

# U.S. DEPARTMENT OF COMMERCE

## Geospatial Strategic Plan

FY 2014 - 2018



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## EXECUTIVE SUMMARY

The Department of Commerce Strategic Plan 2014-2018 includes a goal for prioritizing data activities to “improve government, business, and community decisions and knowledge by transforming Department data capabilities and supporting a data-enabled economy.” This strategic plan further develops the goal as it relates to geospatial data and ties it to the Federal Geographic Data Committee’s (FGDC) National Spatial Data Infrastructure (NSDI) Strategic Plan 2014-2016.

Geospatial data relates observations, measurements, features, and information to locations on the earth. Much of the data available from Commerce has a geospatial component to it, whether it is census data, economic data or environmental data. The Department of Commerce Geospatial Strategic Plan 2014-2018 charts a course forward for making geospatial data more widely available, well managed, and more useful to Commerce, its partners, and the public. Commerce will leverage shared services both within and outside the Department as a way to maintain efficient and effective geospatial programs and provide easily accessible data. Commerce will continue to lead the nation in areas pertaining to its unique expertise in geospatial data.

The following are the Department of Commerce goals and objectives for geospatial data:

1. Utilize capabilities of national and departmental geospatial shared services
  - 1.1. Ensure full compliance with all requirements for the National Geospatial Platform Initiative
  - 1.2. Expand the use of cloud and shared computing environments as applicable for geospatial and data management activities
  - 1.3. Utilize geospatial multiagency acquisition vehicles for interagency and intergovernmental purchases of geospatial data and services as appropriate
2. Ensure accountability and effective development and management of Commerce geospatial resources
  - 2.1. Comply with requirements for the OMB Circular A-16 Portfolio Management Process for National Geospatial Data Assets
  - 2.2. Participate in the development of an open data frameworks and standards that improve the quality, discovery, access, and analysis of geospatial data and standards
  - 2.3. Identify opportunities for collaborative investments and potential duplications of effort
3. Expand Commerce leadership with applicable sectors of the national geospatial community
  - 3.1. Lead and participate in the development and coordination of national and international geospatial standards applicable to Commerce
  - 3.2. Participate in FGDC coordination activities and raise awareness of Commerce’s role in the NSDI
  - 3.3. Update suite of geodetic control standards, specifications, and guidelines tied to the National Spatial Reference System
  - 3.4. Develop an annually updated National Ocean and Coastal Mapping Plan that defines priority mapping needs and gaps
  - 3.5. Explore opportunities for greater collaboration across Commerce bureaus on geospatial activities
  - 3.6. Identify and pursue opportunities for expanded interactions with all government sectors, academia, private

## ABOUT THE COMMERCE GEOSPATIAL STRATEGIC PLAN

### BACKGROUND

The Department of Commerce (Commerce) Geospatial Strategic Plan outlines the current use and future application of geospatial technology within the Department to achieve Administration and organizational priorities. Geospatial data and technologies are pervasive in today's society. In recent years, the availability and usage of geospatial information and products dramatically expanded as software matured, new technologies such as the Global Positioning System (GPS) have been developed, and high-quality data has become more readily available. Within Commerce, use of these technologies has grown over the past four decades, and they are now critical in meeting Commerce's mission. As referenced in the new National Spatial Data Infrastructure (NSDI) Strategic Plan 2014-2016, *"the geospatial technology and services industry is a growing and important factor in the United States and world economies, driving significant benefits and providing high-wage jobs. A 2012 study by the Boston Consulting Group (BCG) estimated that the U.S. geospatial industry generated approximately \$73 billion in revenues in 2011 and comprises at least 500,000 high-wage jobs. In addition, BCG found that geospatial services deliver efficiency gains in the rest of the economy that are valued at many times the size of the sector itself—with geospatial services driving \$1.6 trillion in revenue and \$1.4 trillion in cost savings. These benefits, representing 15 to 20 times the size of the geospatial services sector itself, create an important competitive advantage for the U.S. economy. In addition, the U.S. Department of Labor recently identified the geospatial technology sector as one of the three technology areas that would create the greatest number of new jobs over the next decade."*

Commerce has a wide range of responsibilities in the areas of trade, economic development, technology, entrepreneurship and business development, environmental stewardship, and statistical research and analysis. Commerce is also one of the leading federal contributors of geospatial data to the National Spatial Data Infrastructure (NSDI). Through the geospatial activities of its bureaus, Commerce stewards multiple critical national geospatial datasets, leads numerous geospatial standards initiatives, and provides key decision support tools and technologies for a diverse community of users. The purpose of this Commerce Geospatial Strategic Plan is to outline priority focus areas and activities for the next four years in support of Commerce's mission, as well as supporting elements of the NSDI Strategic Plan and other Administration priorities.

### COMMERCE STRATEGIC PLAN 2014-2018

#### Overview

In 2013, newly confirmed Secretary of Commerce Penny Pritzker initiated an effort to develop a new Commerce Strategic Plan. During a two-month period, the Secretary met with over 300 CEOs and business leaders, visited 13 cities in 12 states, and held numerous roundtables, factory tours, and one-on-one meetings with sector leaders. In addition, multiple meetings were convened with governors, mayors, and congressional leaders. The result of this effort is the new Commerce Strategic Plan 2014-2018, which supports the message that 'America is Open for Business'. This strategic plan is the principal document within the Department's comprehensive management framework, summarizing the key strategies and initiatives that will drive progress. It also serves as an overarching guide for the

allocation of resources needed to achieve the Department’s desired long-term, macro-level economic and social outcomes.

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## Commerce Strategic Goals

The plan includes the following strategic goals:

- Trade and Investment
  - Expand the U.S. economy through increased exports and inward foreign investment that lead to more and better American jobs
- Innovation
  - Foster a more innovative U.S. economy—one that is better at inventing, improving, and commercializing products and technologies that lead to higher productivity and competitiveness
- Environment
  - Ensure communities and businesses have the necessary information, products, and services to prepare for, and prosper in, a changing environment
- Data
  - Improve government, business, and community decisions and knowledge by transforming Department data capabilities and supporting a data-enabled economy
- Operational Excellence
  - Deliver better services, solutions, and outcomes that benefit the American people

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## Focus on Data Goal

Commerce produces and consumes large and growing amounts of data, including data on the U.S. economy, population, and environment. These data are fundamental to the Commerce mission and are used for the protection of life and property, and to enhance economic growth. To meet these mission needs, Commerce data must be accessible, useable, reliable, discoverable and comprehensive. To emphasize the importance of data within the Commerce mission, a separate Data Goal is included in the overall Commerce Strategic Plan.

Many of the heavily used and valued Commerce datasets have a geospatial component. Examples include geodetic control, nautical charts, weather forecasts, broadband access zones, socio-economics, and demographic boundary areas. In order to realize the potential value of the data Commerce produces, barriers to accessing and using the data must be minimized. Barriers include an absence of common formats and standards, capacity constraints limiting the amount of data that can be directly accessed, suboptimal organization across various websites, and a lack of customer awareness about what data Commerce provides. These are target areas for improvement outlined in the Commerce Geospatial Strategic Plan.

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### Federal Geographic Data Committee

The Office of Management and Budget (OMB) has specific oversight responsibilities for federal information technology systems and acquisition activities, including geographic information systems, to help ensure efficient and effective use of these systems. The Federal Geographic Data Committee (FGDC) was formally established by OMB in 1990 and is the interagency committee that promotes the coordinated use, sharing, and dissemination of geospatial data in the United States. The Secretary of the Interior is the Chair of the FGDC and the Deputy Director for Management of OMB is the committee's Vice-Chair.

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### National Spatial Data Infrastructure

The FGDC was tasked with developing the NSDI by Executive Order 12906 "Coordinating Geographic Data Acquisition and Access." In the Executive Order, the NSDI is described as "the technology, policies, standards, and human resources necessary to acquire, process, store, distribute, and improve utilization of geospatial data." The tremendous growth and evolution of geospatial technologies, industries, and applications in recent years highlighted the need to update and modernize the strategic direction of Federal geospatial programs to align with and leverage these advancements.

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### NSDI Strategic Plan

The FGDC recently updated the strategic plan for the NSDI. The NSDI Strategic Plan 2014 – 2016 describes a broad national vision for the NSDI, and includes goals and objectives for the Federal Government's role in continued sustainable development of the NSDI. The plan was developed in coordination with FGDC member agencies and geospatial partner organizations and stakeholders. The plan sets priorities and describes the actions the FGDC community will take, in collaboration with partners, to develop and maintain the nation's critical geospatial infrastructure. Federal agencies, including Commerce, are expected to participate as appropriate in the implementation of the plan.

The NSDI Plan describes a shared national vision of the NSDI and includes a set of goals and objectives for the role of Federal agencies in achieving this vision:

*The NSDI leverages investments in people, technology, data, and procedures to create and provide the geospatial knowledge required to understand, protect, and promote our national and global interests.*

The goals and objectives in the NSDI Plan define areas of critical importance to the continued development of the NSDI and provide a framework for the federal geospatial community's responsibilities over the next three years. The three goals in the NSDI plan formed the foundation for the Commerce Geospatial Strategic Plan:

- Develop capabilities for national shared services
- Ensure accountability and effective development and management of federal geospatial resources
- Convene Leadership of the national geospatial community

## APPROACH TO DEVELOP COMMERCE GEOSPATIAL STRATEGY

It is critical for the Commerce Geospatial Strategy to support the new strategic plans developed for both the NSDI and the Commerce Department. Additionally, the Commerce Geospatial Strategy needs to be informed by the geospatial activities and operational plans of the various Commerce bureaus. To achieve this end, the following approach was used to develop the Commerce Geospatial Strategy.

The Commerce Geospatial Working Group (CGWG) was formed. Group members included representatives from Commerce agencies including: the U.S. Bureau of Economic Analysis, the U.S. Census Bureau (Census Bureau), the U.S. Economic Development Administration, the National Institute of Standards and Technology (NIST), the National Oceanic and Atmospheric Administration (NOAA), and the National Telecommunications and Information Administration (NTIA). The CGWG reviewed the NSDI Strategic Plan and either adopted or adapted specific goals and objectives relevant to Commerce.

- The CGWG examined the Commerce Strategic Plan, with a focus on the Data Goal, and incorporated these concepts into the Commerce Geospatial Strategy.
- The CGWG evaluated the strategic and operational plans from the various Commerce bureaus and incorporated appropriate content.
- Lastly, the CGWG reviewed a number of federal IT initiatives and directives (e.g. Shared Services, Open Data Executive Order) and added content as appropriate.

## FEDERAL GEOSPATIAL COORDINATION OVERVIEW

### COMMERCE'S ROLE IN THE FGDC AND NSDI

The Department of Commerce is a founding member and leading participant in the FGDC and NSDI. Commerce staff serve on the FGDC's three main standing coordination bodies - Executive Committee, Steering Committee, and Coordination Group. The NOAA Chief Information Officer (CIO) serves as the Department of Commerce's Senior Agency Official for Geospatial Information (SAOGI) as required by OMB.

#### Participation in FGDC Subcommittees and Working Groups

Topical area subcommittees and working groups are critical components of the FGDC organization where much of the work in realizing the vision of the NSDI is conducted. Due to the breadth of Commerce's geospatial mission and expertise, it is not surprising that Commerce staff lead and participate in a number of these groups.

#### Participation in FGDC Activities

Commerce recognizes that the FGDC's mission and goal is to provide access to high-quality geospatial data and the tools to make use of these datasets. In order to ensure success in meeting this requirement, Commerce has actively supported one of the FGDC's highest priority activities, the OMB Circular A-16 Supplemental Guidance project, since its inception. Commerce leads or co-leads five of

the sixteen A-16 data themes, and provides National Geospatial Data Assets (NGDAs) to most of the remaining A-16 data themes.

A major component of the NSDI is the creation and identification of standards for geospatial data and services. Commerce took a lead role in developing standards such as the Shoreline Metadata Standard, the Coastal and Marine Ecological Classification Standard (CMECS), the Wetlands Mapping Standard, and a variety of address standards. Commerce is also a leader in documenting geospatial data using FGDC required metadata standards, and in providing training materials and resources on these standards. As a standards organization, NIST provides support for a number of standards used within the NSDI.

Commerce is committed to ensuring all of its applicable geospatial datasets and services are documented, searchable, and accessible. To achieve this end, all Commerce bureaus have made a strong commitment to create standards-compliant metadata, served to the public through the National Geospatial Platform (GeoPlatform.gov) and Data.gov.

## GEOSPATIAL DATA AND RELATED ACTIVITIES AT COMMERCE

Geospatial expertise within Commerce ranges from the nation's economy to the environment. Although it is difficult to categorize all of Commerce's geospatial data, the following depicts the breadth of Commerce's mission. Examples are included for illustrative purposes.

### TYPES OF GEOSPATIAL DATA

#### ***Environmental data***

Environmental data span the oceans to the atmospheres, and includes a number of observations for temperature and chemistry of the air and seas, marine biology, coastal ecologies, winds, currents. These observations are collected on the oceans, Great Lakes, coastal lands, and the earth's atmosphere.

#### ***Physical data***

Physical data include geodetic data which is the basis for defining locations on the earth. Other physical data include coastal elevations and bathymetry data and the U.S. shoreline.

#### ***Economic data***

Commerce collects and disseminates economic data including demographic, economic, business, and socioeconomic data. Much of these data are collected through census taking. In addition, fisheries data and socio-economic data about the nation's coasts and Great Lakes are collected and managed within Commerce.

#### ***Boundaries and mapping units data***

Commerce collects and produces information for mapping. The Census Bureau delineates, collects, and maintains data for features that represent governmental units, and administrative and statistical boundaries. These include boundaries used for decennial and economic censuses, and include boundaries for school districts and tribal lands. In addition, the Census Bureau provides geographic representations of roads, rivers, and other features required for censuses. NTIA collects broadband availability data for the National Broadband Map which is jointly produced with the FCC. NOAA maintains the U.S. maritime limits and boundaries such as the Exclusive Economic Zone (EEZ). In



addition, NOAA maintains boundary information for protected areas such as the National Estuarine Research Reserves and Marine Protected Areas.

## USES OF DATA

Commerce geospatial data are used for a wide variety of purposes including emergency response, navigation, forecasts, decision making and analysis. NOAA and Census Bureau data provide enhanced decision support for emergency managers.

### ***Decision-making***

Policy makers, resource managers and citizens use Commerce data to help understand issues related to the economy, climate, marine resources and many other topics.

### ***Emergency management and response***

NOAA and the Census Bureau are charged with enhancing decision support services for emergency managers. NOAA will deploy new forecasting and decision support tools reliant on geospatial approaches. The Census Bureau will enhance decision support services for emergency managers by providing socio-economic data, such as the OntheMap Tool for Emergency Management.

### ***Models, forecasts and predictions***

Commerce data are used as input for models, forecasts and predictions for the U.S. economy, weather, climate, fisheries, and other fields.

### ***Navigation***

Commerce produces maps and charts used by ports and in marine transportation and recreational boating.

### ***Protection and Regulation***

Commerce data are used in fisheries regulation and monitoring. These data are also used in identifying sensitive habitat areas for use during toxic spills and protecting marine mammals.

### ***Research and Analysis***

Climate, weather, and ocean sciences are examples of some areas which rely on data from Commerce.

### ***Restoration and Conservation***

Restoring coastal habitats and conserving natural resources.

## GEOSPATIAL DATA MANAGEMENT

Management of geospatial data within Commerce requires effort and expertise in a number of areas.

### ***Metadata***

Commerce is a leader in documenting geospatial data in both of the FGDC-endorsed metadata standards. Commerce has been instrumental in moving the FGDC into use of the International Organization for Standardization (ISO) 19115 suite of metadata standards. Numerous metadata records describing Commerce datasets are searchable on national catalogs such as Data.gov and GeoPlatform.gov.

### ***Archives***

The National Geophysical Data Center, the National Climatic Data Center, and the National Oceanographic Data Center, three international data centers within Commerce, archive environmental and physical data for NOAA, other federal agencies, universities and international interests.

### ***Data access***

Commerce provides access to its geospatial data through data catalogs that are connected to federally required clearinghouses such as Data.gov and GeoPlatform.gov. Data access is available through links within metadata records and services that are connected to the catalogs.

### ***Data standards***

Commerce is an active participant in developing and applying national and international geospatial data standards. Commerce also has a rich training program and resources for the creation and maintenance of metadata created using FGDC-endorsed metadata standards.

## INFRASTRUCTURE

Commerce maintains an information technology (IT) infrastructure to support geospatial data, data management, and other geospatial data related activities.

### ***Cloud storage and computing***

Commerce continues to investigate ways to take advantage of cloud computing and storage. NIST provides leadership and guidance around the cloud computing paradigm to catalyze its use within industry and government. NIST aims to shorten the adoption cycle, which will enable near-term cost savings and increased ability to quickly create and deploy enterprise applications. NIST aims to foster cloud computing systems and practices that support interoperability, portability, and security requirements that are appropriate and achievable for important usage scenarios.

### ***Application development***

Commerce continues to develop applications that help users access, explore and analyze Commerce data.

### ***Standards development***

Commerce leads and participates in the development of standards related to geospatial data. NIST's mission is to promote U.S. innovation and industrial competitiveness by advancing measurement science, standards, and technology in ways that enhance economic security and improve our quality of life.

## ADMINISTRATION

Commerce has implemented administrative processes in support of geospatial data activities.

### ***Data acquisition vehicles***

Commerce takes advantage of existing data acquisition vehicles to avoid duplication of data and to save money. Commerce manages the Coastal Geospatial Services Contract.

### ***Grants and contracts***

Commerce requires grantees and contractors to follow best practices in the management of geospatial data. Commerce also requires data (as appropriate) to be shared via federally endorsed catalogs.

## COMMERCE GEOSPATIAL STRATEGIC GOALS AND OBJECTIVES

Since the NSDI strategic plan addresses goals and objectives across all agencies, it is appropriate to map Commerce geospatial goals and objectives to those of the NSDI. The following goals and objectives are based on those of the NSDI strategic plan. Some goals were adopted directly from the plan. Some were adapted to fit geospatial data from Commerce. A few were created based on the unique capabilities within Commerce.

National and Departmental Geospatial Shared Services	
<b>1. Utilize capabilities of national and departmental geospatial shared services</b>	
1.1 Ensure full compliance with all requirements for the National Geospatial Platform Initiative	Commerce
1.2 Expand the use of cloud and shared computing environments as applicable for geospatial and data management activities	Census Bureau, NIST, NOAA
1.3 Utilize geospatial multiagency acquisition vehicles for interagency and intergovernmental purchases of geospatial data and services as appropriate	Commerce

<b>Geospatial Data and Services Accountability and Management</b>	
<b>2. Ensure accountability and effective development and management of Commerce geospatial resources</b>	
2.1 Comply with requirements for the OMB Circular A-16 Portfolio Management Process for National Geospatial Data Assets	Census Bureau, NOAA
2.2 Participate in the development of an open data framework and standards that improve the quality, discovery, access, and analysis of geospatial data and standards	Commerce
2.3 Identify opportunities for collaborative investments and potential duplications of effort	Commerce
<b>Expanding Commerce’s Role in the National Geospatial Community</b>	
<b>3. Expand Commerce leadership with applicable sectors of the national geospatial community</b>	
3.1 Lead and participate in the development and coordination of national and international geospatial standards applicable to Commerce	Census Bureau
3.2 Participate in FGDC coordination activities and raise awareness of Commerce’s role in the NSDI	Census Bureau, NOAA
3.3 Update suite of geodetic control standards, specifications, and guidelines tied to the National Spatial Reference System	NOAA
3.4 Develop an annually updated National Ocean and Coastal Mapping Plan that defines priority mapping needs and gaps	NOAA
3.5 Explore opportunities for greater collaboration across Commerce bureaus on geospatial activities	Commerce
3.6 Identify and pursue opportunities for expanded interactions with all government sectors, academia, private sector, and NGOs	Commerce

### **Strategic Goal 1: Utilize capabilities of national and departmental geospatial shared services**

As outlined in the Federal IT Shared Services Strategy released in 2012 to the Federal Agency Chief Information Officers and key stakeholders, the creation and use of shared IT services is a key component of efforts to eliminate waste and duplication and reinvest in innovative mission systems. The strategy *“seeks to improve the return on investment for IT spending, close productivity gaps, increase communications with the managing partners and customers of shared services...”* This is directly applicable to the national geospatial community of users, as well as Commerce. Through this goal, Commerce will increase use of shared services for data, services, applications, and investments for its geospatial portfolio.

The geospatial technology landscape is changing quickly, with more and more opportunities to deliver new solutions in a shared manner with the promise of faster solutions, for less money, and with fewer resources. One of the most exciting ongoing activities of the NSDI community is the National Geospatial Platform initiative. The Platform is a Web-based services environment that provides access to a suite of well-managed, highly available, and trusted geospatial data, services, applications, and tools for use by federal agencies and their state, tribal, regional, and local partners. In addition, Commerce intends to work closely with the FGDC and its partners to identify and use common cloud computing and enterprise acquisition approaches as applicable. Commerce will also explore options for interdepartmental and multi-agency geospatial data and services acquisitions.

#### **STRATEGIC OBJECTIVE 1.1**

##### **ENSURE FULL COMPLIANCE WITH ALL REQUIREMENTS FOR THE NATIONAL GEOSPATIAL PLATFORM INITIATIVE**

Commerce, principally the Census Bureau and NOAA, will continue their leadership roles in the National Geospatial Platform initiative. Commerce staff will serve on the core cross-department management team and work with the Program Management Office team on the development and maintenance of the website and associated applications. Opportunities to participate in the development and testing of guidance materials on the use of the Platform will be pursued by Commerce staff to provide feedback to the Program Management Office team and other participants in the initiative. Commerce staff will continue to publish all applicable metadata to Data.gov and the GeoPlatform.gov metadata catalog (CKAN) to ensure Commerce content is accessible via these systems. Commerce will lead, create, and maintain five of the A-16 data theme communities (Climate and Weather; Elevation; Geodetic Control; Governmental Units, and Administrative and Statistical Boundaries; Water – Oceans and Coasts) on the Geospatial Platform as well as lead agency communities as applicable.

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**STRATEGIC OBJECTIVE 1.2****EXPAND THE USE OF CLOUD AND SHARED COMPUTING ENVIRONMENTS AS APPLICABLE FOR GEOSPATIAL DATA**

Commerce's Big Data vision will not be realized simply by making data available through conventional means. Through public-private partnerships, as well as internal Commerce shared solutions, geospatial data and services can be intelligently positioned in the cloud and co-located with easy, affordable access to computing, storage, and advanced analytical capabilities. These approaches have the ability to scale and surge to keep pace smartly with external requirements for access to Commerce geospatial products.

Commerce is committed to using a standards approach to develop an interoperable Commerce Data Infrastructure in the Commerce Strategic Plan. Adherence to a set of common standards and architecture would result in a powerful data platform that provides universal access to data in usable form. Improving discovery and analysis by enhancing access will make all data produced by Commerce, including geospatial data and services, more effective. Usable open data will promote enhanced use by the geospatial and non-geospatial communities, fostering economic growth and energizing a data-as-a-service marketplace for government, entrepreneurs, new businesses, and the public.

Commerce will continue to participate in the FGDC-led GeoCloud Sandbox initiative, testing different approaches and defining cost and governance models for shared, commodity hosting of geospatial applications and data. Internally, NOAA and the Census Bureau are both analyzing potential options for using shared and/or cloud hosting for segments of their geospatial portfolio. NOAA is a major driving force in working with commercial geospatial software and infrastructure providers to develop an approach for agency access to these hosted services and this work will continue.

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**STRATEGIC OBJECTIVE 1.3****UTILIZE GEOSPATIAL MULTIAGENCY ACQUISITION VEHICLES FOR INTERAGENCY AND INTERGOVERNMENTAL PURCHASES OF GEOSPATIAL DATA AND SERVICES AS APPROPRIATE**

Commerce bureaus will seek opportunities to partner both internally with other bureaus, as well as externally with other federal agencies, on shared geospatial acquisitions. This will be accomplished both by looking for contracting vehicles to use in other agencies, as well as providing access to existing Commerce contract vehicles for other agency use. An example in NOAA is the Coastal Geospatial Services Contract Vehicle, which provides a mechanism for federal, state and local governments to purchase data from private industry for use in coastal resource management applications. Additionally, Commerce will participate with the National Geospatial Platform initiative to inventory available and planned geospatial acquisition vehicles open to federal agencies and non-federal partners.

While the Census Bureau does not currently contract for geospatial road and boundary data, but rather collects them through partnership programs at the local, state, tribal and federal levels, the Census Bureau plans to utilize the Geospatial Marketplace as a source for information on planned acquisitions. To that end, the Census Bureau, along with all other Commerce bureaus, will follow the requirements as outlined in the recently released Commerce Policy on Planned Geospatial Acquisitions.

### **Strategic Goal 2: Ensure Accountability and Effective Development and Management of Commerce Geospatial Resources**

Commerce has a leadership role for multiple components of the NSDI, most notably numerous data themes and datasets identified in OMB Circular A-16. This role makes it critical for Commerce bureaus to be effective managers of geospatial investments, enabling users of Commerce data and services to meet their mission responsibilities and achieve maximum efficiency across the geospatial community of users. Through the activities contained in this strategic goal, Commerce will enhance access to its high-quality geospatial resources and foster enhanced interoperability across information systems. This will be achieved through a strong commitment to the Open Data priorities of the Administration, as well as the portfolio management process for geospatial data collection efforts and management.

#### **STRATEGIC OBJECTIVE 2.1**

##### **COMPLY WITH REQUIREMENTS FOR THE OMB CIRCULAR A-16 PORTFOLIO MANAGEMENT PROCESS FOR NATIONAL GEOSPATIAL ASSETS**

OMB Circular A–16 Supplemental Guidance provides guidelines for implementing a portfolio management approach to federal geospatial investments and managing NGDA government-wide. This approach will allow identification of data themes and datasets that are most critical for meeting the needs of government and stakeholders.

Commerce leads or co-leads five of the sixteen A-16 data themes, as well as provides NGDAs to most of the remaining A-16 data themes. Commerce has identified Executive Champions and Theme Leads for all assigned themes and will meet all requirements moving forward for assessments, publishing, and reporting. Commerce staff are committed to ensuring all applicable geospatial data and supporting materials are appropriately documented and accessible through the GeoPlatform.gov and Data.gov web-based catalogs as required by the A-16 Supplemental Guidance. Commerce will provide management support for all required sections of the Geoplatform.gov website. Many Commerce bureaus have mature geospatial datasets with clearly defined dataset managers who work with others within their bureaus to continually assess the quality of the datasets, publish the metadata to Data.gov, and work with partners to share information regarding the continual updating of the data. Commerce will also accelerate its efforts to enable access to geospatial data as standards-compliant geospatial web services to enhance interoperability across systems.

#### **STRATEGIC OBJECTIVE 2.2**

##### **PARTICIPATE IN THE DEVELOPMENT OF AN OPEN DATA FRAMEWORKS AND STANDARDS THAT IMPROVE THE QUALITY, DISCOVERY, ACCESS, AND ANALYSIS OF GEOSPATIAL DATA AND STANDARDS**

Commerce’s geospatial data vision will not be realized simply by making data available through conventional means. Efforts must be made to continually enhance the mechanisms and standards by which Commerce geospatial data and services are provisioned for its diverse user communities. Participation in all applicable standards bodies, for example the Open Geospatial Consortium (OGC), will

continue and be expanded to ensure current approaches are in-line with technological advances in the geospatial and information management disciplines. Commerce teams will take a lead role in the development of certain standards for specific communities of interest, the geodetic control standards and address standards as examples. Policies and directives, such as NOAA's Data Access Procedural Directive, will be developed within select Commerce bureaus to provide guidance and direction to geospatial practitioners as they make data and services available. Centralized metadata catalogs and associated technologies will be maintained to enhance the discovery and access of Commerce geospatial data.

There will be a priority to identify geospatial content within Commerce that is not currently being made available and take the necessary actions to document and enable access. These activities will be based on user requirements, for example, feedback on needs for weather data from the Department of Homeland Security. Additionally, within NOAA, an effort is underway to develop an enterprise Integrated Dissemination Program (IDP) for much of NOAA's geospatial data and services. The IDP GIS Program is currently designing the IT architecture to include both commercial and open source server solutions for use by NOAA data managers, scientists, and GIS professionals. The IDP initiative will be focused on providing the underlying IT infrastructure and governance structure to allow NOAA staff to enable access to their geospatial content through standards-compliant geospatial services.

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### **STRATEGIC OBJECTIVE 2.3**

#### **IDENTIFY OPPORTUNITIES FOR COLLABORATIVE INVESTMENTS AND POTENTIAL DUPLICATIONS OF EFFORT**

Commerce recently published a new policy on 'Planned Geospatial Data Acquisitions' which outlines the requirements for all bureaus to search all applicable sources, for example the Geospatial Marketplace on the National Geospatial Platform, before expending any funds on geospatial data collection. The Marketplace provides a listing of datasets that are planned for acquisition by one or more of the FGDC member agencies. This web-based resource can be used to determine whether a potential partner is already trying to acquire a similar dataset and where a potential partnership can be explored. All Commerce bureaus will both publish geospatial acquisition plans to the Marketplace as well as use it to search prior to any geospatial data acquisition.

While the Census Bureau does not currently invest in the purchase of geospatial data, it does invest personnel hours in acquisition of available data. In ongoing efforts to improve the quality of the MAF/TIGER Database (MTDB), the Census Bureau continually evaluates their sources and programs to avoid redundant data collections. Census Bureau staff have implemented the Geographic Support System Initiative (GSS-I) (funded in Fiscal Year 2011) and are utilizing new, more effective practices of acquiring geospatial data and integrating acquired data into the MTDB. Additionally, Census Bureau staff have increased their partnership activities with other federal agencies in order to reduce duplication. For example, the Census Bureau partnered with the U.S. Geological Survey (USGS) to coordinate the use of Census Bureau boundaries in the USGS on-line service 'The National Map,' and are currently working with both USGS and the Department of Transportation's Federal Highway Administration to coordinate the maintenance and use of TIGER road data.

NOAA will also continue efforts internally and externally through Integrated Ocean and Coastal Mapping partnerships and working groups such as the Interagency Working Group on Ocean and Coastal Mapping to coordinate and collaborate on geospatial data acquisitions. Efforts will include using tools such as



SeaSketch and the GeoPlatform Marketplace to share data acquisition needs and plans. NOAA grants also require awardees to check the Marketplace and evaluate for existing data and leveraging potential when they plan to acquire data.

## EXPANDING COMMERCE'S ROLE IN THE NATIONAL GEOSPATIAL COMMUNITY

### **Strategic Goal 3: Expand Commerce Leadership with Applicable Sectors of the National Geospatial Community**

Commerce currently provides both leadership and a facilitation function within certain sectors of the national geospatial community. There are opportunities to expand this role, both with new and existing partners. Commerce staff will look for new opportunities to foster an open dialog and exchange of ideas on a range of topics with multiple user communities. Commerce will continue its active participation within the FGDC as well as other geospatial coordination groups. New geospatial standards will be developed and existing standards will be updated as needed within the geospatial areas of expertise of the Commerce bureaus. Through the objectives outlined in this strategic goal, Commerce will expand its role in the national geospatial community.

#### **STRATEGIC OBJECTIVE 3.1**

##### **LEAD AND PARTICIPATE IN THE DEVELOPMENT AND COORDINATION OF NATIONAL AND INTERNATIONAL GEOSPATIAL STANDARDS APPLICABLE TO COMMERCE**

Commerce will consult and collaborate with existing standards bodies, as well as new emerging communities where applicable. Commerce will maintain its membership within the multitude of existing standards bodies currently being supported, for example the ISO Technical Committee 211 (ISO/TC 211), the U.S. related International Committee for Information Technology Standards (INCITS) L1 standards body, the OGC, and the FGDC. Staff will provide content expertise and technical guidance on a regular basis. NOAA will continue its strong leadership role in geospatial metadata for the national geospatial community, including technical expertise, educational materials, and training on the FGDC endorsed metadata standards such as the Content Standard for Geospatial Metadata (CSDGM) and ISO 19115 and related standards. NOAA is currently a leader in furthering the use of ISO metadata and implementing its use with national and international partners. NOAA has recently issued a NOAA Administrative Order Procedural Directive on data documentation and is furthering the use of ISO metadata through education, tools, and training. The Census Bureau is contributing to the development of ISO 19160, to ensure it is compatible with the United States Thoroughfare, Landmark, and Postal Address Data Standard.

#### **STRATEGIC OBJECTIVE 3.2**

##### **PARTICIPATE IN FGDC COORDINATION ACTIVITIES AND RAISE AWARENESS OF COMMERCE'S ROLE IN THE NSDI**

Commerce is a leading participant in the FGDC and NSDI. Commerce staff serve on the FGDC's three main standing coordination bodies - Executive Committee, Steering Committee, and Coordination Group. Commerce staff lead and participate in multiple FGDC subcommittees and working groups. In all of these FGDC-sponsored groups Commerce is one of the most active participants and will continue in

this manner. There is a strong commitment within Commerce to be responsive to all FGDC requests for team membership, document development and review, and data calls as we see Commerce's participation as a critical element in collectively reaching the goals of the FGDC.

Additionally, Commerce staff will explore existing and new opportunities to promote the critical role Commerce plays in the NSDI. Commerce will continue to provide substantial content for the FGDC Annual Report. Staff will look for opportunities to present on Commerce projects and initiatives at FGDC-sponsored meetings and similar venues. Additionally, Commerce staff will continue to make connections between activities within the scope of the FGDC and similar activities that can be leveraged to expand the scope of the NSDI. An example is the inclusion of the ocean.data.gov community and the Interagency Ocean and Coastal Mapping initiative within the scope of the Water – Oceans and Coasts theme and Marine and Coastal Spatial Data Subcommittee.

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### **STRATEGIC OBJECTIVE 3.3**

#### **UPDATE SUITE OF GEODETIC CONTROL STANDARDS, SPECIFICATIONS, AND GUIDELINES TIED TO THE NATIONAL SPATIAL REFERENCE SYSTEM**

NOAA's National Geodetic Survey (NGS) plans to update a suite of geodetic control standards, specifications, and guidelines documents. Geodetic control examples include: passive geodetic control marks, active geodetic observing systems, data from Global Navigation Satellite Systems (e.g., GPS), gravity measurements, and models of the earth's gravity field (geoid).

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### **STRATEGIC OBJECTIVE 3.4**

#### **DEVELOP AN ANNUALLY UPDATED NATIONAL OCEAN AND COASTAL MAPPING PLAN THAT DEFINES PRIORITY MAPPING NEEDS AND GAPS**

In order to realize the vision of integrated mapping data acquisition within NOAA, avoid duplication of effort with other agencies, increase efficiency by leveraging joint capabilities, and maximize the benefits of survey time and resources, NOAA will improve coordination and collaboration on requirements integration, project planning and execution, and sensor technology Research & Development to result in efficient and appropriate data acquisition. The NOAA Integrated Ocean and Coastal Mapping (IOCM) team will develop a National Coastal Mapping Strategy and Plan for shoreline and nearshore data with external partners, including those in the Joint Airborne Lidar Bathymetry Center of Expertise. The IOCM team will develop and implement an outreach strategy to inform and encourage external partners (including sister agencies, states, academia, and the private sector) to pool mapping resources, consolidate contracting, utilize best practices and leverage mapping opportunities for maximum data acquisition. This strategy includes sharing on standards and guidelines development, vessel of opportunity protocols and onboard data stewardship policies.

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### **STRATEGIC OBJECTIVE 3.5**

#### **EXPLORE OPPORTUNITIES FOR GREATER COLLABORATION ACROSS COMMERCE BUREAUS ON GEOSPATIAL ACTIVITIES**

The process to develop this geospatial strategic plan has shown the benefits of working more collaboratively across Commerce bureaus on geospatial topics. Currently within Commerce, NOAA and the Census Bureau are the most active users of geospatial technologies. There are pockets of other uses within other bureaus, as well as numerous examples of potential opportunities to expand the use of geospatial solutions to better meet the Commerce mission and priorities as outlined in the new Commerce Strategic Plan, especially elements of the Data Goal and the Big Data Initiative. The creation of a standing Commerce Geospatial Working Group or Advisory Committee will be explored. Other options for improving coordination will be evaluated including brown bag seminars, technical consulting across bureaus, joint acquisitions, and the development of common geospatial workspaces using commercial or open source technologies.

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### **STRATEGIC OBJECTIVE 3.6**

#### **IDENTIFY AND PURSUE OPPORTUNITIES FOR EXPANDED INTERACTIONS WITH ALL GOVERNMENT SECTORS, ACADEMIA, PRIVATE SECTOR, AND NGOS**

All of the Commerce bureaus have strong relationships with their respective user communities based on joint areas of interest and supported through active dialog and engagement. This is true as well on the topic of geospatial data and technologies. There are always opportunities to expand communication, coordination, and consultation with members of the national geospatial community, in addition to other groups and sectors that are just now beginning to utilize geo-technologies. Commerce will explore additional venues to engage more with groups such as the National States Geographic Information Council (NSGIC), National Geospatial Advisory Committee (NGAC), and similar networks of practitioners. The objective for these interactions is to identify ideas and activities that can be pursued to build stronger and more effective partnerships across all sectors. Additionally Commerce will work with the private sector to better understand how access to Commerce's geospatial data and services, especially in today's Big Data environment, can be leveraged to meet the needs of the 21<sup>st</sup> century economy.

## **IMPLEMENTATION AND PERFORMANCE MANAGEMENT**

This geospatial strategic plan is a supporting document to both the Department of Commerce Strategic Plan 2014-2016, as well as the National Spatial Data Infrastructure Strategic Plan 2014-2016. The purpose of this geospatial strategy is to outline Commerce's priority geospatial goals and objectives within the context of Commerce's comprehensive management framework. This framework is designed to cascade throughout all levels of Commerce, summarizing the key strategies and initiatives that will drive progress. All Commerce leaders and employees will use the Commerce Strategic Plan to transform strategies into actions, and actions into results. The same holds true for the use of the Geospatial Strategic Plan within the geospatial and data management sectors of Commerce.

To ensure progress is being achieved on the priority geospatial goals and objectives, an annual Geospatial Strategy Implementation Plan will be developed. This implementation plan will contain specific actions for each objective in the plan, with the associated bureau lead milestones, performance indicators, and resources annotated for each. Performance indicators will be based as closely as

possible to those for the data goal in the Commerce Strategic Plan. This implementation plan will be developed annually in the final quarter of the existing year to cover activities for the next fiscal year. Reporting will be completed on a semi-annual basis (Q2 and Q4). The reports will be shared with the appropriate staff for inclusion in the Commerce comprehensive management framework and performance management structure. Additionally, briefings will be provided on request to various Commerce councils, committees, and bureaus as needed.

Another important connection is between progress made on the Commerce geospatial strategy and the NSDI strategic plan. The FGDC has stated in the NSDI plan that *'the FGDC community will work collaboratively to implement and monitor the implementation of the NSDI Strategic Plan.'* In practice this means the activities of the various FGDC member agencies will be used to demonstrate progress in meeting the goals of the NSDI plan. Given Commerce's role in the FGDC it is important that successes are shared regularly with the FGDC.

## APPENDICES

### APPENDIX A – COMMERCE AREAS OF GEOSPATIAL EXPERTISE

#### **Geodetic Control**

NOAA, through its National Geodetic Survey (NGS), provides expertise and leadership across the federal government for survey control points and other related data sets which are accurately tied to the National Spatial Reference System (the official, common federal system for establishing coordinates for geospatial data that are consistent nationwide). Geodetic control examples include: passive geodetic control marks, active geodetic observing systems, data from Global Navigation Satellite Systems (e.g., GPS), gravity measurements, and models of the earth's gravity field (geoid). That leadership is exercised through the:

- Federal Geodetic Control Subcommittee (of the FGDC)
- Geodetic Control Theme and associated datasets registered to Data.gov

A key part of this leadership role is the maintenance of a suite of standards, specifications, and guidelines documents for the geodetic control community. NOAA/NGS also has involvement in international standards via participation in INCITS L1 - GIS Technical Committee, which is an advisory group to the ISO Technical Committee 211 - Geographic information/Geomatics.

#### **Marine and Coastal Spatial Data**

NOAA's Office of Coast Survey is the nation's nautical chart-maker and America's leading civilian hydrographic office, creating and updating a suite of over a thousand charts in paper, digital, and electronic formats. NOAA maintains its expertise with ships and manages contracts to survey the seafloor, measure ocean depths, identify dangers to navigation, and record seafloor shifts. Shoreline data are acquired by the National Geodetic Survey via airborne technologies such as topographic bathymetric LIDAR and digital cameras. Cartographers use these data to create charts for navigation and ocean planning. Survey teams mobilize during hurricanes and other emergencies, to speed the re-opening of essential shipping lanes and port facilities. Scientists develop hydrographic models that help protect communities from storm surge. NOAA develops, maintains and publishes national mapping standards and specifications in support of these activities.

NOAA National Data Centers (NNDC) serve as national repositories and dissemination facilities for global environmental data. The data archives amassed by the NNDC provide a record of Earth's changing environment, and support numerous research and operational applications. The centers provide data products and services to scientists, engineers, resource managers, policy makers, and other users in the United States and around the world.

#### **Integrated Ocean and Coastal Mapping**

As defined in the Ocean and Coastal Mapping Integration Act of 2009<sup>1</sup>, ocean and coastal mapping is defined as the acquisition, processing, and management of physical, biological, geological, chemical, and archaeological characteristics and boundaries of ocean and coastal areas, resources,

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<sup>1</sup> <http://beta.congress.gov/bill/111th-congress/senate-bill/174>

and sea beds using a variety of mapping technologies. The purpose of the NOAA Integrated Ocean and Coastal Mapping (IOCM) program is to reinforce within NOAA the planning, acquiring, documenting, managing, integrating, and disseminating of these data and derivative products in a manner that permits easy access to and use by the greatest range of users. NOAA IOCM supports a “whole ocean” approach to management and planning, leveraging limited resources by identifying and consolidating common mapping requirements, ensuring proper stewardship of mapping data to consistently generate the products that were originally intended, as well as the innovative re-use of these data to derive additional products to serve national needs. NOAA is adopting these practices throughout its mapping programs with the philosophy of “map once, use many times.” The National Ocean Policy, OMB Circular A-16 on Coordination of Geographic Information and Related Spatial Data Activities, and other federal directives also reflect this philosophy in the concepts of efficient government as promoted.

IOCM requires intra- and inter-agency coordination and collaboration with a focus on streamlining operations, reducing redundancies, improving efficiencies, developing common standards, and stimulating innovation and technological development. IOCM involves three primary tasks:

1. **Integrated Data Acquisition** among mapping organizations within NOAA and other agencies to avoid duplication of effort and increase efficiency by leveraging joint capabilities and maximizing the benefits of survey time and resources;
2. **End-to-End Data Management** to provide an efficient system to assure that all data collected are consistently processed, documented according to applicable metadata standards, and provided to the NOAA National Data Centers for stewardship; and
3. **Maximum Use and Re-use** of the archive of mapping data, to consistently produce and distribute interim and final products for intended uses, and to enable the innovative re-use of the data for additional products, thus more effectively addressing national geospatial needs.

## Boundaries

The Census Bureau delineates, collects, and maintains geospatial data for features that represent governmental units, and administrative and statistical boundaries. These boundaries are used for purposes of governance, the general provision of services, and provision of statistical data. Boundaries for these various types of geographic areas are either defined through a documented legal description or through criteria and guidelines.

The Census Bureau conducts the Boundary and Annexation Survey (BAS) to collect and maintain information about the inventory of the legal boundaries for, and the legal actions affecting the boundaries of, counties and equivalent governments, incorporated places, minor civil divisions, Census Areas of Alaska, Hawaiian Homelands, and federally recognized legal American Indian and Alaska Native areas (including the Alaska Native Regional Corporations). This information provides an accurate identification of geographic areas for the Census Bureau to use in conducting the decennial and economic censuses and ongoing surveys such as the American Community Survey (ACS). The BAS supports the following additional programs:

- Population Estimates Program
- Special Census
- Geographic Update Population Certification Program
- Other statistical programs of the Census Bureau and the legislative programs of the Federal Government

No other federal agency collects these data, nor is there a standard for the collection of this information at the state level. The Census Bureau's BAS is a unique boundary survey providing a standard result for use by federal, state, local, and tribal governments and by commercial, private, and public organizations.

The Census Bureau also maintains school district boundaries through the School District Review Program (SDRP) for the distribution of the Department of Education Title I funding allocations. This collection activity provides boundaries for the production of school district demographic estimates. School districts are identified as Elementary (primarily serving children in the elementary grades), Secondary (primarily serving children in secondary grades 9th-12th), and Unified (serving children of all grade levels). Through the SDRP, state officials provide updates and corrections to the Census Bureau for school district names and Federal Local Education Agency (LEA) identification numbers, school district boundaries, and the grade ranges for which a school district is financially responsible.

The Census Bureau works with local, tribal, regional, state, and federal partners through a number of additional geographic programs to delineate statistical area boundaries in the five years leading up to each decennial census, including, but not limited to, the Participant Statistical Areas Program (PSAP). The primary purpose for defining these statistical geographic areas is to provide a set of nationally consistent, small, statistical geographic units that provide policy makers and planners at all levels of government with the information they need to compare data both across the Nation and across time. Some of the primary statistical geographic areas include:

- Census Tracts
- Block Groups
- Census Tabulation Blocks
- Census Designated Places
- Urban Areas
- ZIP Code Tabulation Areas

The Census Bureau integrates the boundary information collected in the BAS, SDRP, and statistical area programs into the MTDB. The Census Bureau provides the updated MTDB data to the public. The public product is a result of extracts of area and linear features from the TIGER (Topologically Integrated Geographic Encoding and Referencing) portion of the MTDB. TIGER contains geographic information representing the position of boundaries, roads, rivers, railroads, and other census-required map features and attributes. The MTDB data model is very unique because it integrates features in a way that shows how they relate to each other geographically, which adds value to the data collected. For boundaries this means that relationships between legal, administrative, and statistical areas such as incorporated places, Congressional Districts, American Indian reservations, and census tracts can be analyzed. The product line includes TIGERweb (web map viewer and web mapping services), TIGER/Line (Esri shapefiles or geodatabase), and cartographic boundary files (Esri shapefiles). (Esri shapefiles).

## **Broadband Mapping**

The National Telecommunications and Information Administration (NTIA) has developed expertise in collecting broadband availability data and mapping it in ways that are useful for policymakers, businesses and citizens. All non-confidential data is available via download as well as through Application Programming Interfaces (APIs). What is most successful about this program is the collaboration with states and among federal agencies. The National Broadband Map is a joint

collaboration between NTIA and the Federal Communications Commission (FCC), and the 50 states, five territories and the District of Columbia. States received partial grants to fund data collection and verification. They also submit new, standardized data to NTIA every six months through a geodatabase, and the data are integrated from each of 56 databases into the national broadband availability dataset. This dataset then powers the National Broadband Map, which NTIA jointly produces with the FCC. Extensive feedback is provided to states about data quality as well as technical assistance opportunities for states to learn from each other about emerging best practices in collection and verification. Additionally, each state manages their own state map, overlaying state-specific information such as verification tools or economic development regions. This spatial data is used extensively by local governments and states to plan for broadband expansion. In September of 2014, the FCC will begin collecting broadband availability data through its Form 477 process. This collection will parallel NTIA's last data collection in October 2014. After NTIA's data is published in early 2015, NTIA will no longer have funding to support state collection of this data, and so at that time, the FCC expects to take over the maintenance of the National Broadband Map.

## **Weather and Climate**

Weather affects almost every activity in the Nation. The steep increases in damaging weather-related events and associated societal impacts highlight the growing importance of weather, water, and climate information. NOAA is the assigned FGDC A-16 data theme lead for the Weather and Climate theme. Improving the accuracy and usefulness of weather forecasts is a priority objective in the Commerce Strategic Plan and one that relies heavily on the use of geospatial and observing technologies. Accurate and reliable data from sustained and integrated observation systems is essential. NOAA and the Census Bureau are also charged with enhancing decision support services for emergency managers. NOAA will deploy new forecasting and decision support tools reliant on geospatial approaches. The Census Bureau will enhance decision support services for emergency managers by providing socio-economic data, such as the *OntheMap* Tool for Emergency Management.

The demand for weather data in GIS-friendly formats is substantial across a wide-range of user communities. NOAA, principally within the National Weather Service, has made substantial progress in its use of various geospatial solutions within both operations and research. NOAA is delivering more and more data, services, and applications in standards-compliant formats that support interoperability with other users and systems. Examples are numerous and include flood forecasts as online maps and geospatial services, National Hurricane Center models and forecasts as web-enabled services, and a Mobile Storm Damage Assessment application that uses smart-phone technology and web GIS applications to conduct field damage assessments immediately after an event and share the data in near real-time with other users, speeding up storm response efforts. The National Weather Service has been collecting and documenting user requests from all sectors – government, private sector, NGOs, academia – and is using this information to prioritize the delivery of new products within the NOAA Integrated Dissemination Program GIS initiative.

Climate is another topical area where there is a high-demand for GIS-ready products and data. NOAA has committed to build partnerships to produce and deliver climate information and services within the new Commerce Strategic Plan. NOAA will produce new and improved information systems and visualization tools and build out the Climate.gov Web site, which contains a section specifically focused on the delivering of geospatial data and services.



## APPENDIX B – PARTICIPATION IN FGDC AND NSDI

Commerce membership on FGDC Subcommittees:

- Cadastral Subcommittee – Census Bureau
- Cultural Resources Subcommittee – Census Bureau
- Federal Geodetic Control Subcommittee – NOAA (chair), Census Bureau, NIST
- Geologic Subcommittee – NOAA
- Marine and Coastal Spatial Data Subcommittee – NOAA (chair)
- National Digital Orthoimagery Program Subcommittee – Census Bureau, NOAA
- Spatial Water Data Subcommittee – NOAA
- Transportation Subcommittee – Census Bureau
- Vegetation Subcommittee – NOAA
- Wetlands Subcommittee – NOAA

Commerce membership on FGDC Working Groups:

- National Boundaries Group – Census Bureau (co-chair)
- Users/Historical Data – NOAA
- Global Geospatial Information Management (GGIM) – Census Bureau (chair)
- Metadata – Census Bureau, NOAA
- Standards – Census Bureau, NIST, NOAA

### Participation in the A-16 Data Themes

Commerce leads the following A-16 data themes:

- Climate and Weather
- Elevation (co-lead)
- Geodetic Control
- Governmental Units, and Administrative and Statistical Boundaries
- Water – Oceans and Coasts

Commerce provides National Geospatial Data Assets (NGDAs) to the following A-16 data themes:

- Biota
- Climate and Weather
- Cultural Resources
- Elevation
- Geodetic Control
- Governmental Units, and Administrative and Statistical Boundaries
- Imagery
- Land Use – Land Cover
- Transportation
- Water – Oceans and Coasts

## **NSDI Standards Activities**

Commerce serves as the maintenance authority for the following NSDI standards:

- Coastal and Marine Ecological Classification Standard (CMECS)
- Content Standard for Digital Geospatial Metadata: Part 2 Metadata Profile for Shoreline Data
- Geographic Information Framework Data Standard: Part 5 Governmental Unit and other Geographic Area Boundaries
- Geospatial Positioning Accuracy Standards, Part 1: Reporting Methodology
- Geospatial Positioning Accuracy Standards, Part 2: Standards for Geodetic Networks
- Geospatial Positioning Accuracy Standards, Part 5: Standards for Nautical Charting Hydrographic Surveys
- United States Thoroughfare, Landmark, and Postal Address Data Standard
- Spatial Data Transfer Standard (SDTS) Part 6: Point Profile

## APPENDIX C – POLICIES GOVERNING GEOSPATIAL SERVICES

### Government Accountability Office (GAO)

The GAO was established by the General Accounting Office by the Budget and Accounting Act of 1921 to investigate, at the seat of government or elsewhere, all matters related to the receipt, disbursement, and application of public funds, and shall make to the President and to Congress reports and recommendations looking to great economic efficiency in public expenditures.

Identifier	Title	Brief Description	URL
GAO-13-94	Geospatial Information: OMB and Agencies Need to Make Coordination a Priority to Reduce Duplication	Report to the Committee on Homeland Security and Government Affairs, U.S. Senate	<a href="http://gao.gov/products/GAO-13-94">http://gao.gov/products/GAO-13-94</a>

### OMB Circulars

A government circular is a written statement of government policy. It provides information, guidance, rules, and often background information on the reasoning behind a policy. OMB Circulars are instructions or information issued by the Office of Management and Budget (OMB) to Federal Agencies.

Identifier	Title	Brief Description	URL
A-16	Coordination of Geographic Information and Related Spatial Data Activities – OMB Circular A-16 (1990, 2003, 2010) & Supplemental Guidance	This Circular provides direction for federal agencies that produce, maintain or use spatial data either directly or indirectly in the fulfillment of their mission.	<a href="http://www.whitehouse.gov/omb/circulars_a016_rev/">http://www.whitehouse.gov/omb/circulars_a016_rev/</a>
A-119	Federal Participation in the Development and Use of Voluntary Consensus Standards in Conformity Assessment Activities – OMB Circular A-119 (1998)	The revised Circular establishes policies on federal use and development of voluntary consensus standards and on conformity assessment activities; and authorized the National Institute of Standards and Technology to coordinate conformity assessment activities of the agencies	<a href="http://www.whitehouse.gov/omb/circulars_a119/">http://www.whitehouse.gov/omb/circulars_a119/</a>
A-130	Management of Federal Information Resources – OMB Circular A-130	General policies that apply to the information activities of all agencies of the Executive Branch of the Federal Government.	<a href="http://www.whitehouse.gov/omb/circulars_a130_a130trans4/">http://www.whitehouse.gov/omb/circulars_a130_a130trans4/</a>

**Executive Office of the President Policy and Guidance**

Policy and guidance issued by parts of the Executive Office of the President, which includes OMB’s E-Government Office and the Office of Science and Technology Policy.

Identifier	Title	Brief Description	URL
EO 13642	Making Open and Machine Readable the New Default for Government Information – Executive Order	Creates the Government’s Open Data Policy, sets requirements for the publication of open, standards compliant data across federal agencies.	<a href="https://www.federalregister.gov/execute-order/13642.pdf">https://www.federalregister.gov/execute-order/13642.pdf</a>
Digital Government Strategy	Digital Government: Building a 21 <sup>st</sup> Century Platform to Better Serve the American People (2012)	Provides strategies and guidance for making government information more accessible to its citizens.	<a href="http://www.whitehouse.gov/sites/default/files/omb/egov/digital-government/digital-government-strategy.pdf">http://www.whitehouse.gov/sites/default/files/omb/egov/digital-government/digital-government-strategy.pdf</a>

**Federal and State Laws and Directives**

Identifier	Title	Brief Description	URL
Ocean and Coastal Mapping Integration Act of 2009	S. 174 Ocean and Coastal Mapping Integration Act	Directs the President to establish a program to develop a coordinated and comprehensive federal ocean and coastal mapping program for the Great Lakes and coastal state waters, the territorial sea, the exclusive economic zone, and the U.S. continental shelf that enhances ecosystem approaches in decision-making.	<a href="http://beta.congress.gov/bill/111th-congress/senate-bill/174">http://beta.congress.gov/bill/111th-congress/senate-bill/174</a>