SAOGI) to submit the standards for endorsement to the FGDC.

Existing Standards on NGDA Site

- 1) Standards & Best Practices [NASA, Earthdata, World Meteorological Organization (WMO)]
- 2) INCITS/ISO 19115-2:2009[R2014] Geographic information - Metadata - Part 2: Extensions for Imagery and Gridded Data
- 3) National Archives and Records Administration (NARA) Geospatial Formats
- 4) GOES Data Book; GOES Calibration
- 5) NOAA Technical Report 82/GVAR Format
- 6) FGDC Technical Guidance: Data.gov and The GeoPlatform Metadata Recommendations - including Guidelines for National Geospatial Data Assets (NGDA), [NOAA] ISO Metadata Standard - NGDC Wiki - NOAA, [NOAA] Metadata - National Geophysical Data Center – NOAA
- 7) GeoTIFF Revision 1.0, INCITS/ISO 19144-1:2009 [R2015] Geographic information - Classification systems - Part 1: Classification system structure, INCITS/ISO 6709:2008/COR 1:2009 [R2015] Standard representation of geographic point location by coordinates - Technical Corrigendum 1, INCITS/ISO 6709:2008[R2013] Standard representation of geographic point location by coordinates
- 8) ISO 19107:2019 Geographic information — Spatial schema
- 9) INCITS/ISO 19108:2002[R2013], Geographic information – Temporal schema, INCITS/ISO 19110:2005 [R2015] Geographic information - Methodology for feature cataloging, INCITS/ISO 19111:2007 [R2012] Geographic information - Spatial referencing by coordinates, ISO 19108:2002 Geographic information — Temporal schema
- 10) FHM-11: WSR-88D Products and Algorithms
- 11) ISO 19135-1:2015 Geographic information — Procedures for item registration — Part 1: Fundamentals
- 12) Hierarchical Data Format-5 (HDF5); NetCDF-4 Format

Appendix A: NGDA Data Themes (GDA Sec 2805) and NSDI Strategic Plan Crosswalk

The following is a crosswalk of National Geospatial Data Asset Data Themes (GDA Sec 2805) referenced within this Plan as the GDA relates to the NSDI Strategic Plan.

Goal	GDA Section	NSDI	GDA
I.	2805(b)(3)(E)	1.3, 2.1, 4.1	Goal: Administration of the Theme
I.A.	2805(b)(3)(E)(i)		Objective: Point of Contact
I.B.	2805(b)(3)(E)(ii)(I)	2.1, 4.1	Objective: Annual Reporting
I.C.	2805(b)(3)(E)(ii)(II)	2.1, 4.1	Objective: Annual Report Comments
II.	2805(b)(3)(B)	2.1-2.4, 3.1-3.4	Goal: Provide leadership and facilitate the development and implementation of a plan for nationwide population of the National Geospatial Data Asset data theme
II.A.	2805(b)(3)(B)(i)	4.1-4.5	Objective: Partnerships
II.B.	2805(b)(3)(B)(ii), 2805(b)(3)(D)	2.4 3.1, 3.3, 4.1, 4.2	Objective: User Needs
II.C.	2805(b)(3)(B)(iii)	4.4	Objective: Human and Financial Resources
II.D.	2805(b)(3)(E)(iii)	2.4, 3.1-3.4	Objective: – Publish Maps or Comparable Graphics Online
II.E.	2805(b)(3)(E)(iv)	2.4, 3.1-3.4	Objective: Provide Access to NGDA Through the GeoPlatform
II.F.	2805(b)(3)(E)(v)	3.1	Objective: Coordinate with the GeoPlatform
II.G.	2805(b)(3)(E)(vi)	2.4	Objective: Publish Proven Geospatial Practices
III.	2805(b)(3)(A), (b)(3)(B)(iv)	3.4, 4.5	Goal: Data and Metadata Standards
III.A.	2805(b)(3)(B)(iv)	3.4, 4.5	Objective: Metadata Standards
III.B.	2805(b)(3)(A)(i)-(iii)	3.4, 4.5	Objective: Plan for Standards