The National Spatial Data Infrastructure And Geospatial Data Act of 2018

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Quiz

• What was the first Federal Agency established to map U.S. Territory?
• Office of Coast Survey
• When was it established?
• February 10, 1807
• Which president signed it into law?
• Thomas Jefferson
Background

• America has always managed geospatial data
• Mapping and charting technologies constantly evolve
• Modern computing and the Internet present opportunities for
  • Unprecedented access to geospatial data
  • Improved data integration
  • Detailed examinations
  • Our greatest understanding of American characteristics
• Management needs evolve parallel to technology
• The GDA addresses modern geospatial data management needs
Agenda

• Define the National Spatial Data Infrastructure
• Establish the significance of the NSDI
• Provide a review of the 2018 GDA
• Review Federal Activities Related to the GDA
NATIONAL SPATIAL DATA INFRASTRUCTURE (NSDI)
Governing Documents

• OMB Circular A-16
  • First issued in 1953
  • Directs the Federal Government to manage its geospatial efforts efficiently
  • 1990 revision established the FGDC
  • 2002 revision strengthened coordination responsibilities of Federal agencies and incorporated the NSDI

• Executive Order 12906
  • Established the NSDI in 1994
  • In 2003, EO 13286 amended and affirmed EO 12906 by incorporating the Department of Homeland Security

• Geospatial Data Act of 2018
Purpose of the NSDI

• Assures that spatial data, from multiple sources, are...
  • Available,
  • Easily integrated, and
  • Foster a better understanding our physical and cultural world
NSDI Components

• Data Themes
• Metadata
• GeoPlatform
• Standards
• Partnerships
• Technologies
• Policies
NSDI Data Themes

- **The Actual Geospatial Data**
- Themes are the core of the NSDI
- Describe physical and cultural subjects and topics
- Specifically illustrated by *Data Assets* (Layers)
- Transportation Theme as defined by its layers
  - Airports and Runways, Roads, Bridges, Intermodal Freight Facilities, Intermodal Passenger, Facilities, Rail Lines and Nodes, Transit Lines, Transit Stops, Navigable Waterways and Nodes, Inland Electronic Nautical Charts, Waterway Locks, Ports
NSDI Metadata

- **Makes Data Discoverable**
- Metadata describes the content, origin, pedigree, and accuracy of the data being published or consumed
- Establishes publisher as a reliable, authoritative source
- Fosters user confidence
- Without it consumers can’t
  - Find data
  - Perform analysis
  - Inform decision makers
NSDI GeoPlatform

- **Makes Data Accessible**
- A suite of well-managed, highly available, and trusted
  - geospatial data
  - services
  - applications
- Facilitates meeting the mission needs of the US Geospatial Community
- Remember Metadata?
  - Fundamental to the GeoPlatform
  - Enables the discovery of data, services, and applications
NSDI Standards

• **Makes Data Interoperable**
• Provides common storage and retrieval methods
• Enables data exchange
• Promotes technological efficiency
  – Technologies are developed to accommodate a data standard
  – Infrastructure is developed to meet the needs of the community
  – Applications become vendor neutral
NSDI Partnerships

• **Reduces Duplication**
• Coordination and cooperation is essential
• Agencies use similar data to perform similar analysis
• Working blind makes us susceptible to duplicative work
• A heightened situational awareness enables us to share resources
NSDI Technologies

• **Enables Data Management & Dissemination**
• The infrastructure on which the NSDI operates
  – Internet, Networks, Servers, Storage Devices
  – Personal Computers, Databases, Software
• IT Infrastructure needs management and oversight to reach its potential
NSDI Policies

- **Improves Performance**
- Policies direct the necessary coordinated management of the NSDI
- Fosters efficient management of geospatial data, technologies, and infrastructure.
- Aligns business strategies and technology
- Ensures that resources are managed in accordance with the Nation’s needs and priorities
- Ensures that all technology resources and employees are utilized in a manner that provides the best value for the Nation.
GEOSPATIAL DATA ACT OF 2018
Section 751: Short Title and Findings

• Names subtitle F of the FAA Reauthorization Act as the Geospatial Data Act of 2018
• Open and publicly available data is essential to GeoPlatform;
• The private sector is invaluable to the success of the Federal government and contributes positively to the U.S. economy
• Congress promotes access and use of Government information and data which
  – Sparks new, innovative start-ups and services;
  – Spurs economic growth
  – Advances scientific research;
  – Promotes public access to Federally funded services and data; and
  – Improves access to geospatial data which promotes public health, weather forecasting, economic development, environmental protection, flood zone research, and other purposes.
Section 752: Definitions

- Lists and defines all the terms used in the GDA
- NSDI – National Spatial Data Infrastructure
- FGDC – Federal Geographic Data Committee
- NGAC – National Geographic Advisory Committee
Section 753: FGDC

• Establishes the Federal Geographic Data Committee as the lead entity for
  • development, implementation, and review of policies, practices, and standards relating to geospatial data.

• It also establishes...
  – Membership rules,
  – Defines the duties of the FGDC, and
  – Provides support staff
Section 754: NGAC

- Directs National Geographic Advisory Committee to provide advice and recommendations to FGDC Chair
- Defines NGAC Membership Rules
- Authorizes NGAC Subcommittees
- Establishes NGAC Meeting Requirements
- Defines NGAC Duties
- Establishes NGAC Powers
- Clarifies Personnel Matters and
- Places NGAC under the control of the Federal Advisory Committee Act
Section 755: NSDI

• The NSDI shall ensure that geospatial data from multiple sources
  • (including the covered agencies, State, local, and tribal governments, the private sector, and institutions of higher education)
    – is available and easily integrated
    – enhances the understanding of the physical and cultural world.

• The section also...
  • Defines NSDI Goals
  • Requires Strategic Planning, and
  • Requires the FGDC to advise the geo-community of their roles in the NSDI
Section 756: NGDA Data Themes

- The FGDC shall designate National Geospatial Data Asset data themes
- Themes Shall
  - Be developed, maintained, and disseminated for the benefit the U.S.
  - Represent conceptual topics describing digital spatial information for the Nation
  - Contain associated datasets
  - Be documented, verifiable, and officially designated to meet recognized standards;
  - May be integrated
  - Foster and permit derivative products
Section 756: NGDA
Lead Covered Agency (LCA)

• The FGDC shall designate a LCA for each NGDA data theme
• LCAs ensure the coordinated management of data, supporting resources, and related services and products of the NGDA Theme
Section 756: LCA Responsibilities

- Administer the National Geospatial Data Asset data Theme
- Develop and implement of geospatial data standards for the Theme
- Develop and implement of a plan for population of the Theme
- Establish goals that support the strategic plan for the NSDI
- Identify and establish goals to meet Theme user needs
- Submit an annual performance report the FGDC
- Coordinate responses to the performance report with the FGDC
- Publish online maps showing the extent and status of the Theme;
- Encourage Theme data authorities to provide metadata and data access through the GeoPlatform;
- Identify and publish proven practices for the use and application of geospatial data of the Theme.
Section 757: Geospatial Standards

• FGDC shall establish standards for each data theme
• Standards include
  – Rules, conditions, guidelines, and characteristics for the geospatial data
  – Content standards for metadata for geospatial data within the Theme;
• Be consistent with international standards and protocols (when practicable)
• Standards must be appropriate for public (unclassified) data
• Standards must be periodically reviewed and updated to remain current, relevant, and effective.
Section 758: GeoPlatform

- Directs the FGDC to operate an electronic service (GeoPlatform) that provides access to geospatial data and metadata for geospatial data
- The GeoPlatform must
  - Be accessible via a common interface or other means of communication;
  - Include metadata for all published geospatial data
  - Include download access to all published geospatial data
  - Include an API providing automated access to published geospatial data
- May include geospatial data from non-covered agencies
- Shall not store or serve proprietary information or data unless authorized by the data provider.
Section 759: Covered Agency Responsibilities

- Prepare, maintain, publish, and implement a Strategic Plan
- Collect, maintain, disseminate, and preserve geospatial data
- Promote the integration of geospatial data from all sources;
- Ensure that products archived according to National Archives and Records Administration best practices
- Allocate resources to fulfill the responsibilities of effective geospatial data collection, production, and stewardship
- Use the geospatial data standards, including metadata standards
- Make data available through the GeoPlatform;
- Coordinate with the geospatial community to efficiently and cost-effectively collect, integrate, maintain, disseminate, and preserve geospatial data
Section 759: Covered Agency Responsibilities

- Make Federal geospatial information and services more useful to the public;
- Use geospatial data to enhance operations, support decision making, and enhance reporting to the public and to Congress;
- Protect personal privacy and maintain confidentiality;
- Help determine whether declassified data can become a part of the NSDI;
- Ensure needed geospatial data does not exist before expending funds for collection;
- Ensure that data collected on behalf of the Federal Government is exceptional;
- Appoint a contact to coordinate the collection, acquisition, maintenance, and dissemination of geospatial data.
Federal Efforts

• FGDC established the GDA Tiger Team
• Analyzing the GDA to Identify Impacts and requirements
• Designating representative from Lead Agencies, FGDC Leadership, and OMB
• Established 4 Working Groups to study GDA and make recommendations to FGDC and OMB
# GDA Timeline

<table>
<thead>
<tr>
<th>Activity</th>
<th>Target Date</th>
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<tbody>
<tr>
<td>Tiger Team / Working Group Meeting</td>
<td>2/27/19</td>
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<tr>
<td>Work Group Priority Issues due (Initial analysis of impacts and requirements)</td>
<td>3/18/19</td>
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<tr>
<td>NGAC Public Meeting</td>
<td>3/26/19</td>
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<tr>
<td>FGDC Steering Committee Meeting: Report on Priority Issues/Questions</td>
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<tr>
<td>Work Group Reports Due</td>
<td>4/18/19</td>
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<tr>
<td>Address Priority Issues – FGDC &amp; OMB</td>
<td>Apr/May 19</td>
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<tr>
<td>Develop initial GDA Budget Strategy</td>
<td>Apr/May 19</td>
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<td>NSDI Leaders Forum</td>
<td>Apr/May 19</td>
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<td>Draft of GDA Implementation Road Map</td>
<td>6/3/19</td>
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<tr>
<td>NGAC Public Meeting</td>
<td>6/11-12/19</td>
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<tr>
<td>FGDC Steering Committee Meeting</td>
<td>6/13/19</td>
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<td>OMB Guidance – Per Section 753(b)(3)</td>
<td>Oct 2019</td>
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Questions?
Thank You

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