2010 Annual Report

Federal Geographic Data Committee

fgdc
Federal Geographic Data Committee

Federal Geographic Data Committee
IVAN DELOATCH, Executive Director

Federal Geographic Data Committee, Reston, Virginia: 2010

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Executive Summary

2010 has been a year of continued accomplishment and progress for the Federal Geographic Data Committee (FGDC), with significant advances in the collaborative development of geospatial data and technology. The theme of this year's annual report from the FGDC is "The Geospatial Platform." The Geospatial Platform is a new collaborative concept that was described in the President's fiscal year 2011 budget:

> "In 2010 and 2011, Federal data managers for geospatial data will move to a portfolio management approach, creating a Geospatial Platform to support Geospatial One-Stop, place-based initiatives, and other potential future programs."

The Geospatial Platform will be an accessible, reliable, and cost-effective collection of data, tools, and services that will provide a capability to help address the Administration's priorities for data sharing, transparency, and collaboration. The Geospatial Platform will be developed based upon the principles of collaborative governance, partnerships, shared infrastructure, and collecting data once and using it many times. The FGDC Executive Committee has taken a leadership role in developing an initial roadmap for the Geospatial Platform and laying the foundation for integrated non-Federal governance and public/private partnerships. We look forward to moving toward further development and implementation of this promising new initiative in 2011.

The FGDC has provided important support for key Administration initiatives. For example, the Data.gov portal, which is the Administration's flagship data initiative, celebrated its first anniversary in 2010. During the course of the year, datasets accessible though Data.gov increased from 1,400 to over 270,000. Over 90 percent of these 270,000 datasets are geospatial data. This tremendous growth was facilitated and made possible through a dedicated and concerted effort by many geospatial specialists within the FGDC partner agencies.

Several other important developments have also taken place during the past year. For example, the FGDC Steering Committee approved new Supplemental Guidance to the Office of Management and Budget's Circular A–16, which will provide a more effective process to manage Federal geospatial investments utilizing portfolio management. The FGDC also made progress on several new data standards, including the United States Thoroughfare, Landmark, and Postal Address Data Standard and the Coastal and Marine Ecological Classification Standard. The FGDC is also developing a new business case for the Imagery for the Nation initiative and has approved the National Digital Orthoimagery Program (NDOP) Subcommittee as a new FGDC subcommittee.

Fiscal year 2011 will focus on continued collaboration to better enable public-private partnerships and investments, and continued progress on the development of geospatial data and tools for the benefit of the agencies and the public we serve.

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National Spatial Data Infrastructure Champion

Dr. Jerry J. Johnston

Champions are leaders. They are dedicated to achieving success. They lead by example and personify a "can do" attitude. Leaders are visionary in their approach, efficient in their execution, and valued for their outcomes. The tools they use—innovation, cooperation, and mitigation—are keys to success. Each year the FGDC recognizes as a champion one who has taken a strong leadership role in the development of the National Spatial Data Infrastructure (NSDI). This year's honoree is Dr. Jerry J. Johnston.

Dr. Johnston's leadership is clearly reflected by his key contributions to the operations of the FGDC Steering Committee, the Executive Committee, and the National Geospatial Advisory Committee where he provided strategic leadership and applied a multifaceted approach to coordination. His ability to provide visionary direction to geospatial coordination while also applying a "roll-up-the-sleeves" approach to integrating geospatial data into Data.gov has helped advance key geospatial initiatives such as the Geospatial Platform. Dr. Johnston's efforts with Data.gov, a primary Administration priority, (1) ensured that geospatial data was integrated into the Data.gov framework, (2) brought geospatial data into the mainstream limelight, and ultimately (3) enabled Data.gov to exceed its anniversary service goal of 250,000 available data records. As of July 2010, over 90 percent of the records available through Data.gov are geospatial. For his vision, dedication, tireless efforts, and successful leadership in the NSDI community, Dr. Johnston is recognized as this year's NSDI Champion.

Biography

Dr. Jerry J. Johnston is the Geographic Information Officer for the U.S. Environmental Protection Agency (EPA). In this role he is responsible for leading efforts to implement enterprise geospatial services and technologies that support achieving the diverse mission goals of the Agency. He is an active member in several Federal geographic coordinating committees. Through his leadership in interagency programs Dr. Johnston led the design, development, and release of the Data.gov GEO Viewer application and the development for mapping components of the interagency ChesapeakeStat application. Dr. Johnston received the Federal Computing Week Fed100 award in recognition of information technology innovation for his efforts within the EPA. Prior to joining the EPA in 2005, Dr. Johnston conducted research on complex environmental systems modeling and served as the project manager for numerous geospatial projects in the private sector. Dr. Johnston is a graduate of Michigan State University and Indiana University where he received degrees in environmental science.

Highlights 2010

1. Geospatial Platform

The President's fiscal year 2011 budget called for the establishment of a Geospatial Platform that supports Geospatial One-Stop, place-based initiatives, and other potential and future programs. This direction, along with the 2011 and 2010 memos on Place-Based Policy, and integration of geospatial capabilities into Recovery.gov and Data.gov, reflects the value the Administration sees in geospatial information, and recognizes the need to leverage the large Federal investment in geospatial data. In fiscal year 2010, the foundational framework for the Geospatial Platform was defined and laid out in the "Modernization Roadmap for the Geospatial Platform" document. Developed under the leadership of the FGDC Executive Committee, with participation and feedback from Federal and non-Federal sources, the Roadmap defines the path forward for implementing common geospatial data, services, and applications for meeting Federal Government and non-Federal government business requirements. The Geospatial Platform will leverage the efforts of the Geospatial Line of Business activities. Additionally, the GeoPlatform.gov Web portal was established utilizing a NOAA hosted Gulf Response application that was featured on a major newscast. For more information see page 5.

2. Data.gov

Data.gov celebrated its one-year anniversary in May 2010. During the first year, Data.gov expanded its accessible raw data from 47 records to 272,677 records, exceeding the first-year target of a quarter-of-a-million records. The Federal geospatial community played a critical role in enabling this success. Of the available records, 270,724 are geospatial data or over 90 percent of the data. Late in fiscal year 2010, Data.gov unveiled its first geospatial visualization capability, GEO Viewer, an interactive mapping tool designed to let users preview geospatial data available through the Data.gov catalog. For more information see page 10.

Graphic showing Data.gov home page on its first anniversary.

3. Geospatial One-Stop

In fiscal year 2010, the Geospatial One-Stop (GOS) project focused on integration with the new Administration's Open Government Initiative through Data.gov. Connectivity between GOS and Data.gov takes place using newly developed GOS Web service capabilities that enable searches for geospatial data through applications beyond the GOS portal. During fiscal year 2010, the GOS data collection grew to over 430,000 records, of which over 270,000 are shared through Data.gov. In addition, GOS as a Web service was used in the development of several applications by four NSDI Cooperative Agreements Program awards. For more information see page 11.

4. Geospatial Line of Business

The Geospatial Line of Business (Geospatial LoB) has served as the policy, planning, and key business processes component for the geospatial information community. During the past year, the work groups advanced the Geospatial SmartBUY Agreement, which lowers the cost of doing business and improves access to geospatial technologies, saving the Federal Government over $8 million in the first three quarters alone. The work groups finalized the Office of Management and Budget Circular A–16 Supplemental Guidance, which improves the coordination and use of spatial data by utilizing a portfolio management approach for geospatial data management and reporting. Likewise, key steps were made to advance the development of

the geospatial segment architecture that defines a framework for shared infrastructure. These work group efforts and others were refined to align with direction in the President's budget in order to provide a foundation for the Geospatial Platform and help to guide its implementation strategy. For more information see page 9.

5. National Geospatial Advisory Committee

The National Geospatial Advisory Committee (NGAC) was established by the Department of the Interior to provide external advice and recommendations to the FGDC. During the past year, the NGAC analyzed and provided feedback and recommendations on the new Geospatial Platform Initiative, the economic recovery bill, national geospatial policy approaches, and metrics for geospatial programs. For more information see page 12.

6. Fifty States Initiative

In 2010, the Fifty States Initiative celebrated its 5-year anniversary, recognizing five years of improving geospatial coordination through strategic and business planning. Ten new Cooperative Agreements Program awards were made to support collaborative planning and a kickoff meeting was held in March 2010. Forty-five States plus the District of Columbia and the Virgin Islands have received over $2.4 million since the initiative started. The Initiative advances ways to measure progress on geospatial coordination. In particular, FGDC supports efforts to develop a Geospatial Maturity Assessment model and is continuing to assess progress of the Initiative. For more information see page 14.

7. International Activities

The FGDC continues its international activities through participation in international standards organizations (ISO/TC 211) and the Open Geospatial Consortium and support of the Global Spatial Data Infrastructure (GSDI) biennial conference, the GSDI Small Grants Program, and the intergovernmental Group on Earth Observations (GEO), as well as its Global Earth Observation System of Systems (GEOSS). For more information see page 15.

8. Standards

In fiscal year 2010, the FGDC released the draft United States Thoroughfare, Landmark, and Postal Address Data Standard and the draft Coastal and Marine Ecological Classification Standard for public review and comment. Both standards were the result of rigorous development processes prior to submission of the committee draft for public review. The FGDC initiated a process to endorse external standards in support of the Geospatial Platform. The FGDC also conducted an online survey on the FGDC standards process. Survey participants commented on the length of time it takes to develop standards and identified reasonable lengths of time to accomplish steps in the FGDC standards process. For more information see page 16.

9. Imagery for the Nation

The Imagery for the Nation (IFTN) Phase 1 Project was initiated late in fiscal year 2008 to explore the development of a Federal program, conducted in partnership with State and local governments, to address the Nation's basic business needs for imagery at 1-meter resolution and higher. Building on the foundation of the Phase 1 Project conducted in fiscal year 2009, the FGDC Executive Committee and the Work Groups began development in fiscal year 2010 of a business case and funding request for IFTN. Led jointly by USDA and DOI, this process will document the justification for capital investment and plans for executing IFTN for review by the Office of Management and Budget (OMB). This is a first step to obtaining OMB approval for a budget request related to the information technology aspects of IFTN. For more information see page 18.

10. National Digital Orthoimagery Program Subcommittee

In September 2009, the FGDC Executive Committee unanimously endorsed a Record of Decision (ROD) proposed by the IFTN Planning Team. The ROD recommendations on IFTN governance included the following: "The National Digital Orthophotography Program, re-chartered as an FGDC subcommittee, will provide operational-level coordination of IFTN activities. [The subcommittee] will focus on coordination and management issues related to Federal imagery programs." At its July 2010 meeting, the FGDC Coordination Group unanimously passed the proposed charter to establish the National Digital Orthoimagery Program (NDOP) subcommittee and recommended the NDOP's establishment to the FGDC Steering Committee. Upon approval by the FGDC Steering Committee, the NDOP subcommittee will begin operations.

11. FGDC Coordination Group

In December 2009, the FGDC Coordination Group elected its first Co-Chair to serve with the Executive Director of the FGDC Secretariat. William Mullen, National Geospatial-Intelligence Agency, dutifully fulfilled this role. The Co-Chair role was established as part of revisions to the Coordination Group Charter, which now also has provisions for additional Federal members to be appointed by Federal senior agency officials. The additional Federal members support geospatial information for second-tier agencies within their departments, thus allowing second–tier agency members to represent their unique geospatial missions. For more information on membership see page 27.

12. Recovery.gov

The FGDC Executive Committee established a team in 2009 to work with the Recovery.gov development team to help ensure that the Web portal could leverage geospatial capabilities in the presentation of Federal investments in the American Recovery and Reinvestment Act (Recovery Act) funding data to the public. In 2010, this team of cross-agency geospatial experts provided valuable feedback and lessons learned to the Recovery.gov developers, including input on geocoding resources, user interface design, report use cases, and data feeds. The Recovery.gov site utilizes maps as the central organizing principle for presenting both agency and recipient information on (1) where recipient awards have been funded, by State, zip code, or neighborhood; (2) funding amount summaries; (3) recipient information; (4) project status; and (5) other parameters. Recovery.gov is a prime example of how geospatial information and spatial analysis adds value to other government data, and how maps and place-based approaches can help users interpret how and where Federal programs and activities are affecting their communities.

13. National Land Parcel Data

The FGDC Subcommittee for Cadastral Data continued its efforts to create national land parcel data by providing updates to the existing national inventory of cadastral data and by identifying several State cadastral coordinators. In addition, three workgroups were established to address the various themes: the National Parcel Workgroup, the Federal Parcel Workgroup, and the Public Land Survey System (PLSS) and Common Control Workgroup. Also this year, the Cadastral Subcommittee completed an essential metadata profile. For more information see page 18.

Graphic showing the home page for Recovery.gov.

The American Recovery and Reinvestment Act (Recovery Act) of 2009 was a direct response by Congress and the President to the economic crisis. Its three immediate goals are to (1) create new jobs and save existing ones, (2) spur economic activity and investment in long-term growth, and (3) foster unprecedented levels of accountability and transparency in government spending. All recipients of Recovery funds are required to report quarterly on how they are using the money. These data are posted on Recovery.gov, the Web site required by the Recovery Act to "foster greater accountability and transparency in the use of funds made available by this Act."

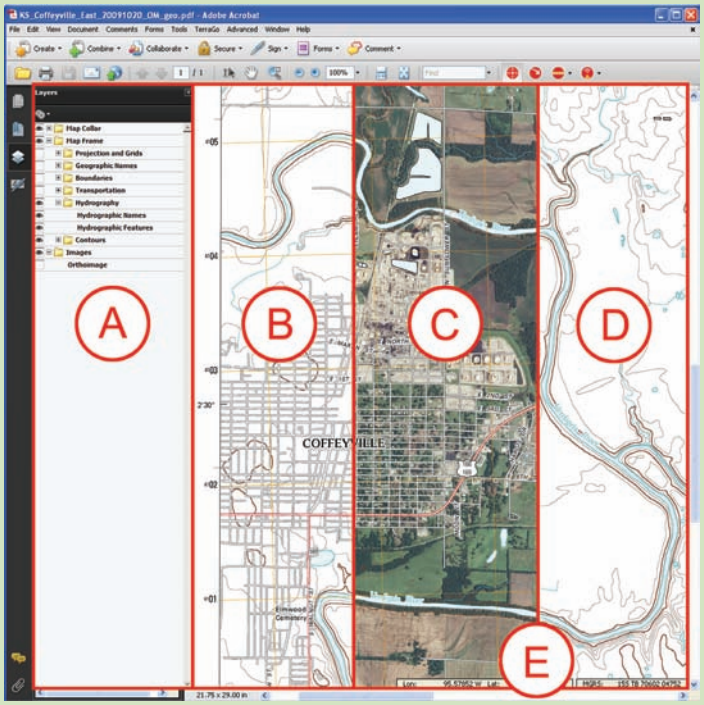
Success Stories

USGS Milestone Reached for Map Production

Challenge: Through the second half of the 20th century, the U.S. Geological Survey (USGS) produced more than 60,000 paper topographic maps, providing complete coverage of the United States. The median publication date for these maps is 1979. As such, the existing legacy paper map collection is out of date and possibly not current enough for use by scientists, engineers, emergency responders, and the public, including recreational users. In response to the need for updated topographic maps, the USGS National Geospatial Program has developed and made available a new national map series called US Topo.

Action: These maps are modeled on the old topographic series, but are derived from the best available, existing government digital data, and are created semi-automatically using processes that will allow the entire contiguous United States to be remapped every 3 years. Production of these maps began in earnest in June 2009. In a little more than a year, the USGS National Geospatial Technical Operations Center has published more than 25,000 maps in the traditional 7.5-minute quadrangle format. This equates to more than 2,000 maps per month, or nearly 100 per workday. Instead of printing and distributing paper copies, the entire US Topo collection is available as digital files and is distributed for free, through the Web, via the USGS Store. Currently available US Topo maps and earlier "Digital Maps – Beta" are posted at *nationalmap.gov/ustopo/*.

Result: Although US Topo maps do not have the handcrafted, artistic appearance of the original, manually produced topographic maps, they do include high-resolution color aerial imagery that provides visible content not available in the original map series. Future project objectives include adding additional content, such as county boundaries and vegetation, while still achieving rigorous production goals. The rapid production cycle will soon eliminate the no-coverage and out-of-date map problems that are inherent in the original, paper map series.



A portion of the US Topo map for Coffeyville, Kansas. New features allow the user to mix and match the information (using options in area (A) to create a topographic map (B), a topographic map with an image (C), selections of topographic map information such as only elevation and surface water (D), or other chosen combinations. Additional software provides a coordinate readout (E) that reports the location of the cursor in longitude and latitude and other coordinate systems. Other software tools are available that allow users to measure distances and areas and to use the map with the Global Positioning System.

The Geospatial Platform

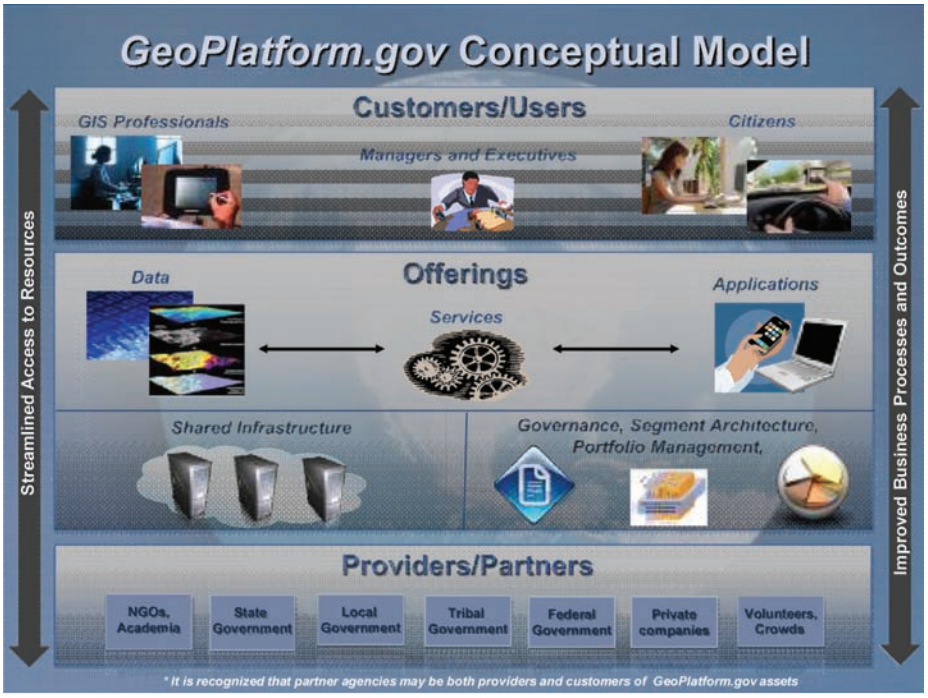
"In 2010 and 2011, Federal data managers for geospatial data will move to a portfolio management approach, creating a Geospatial Platform to support Geospatial One-Stop, place-based initiatives, and other potential future programs.

This transformation will be facilitated by improving the governance framework to address the requirements of State, local and tribal agencies, Administration policy, and agency mission objectives.

Investments will be prioritized based on business needs.

The Geospatial Platform will explore opportunities for increased collaboration with Data.gov, with an emphasis on reuse of architectural standards and technology, ultimately increasing access to geospatial data."

President's Budget, Fiscal Year 2011



The Geospatial Platform Conceptual Model.

The Need for Geospatial Capabilities

The challenges this Nation will face in the upcoming decades will be multifaceted and complicated; they will require diverse information, innovative analysis, and new levels of collaboration to solve. These issues and events have one other common characteristic—they occur in places.

Consider some of the most devastating events in recent United States history: the terrorist attacks on September 11, 2001; Hurricane Katrina; the mortgage crisis; and the Deepwater Horizon oil spill in the Gulf of Mexico. Responses to such events require coordination, information sharing, analysis, and deployment of operational capabilities, all of which are reliant on knowledge of place.

An example of complex questions raised by such events is evident in the recent Gulf oil spill:

- How can we best observe, understand, track, and monitor the existing, pending, and future impacts of this event?
- Where do we mobilize and apply resources to provide the greatest good, prevent the greatest harm, and protect the life, health, and welfare of citizens?
- How do we synthesize vast information resources of the Federal, State, regional, local, and Tribal governments, the private sector, academia, and citizens to provide the on-the-ground situational

awareness required to make wise decisions?

- How do we determine where proactive steps can be taken to prevent or minimize future impacts, such as identifying Gulf coastal communities where aid will be required?
- How do we measure our progress in cleaning up and recovering from the event?

In addition to responding to unforeseen events, the vast majority of the day-to-day activities of government and citizens rely on information linked to places and communities. Commuting to work, choosing where to live and raise families, protecting our natural resources, planning vacation destinations, and juggling busy schedules all require knowledge about place to answer questions and solve problems.

Using place as an information management framework allows decision makers to leverage visualization techniques, government databases, and geospatial analysis tools to rapidly recognize patterns in large amounts of data and make more informed decisions. Displaying results through interactive maps helps communicate complex ideas clearly. This "place-based" framework is consistent with Administration priorities for place-based policies and budgeting.

The Case for the Geospatial Platform

Geospatial data, tools, and resources are already an integral part of many Federal, State, regional, local, and Tribal government day-to-day operations. While the business needs of stakeholders vary, different operations frequently require the use of similar resources. Because geospatial information often involves a significant financial investment, many governments coordinate their efforts to produce cost savings, improve quality of services, and increase efficiency, although clearly more could be done. Under the basic premise "build it once, use it many times," benefits already realized through coordination can be enhanced and expanded when implemented on a larger scale through the Geospatial Platform. The Geospatial Platform will provide the means to enhance and expand these capabilities by offering an operational focal point for delivering trusted geospatial data, services, and applications that can be accessed and used by multiple organizations.

The Geospatial Platform will promote efficient problem-solving tools across organizations, thereby reducing the cost associated with developing independent geospatial capabilities. The Geospatial Platform will provide the environment and leadership needed to successfully share geospatial data, services, and applications that support all levels of government. It will promote information sharing across the geospatial community and provide opportunities to view and conduct business in new and innovative ways.

Building the Geospatial Platform

Coordinating the development and delivery of the Nation's geospatial data and services is a complicated task, but the geospatial community has come together to create an initiative that does just that. The Geospatial Platform is the culmination of these efforts. The partner agencies of the Federal Geographic Data Committee and its stakeholders in government, academia, and the private sector are developing the foundational plans for the Geospatial Platform, which is a managed portfolio of common geospatial data, services, and applications hosted on a shared infrastructure and used by all sectors of society. Karen Siderelis from the Department of the Interior serves as the Platform's Executive Sponsor and Tony LaVoi from National Oceanic and Atmospheric Administration serves as the initial Project Manager. Components of the Geospatial Platform include technical architecture, processes and organizational elements, and an implementation plan. The Geospatial Platform will leverage the expertise and data holdings of geospatial organizations and enhance the Nation's development of—and access to—all things geospatial.

The Purpose of the Geospatial Platform

The Geospatial Platform, with the goal of "ultimately increasing access to geospatial data," is designed to become the operational component of the National Spatial Data Infrastructure.

The Geospatial Platform will offer a managed portfolio of common geospatial data, services, and applications contributed to and administered by trusted sources and hosted on a shared infrastructure. The Geospatial Platform's shared resources will be easily accessible, through GeoPlatform.gov, to support the Administration's priorities, enhance mission critical operations, improve analysis, and support business needs. By delivering trusted assets that are "built once and used many times," the Geospatial Platform will increase information sharing across various levels of government and industry, allowing for the reuse, adaptation, and expansion of geospatial resources. This repurposing and availability of resources will lead to cost savings; wider use of geospatial capabilities; and higher quality applications, data, and infrastructure.

The Geospatial Platform is the next generation of Federal geospatial resource management, building upon the successes of *The National Map*, Geospatial One-Stop (GOS),

the Geospatial Line of Business (Geospatial LoB), and numerous other ongoing interagency geospatial initiatives. Its operations will complement current Administration initiatives such as Data.gov and the modernization of Federal information technology. The Geospatial Platform fundamentally improves access to and management of geospatial resources.

The Geospatial Platform is underpinned by:

- A segment architecture, aligned with the Federal Enterprise Architecture, which emphasizes reuse of open and interoperable standards and technology, and supports increased access to geospatial data and services and an underlying shared infrastructure.
- Collaborative investment and portfolio management processes that enable Federal agencies to leverage resources and share the costs of shared geospatial services.
- A government Managing Partner responsible and accountable for coordination and provision of data and services provided by the Geospatial Platform.
- Policies and governance structures to ensure sound management practices and effective partnerships that address the requirements of Federal, State, regional, local, and Tribal organizations; Administration policy; and agency missions.

The Geospatial Platform will support an operational environment where agencies and their partners discover and use shared data, services, and applications in support of the business of the government and its citizens. The Geospatial Platform will be established as a service-oriented architecture based upon recognized, secure, interoperable, and scalable open-standards-based technologies. It will provide access to a range of geospatial capabilities including software, data, services, and infrastructure.

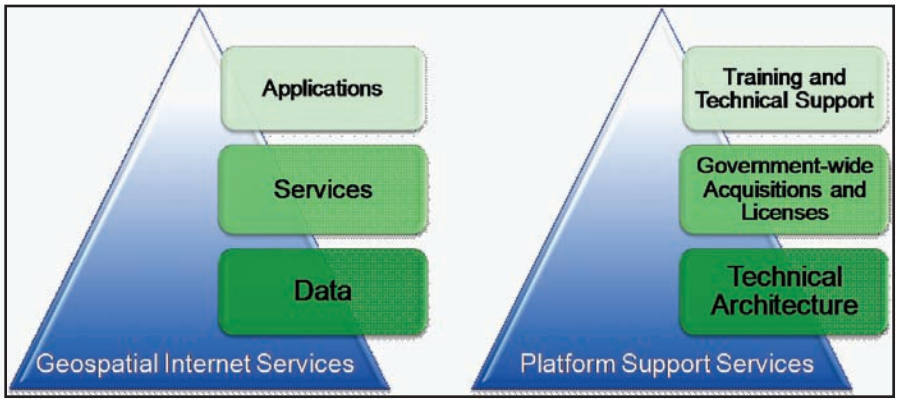
The Business Model

The Geospatial Platform will utilize a business model that outlines the offerings, responsible parties, partners, key customers, and a funding strategy. This business model represents a fundamental shift from managing geospatial resources on a volunteer or “other duties as assigned” basis to creating an operational capability with sustainable support and resources.

Furthermore, the business model places new emphasis on coordinating a partner network of government and private sector organizations that will provide offerings through GeoPlatform.gov based on the needs and requirements of key customers. These customers can include Federal agencies and their partners in State, regional, local, and Tribal governments, nongovernmental organizations, academic institutions, industry, and citizens. In order to carry out this business model, a Managing Partner will be created to orchestrate the initiative, ensuring that the Geospatial Platform engages with partners to deliver the data, services, and applications that meet customer requirements. To assess how well the Geospatial Platform meets its goals and provides a return on investment, the business model outlines a performance evaluation strategy.

Roadmap Implementation

In the coming months the Geospatial Platform will engage in a number of foundational activities as part of its phased implementation. Each phase is defined by a time box in which its deliverables will be created and actions accomplished. The path forward includes ongoing collaboration with stakeholders and leveraging select, existing geospatial efforts in the Federal, State, regional, local, and Tribal geospatial community that are ready to be shared through GeoPlatform.gov.



The GeoPlatform.gov Offerings.

Success Stories

Geospatial Platform Success Story – The Digital Coast

Challenge: Coastal geospatial data exists in literally hundreds of data portals and Web sites throughout Federal, State, and local governments, nonprofit organizations, and academia. For coastal managers, finding the right geospatial data to address coastal issues is half of the challenge. Having the right tools, methods, and case studies to facilitate the application of data to coastal issues is equally as important.

Action: The Digital Coast is a partnership and community resource developed by the National Oceanic and Atmospheric Administration's Coastal Services Center for use by organizations that manage the Nation's coastal resources. The Digital Coast was developed to address the needs of its users by providing a simplified way to access geospatial data and the tools and methods to turn that data into information. A Partnership Group, comprised of representatives from the target audience, is used to determine the focus, form, and function of the Digital Coast effort. The Digital Coast Web site was revised and expanded in fiscal year 2010 and now provides access to 24 national level datasets, 35 geospatial tools, 12 training courses, and over 50 case studies (Digital Coast in Action). The accompanying Data Access Viewer was also modified, and now provides simplified access to over 15 terabytes of high-resolution elevation data, orthoimagery, and land cover.

Result: In the past year more than 69,000 users have accessed the Digital Coast site, an increase of almost 300 percent from the previous year. Over the next 10 years the use of the Digital Coast is expected to result in $26.5 million of benefits to more than 450,000 users, exceeding costs by a ratio of 4.5:1.

The Digital Coast Web site provides a comprehensive information gateway for coastal managers.

FGDC Moving Forward

Geospatial Line of Business Creates Efficiencies

In fiscal year 2010, the FGDC announced that all Federal agencies have access to a single ordering schedule (SmartBUY) for purchase of their geospatial software needs. The SmartBUY procurement vehicle promotes effective enterprise-level software management and leverages the government's buying power through bulk purchase of commercial off-the-shelf software products at pre-negotiated prices, terms, and conditions. This year, the Common Services Work Group (CSWG) continued to expand the variety of software available. SmartBUY has been very successful to date. The General Services Administration estimates that the geospatial software SmartBUY vehicle saved the government over $8 million in the first three quarters of fiscal year 2010.

The CSWG also completed a Survey of Federal Agency Geospatial Requirements to identify Federal geospatial priorities in order to develop acquisition strategies and vehicle(s). Sixty-seven individuals at twenty-seven agencies in fifteen departments responded to the Survey of Federal Agency Geospatial Requirements. As a result of the survey, the CSWG began investigating common metadata editor and geocoding service options with the goal of developing service-level agreements that provide additional opportunities for Federal cost savings. The survey provided a baseline inventory of geospatial requirements for the Federal Government. The priority data, services, and applications can be built once and used many times by many agencies and levels of government. Survey results can be leveraged by the Geospatial Platform for prioritization of offerings and movement toward portfolio management of data, services, and applications.

The Lifecycle Management Work Group (LMWG), in collaboration with representatives from sixteen Federal agencies, responded to Office of Management and Budget (OMB) feedback on the OMB Circular A–16 Supplemental Guidance. OMB requested that the FGDC revise the Supplemental Guidance to evolve from lifecycle management of individual datasets to a framework for portfolio management of Federal geospatial data assets. The updated Supplemental Guidance, delivered to OMB in July 2010, provides the foundation for portfolio management of geospatial data assets. The Supplemental Guidance also provides the outline and direction for similar portfolio management strategies for services and applications under the Geospatial Platform. Efficient implementation of the Supplemental Guidance for data and similar strategies for services and applications across agencies and levels of government is critical to the success of the Geospatial Platform.

The Geo-Enabled Business Work Group (GEBWG) reached myriad audiences to communicate the benefits of geospatial approaches and produced many useful resources during fiscal year 2010. To showcase the value of geospatial tools in the Federal Government, the GEBWG authored an article for the Spring 2010 issue of ArcUser magazine entitled "Geoenabling Federal Business Processes: Improving services to citizens through place-based approaches" (*www.esri.com/news/arcuser/0410/myenvironment.html*). This venue allowed GEBWG to reach a wide national and international audience. The GEBWG also interviewed numerous Federal geospatial project managers to create six informational fact sheets in 2010 highlighting the benefits of Federal geospatial tools and lessons learned through their implementation. These fact sheets are available on the FGDC Web site, *www.fgdc.gov/geospatial-lob/factsheets*. Using the data gathered from these interviews, as well as other sources, the GEBWG developed a "Common Practices and Lessons Learned" document that may be used as a resource for Federal geospatial managers. Additionally, in an effort to guide users in geo-enabling Federal business processes, the GEBWG created a three part Geo-Enabling Curriculum. The curriculum explains geospatial tools and approaches, communicates their value, and lays out a process to begin geo-enabling a business function or project. Additionally, the GEBWG supported outreach efforts for the Geospatial Platform, including the development of a display booth and fact sheet to introduce the Geospatial Platform at Esri's signature event, the International User's Conference, held in July 2010. The Geospatial Platform will build upon the GEBWG's resources and outreach efforts by continuing to encourage the use of geospatial information to enhance government business processes and by reaching out to an ever expanding audience.

The Technology and Architecture Work Group (TAWG) focused on transitioning the Geospatial Profile to a geospatial segment architecture guidance

document supporting efforts of agency architects and executives to:

- Enhance agency business processes with geospatial capabilities.
- Collect, manage, and utilize geospatial information in efficient and effective ways within an enterprise.
- Leverage geospatial standards and coordination efforts to enable the sharing of geospatial resources across an organization and with partners and the public.
- Produce open, interoperable, discoverable, reusable, and measurable services that limit redundancy while promoting maximum use.
- Implement common design principles that foster a broader Federal geospatial platform of shared and accessible capabilities.

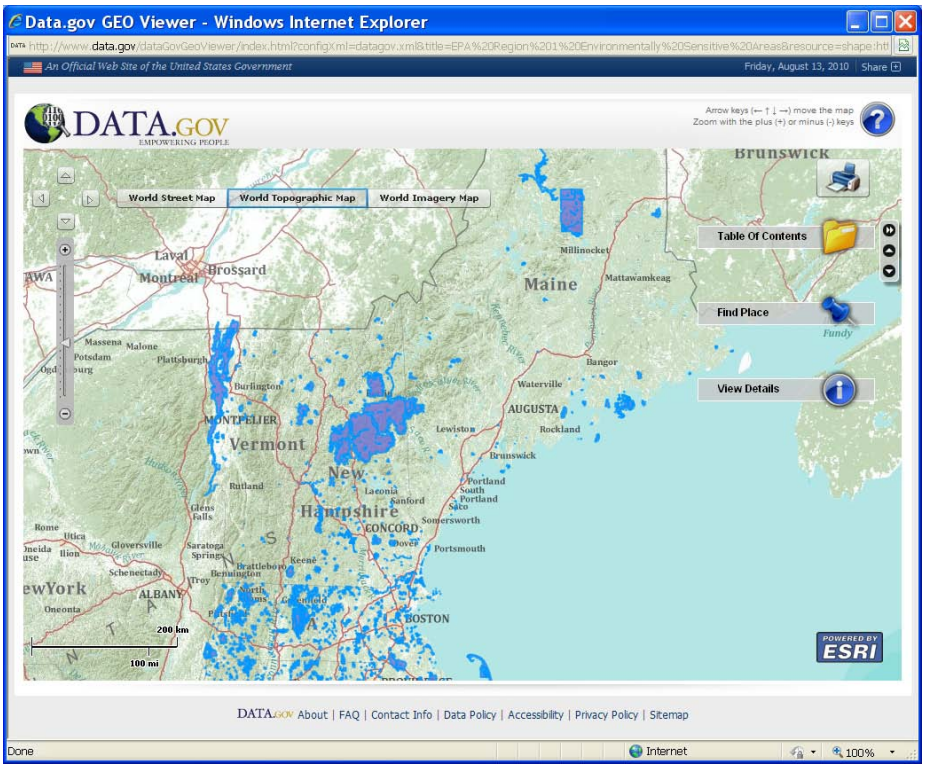
The draft "Geospatial Segment Architecture Guidance" document developed by TAWG incorporates recommendations from OMB and is based on the Federal Segment Architecture Methodology (FSAM) approach. The document is similar to a model document from the Chief Information Officers Council (CIO.gov) on "Identity, Credential, and Access Management." Final additions to the draft "Geospatial Segment Architecture Guidance" document are underway and include FSAM instructional material interpreted and applied to the objectives of the Geospatial Platform. The TAWG also developed initial requirements to establish a cloud computing pilot project to explore the capabilities, cost, and process to host geospatial data, services, and applications "in the cloud." By collecting information about the strengths, weakness, cost models, and opportunities related to cloud computing, the work group can provide recommendations for appropriate use of cloud technology to serve and share geospatial resources across the Federal space.

Data.gov Capabilities Increase

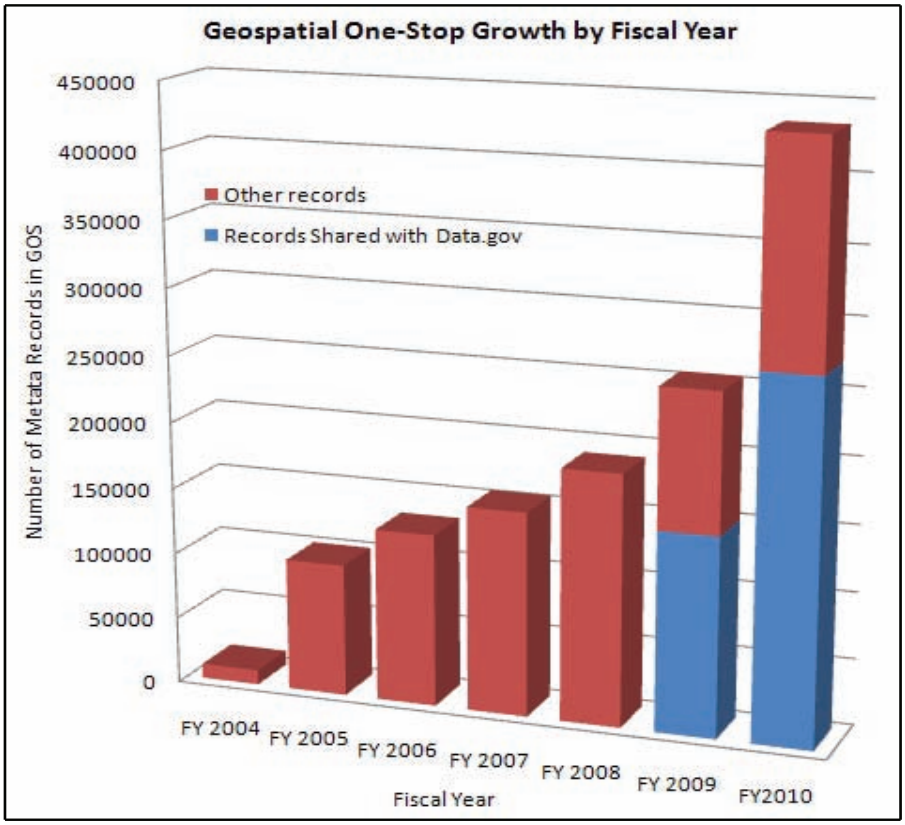
As a priority for the President's Administration, the Open Government Initiative, Data.gov, increases the ability of the public to easily find, download, and use datasets generated and held by the Federal Government. Data.gov provides descriptions of the Federal datasets (metadata), information about how to access the datasets, and tools that leverage government datasets. The data catalogs continue to grow as datasets are added. Federal, executive branch data are included in the first version of Data.gov. The purpose of Data.gov is to increase public access to high value, machine readable datasets generated by the executive branch of the Federal Government.

A primary goal of Data.gov is to improve access to Federal data and expand the creative use of those data beyond the walls of government by encouraging innovative ideas (such as Web applications). Data.gov strives to make government more transparent and is committed to creating an unprecedented level of openness. The openness derived from Data.gov will strengthen our Nation's democracy and promote efficiency and effectiveness in government.

The FGDC initially established a team to work with the Data.gov developers to include geospatial data and capabilities. In 2010, FGDC Executive Committee members continue to be directly involved with the development of Data.gov. Federal geospatial data records account for the vast majority of records currently available through the Data.gov portal; these records are added to Data.gov from the Geospatial One-Stop (GOS) registry. Geospatial capabilities of Data.gov continue to mature and a geospatial data viewing capability was recently unveiled. The interactive mapping tool, GEO Viewer, is designed to let users preview the geospatial data available through



Data.gov GEO Viewer showing EPA Region 1 environmentally sensitive areas.



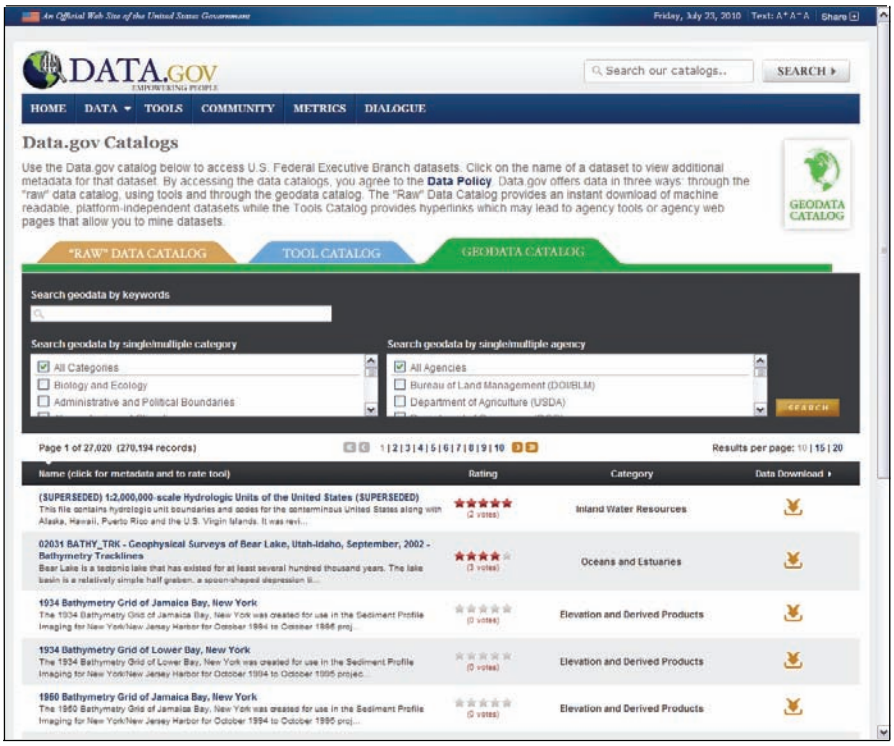
contributed by 435 publishers, the portal saw a 60 percent increase in records from fiscal year 2009. The number of portal users averaged about 100,000 per month in fiscal year 2010, up from 74,000 in fiscal year 2009.

An impetus leading to the significant increase in the number of records and usage of GOS was the integration of GOS with Data.gov. A search of the Geodata catalog (*www.data.gov/catalog/geodata*) in Data.gov is actually a search of selected Federal agency records from the GOS catalog. GOS connectivity to Data.gov is achieved through the use of a Cataloging Service for the Web (CS-W) interface.

The GOS team continued to work with Federal agencies to promote collections of records through GOS for discovery in Data.gov. Adding to collections from the U.S. Census Bureau, the U.S. Environmental Protection Agency, and other agencies, several large collections of the Data.gov catalogs. As Data.gov improves the accessibility of Federal geospatial data, the Geospatial Platform portfolio management strategy is being developed. And as GOS's mission continues to support the data cataloging of non-Federal sources, FGDC will continue to work on the close integration of all three efforts to help ensure the efficient and effective use of resources.

Geospatial One-Stop Grows

The Geospatial One-Stop (GOS) portal is the official means for accessing metadata resources managed in the National Spatial Data Infrastructure (NSDI) Clearinghouse Network. Metadata held by Federal, State, local, and Tribal entities, by academic and nonprofit organizations, and by the private sector are published through the Clearinghouse Network. The GOS portal (geodata.gov) grew substantially in fiscal year 2010. With more than 430,000 individual metadata records



Selected geospatial data from GOS are now searchable in the Data.gov Web portal.

The Geospatial Forum

The FGDC sponsored a Virtual Forum on December 9, 2009. The Forum brought together Federal Government geospatial executives to discuss the development of a national place-based policy that addresses economic competitiveness, environmental sustainability, community health access, and safety and security. The White House issued a memorandum to department and agency heads dated August 11, 2009, entitled "Developing Effective Place-Based Policies for the FY 2011 Budget" that emphasized the need to leverage place-based policies for better policy planning for a variety of issues.

The Forum panelists shared reactions to the White House memorandum and discussed the geospatial community's role in helping shape the future of place-based policies. The Forum was intended for Federal Government geospatial executives only; future Forums will be targeted to other stakeholder groups with interests in policy issues. The event was hosted online and included a brief introductory presentation followed by a facilitated discussion between panelists and participants.

data were added to GOS this year. The new contributing collections are: US Topo (the next generation of digital topographic maps from the U.S. Geological Survey), high resolution aerial orthoimagery from the U.S. Geological Survey, and Shuttle Radar Topography Mission (SRTM) data from the National Geospatial-Intelligence Agency and the National Aeronautics and Space Administration. In all, over 270,000 records are shared from GOS with Data.gov, which means that 90 percent of the records available in Data.gov are geospatial data from GOS. This is a good example how shared and integrated capabilities can increase governmental transparency and efficiency.

The use of external applications to access the GOS data catalog through Web services was the focus of four NDSI Cooperative Agreements Program (CAP) awards this year. Visit *www.fgdc.gov/grants/2009CAP/2009CAPDescriptions* for more project details.

Two-Way Communication with NGAC Produces Results

The National Geospatial Advisory Committee (NGAC) is a Federal advisory committee sponsored by the Department of the Interior to provide external advice and recommendations to the member agencies of the FGDC. The NGAC includes a balanced membership of 28 committee members representing organizations involved in geospatial issues, including all levels of government, the private sector, nonprofit organizations, and academia. The NGAC meets on a quarterly basis and has established subcommittees that conduct research and develop draft products between committee meetings.

The NGAC promotes two-way communication on issues of common interest to the national geospatial community and provides a forum to convey views representative of our partners and stakeholders. The NGAC serves as a valuable source of advice and feedback for the FGDC. Over the past year, the NGAC analyzed and provided recommendations on a number of key geospatial policy issues. Highlights of the NGAC's 2010 activities include the following.

National Geospatial Advisory Committee quarterly meeting.

- The NGAC provided initial feedback and advice on the new Geospatial Platform Initiative and adopted the following resolution: "The NGAC endorses the Geospatial Platform concept as described in the Geospatial Platform Roadmap and encourages the Administration, along with Federal agency leadership, to adopt, support, and implement this initiative in partnership with State, local, regional and Tribal governments."
- The NGAC adopted an Action Plan for committee activities in 2010/2011, including goals and subcommittees organized under the following areas:
  - Geospatial Platform
  - Place-Based Policies
  - *The National Map*
  - Partnerships
  - Emerging Technologies
  - Governance
  - Communications
  - Broadband Mapping
  - Geospatial Workforce
- The NGAC adopted a paper on lessons learned from the geospatial community's response to the economic recovery bill.
- The NGAC adopted a paper on the benefits of a national geospatial policy.
- The NGAC endorsed the high-level concepts in the NGAC Governance Subcommittee's draft paper on NSDI metrics.

Cooperative Agreements Program Promotes the NSDI

For over 15 years the FGDC has sponsored the Cooperative Agreements Program (CAP) with the goal of encouraging and enabling

the geospatial data community to participate in building the National Spatial Data Infrastructure (NSDI). In addition to the benefit of funding, the NSDI CAP validates an organization's geospatial work, which leads to new opportunities. The CAP has created collaborations within all sectors of government, helped develop an understanding of geospatial information in organizations and disciplines new to the NSDI, provided seed money to enable geospatial organizations to participate in the national effort to implement the NSDI, promoted the development of standardized metadata in hundreds of organizations, promoted the importance of geospatial data standards, and greatly expanded implementation of Web mapping services and Web feature services.

This year, 23 CAP projects were completed. As in past years the projects continue to demonstrate the program's diversity. The three service-oriented architecture projects completed successfully demonstrated and documented best practices for wetland permitting, estimating flood-related property losses, and role-based access control. The Cross-Border SDI Project made significant progress deploying new online data, services, and applications to support critical infrastructure identification by using a common spatial data infrastructure for Canada and the United States. For more information please see *www.thecarbonproject.com/Projects/crossborder.php*. The Minnesota Structures Collaborative established partnerships and developed the technical capacity needed to support the long-term collection, publication, and maintenance of databases pertaining to structures. Delta State University and the North Carolina Center for Geographic Information and Analysis completed stakeholder training materials for the U.S. National Grid. These materials are available on the FGDC Web site, *www.fgdc.gov/training/training-materials*. Finally, over 240 people were introduced to metadata concepts though a variety of workshops and presentations.

In the 2010 program, CAP awards were given to 26 projects that address the eight categories outlined below.

1. The Metadata Trainer and Outreach Assistance category is designed to support organizations with NSDI knowledge and experience to assist others in geospatial metadata implementation. Of special interest this year were projects that targeted managers and nontraditional geospatial communities. CAP awarded assistance to four projects to advance metadata outreach.

2. Framework Data Exchange through Automated Geo-Synchronization projects promote and facilitate the exchange of standardized framework data between State and national data stores through a synchronization service using common data models and services. The governance challenges required to enable automated data exchange will also be addressed. Three awards were given in this category.

3. The Fifty States Initiative: Strategic and Business Plan Development category is designed to accelerate statewide coordination activities through consistent strategic and business plan development. CAP awarded assistance to five States to begin developing State plans.

4. The Fifty States Initiative: Business Plan Development and Implementation category is designed to build on the work that resulted from an initial Fifty States Initiative award. The projects develop and implement statewide business plans that facilitate the alignment of Federal agencies with statewide geospatial planning activities that advance the NSDI. Five awards were given in this category.

5. Return on Investment Methodology and Business Case Development for Multi-agency NSDI projects enables the development of the financial business cases for collaborative spatial data infrastructure projects to gain a better understanding of the cost and more importantly the benefits of spatial data infrastructure projects. This category received three awards.

6. The project awarded in the FGDC-Endorsed Standards Development and Implementation Assistance and Outreach category will carry out key recommendations included in the Implementation Plan for the FGDC Wetland Mapping Standard that was adopted in July 2009.

7. The category Demonstration of Geospatial Data Partnerships across Local, State, Tribal, and Federal Government supports the NSDI vision of integrating data from all levels of government, to include processes for feeding local data into State holdings, which in turn feed into Federal programs, such as *The National Map*. The four awards in this category will support the further development and documentation of partnerships and processes to implement this nested approach for one or more data themes of the NSDI.

Graphic showing the MnGeoData Collaboration System Web site (*https://www.sharedgeo.org/MNGEO-ro/public/geomoose.html*).

What are the States saying about the Fifty States Initiative?

Arkansas: "[Its 2009 Fifty States project] provided a mechanism for communications with State leadership and stakeholders…"

Hawaii: "As a result of the 2008 Fifty States project, the Council recruited more non-Board members to take active roles in governance."

Maine: "The stakeholder forums and sharing of priorities were most valuable."

Virginia: "The [2009 Fifty States] project provided the glue to help advance collaborative efforts needed in Virginia…"

8. One award was given to help build an interoperable environment for emergency response that would become available to all jurisdictions in the State of California.

More information about these projects, including descriptions and reports, is available at *www.fgdc.gov/grants/2010CAP/2010CAPDescriptions*. The planned CAP budget for fiscal year 2011 is $800,000, and these funds will be used to support approximately 21 projects. For more information about the CAP, please see *www.fgdc.gov/grants*.

Fifty States Initiative Builds Coordination

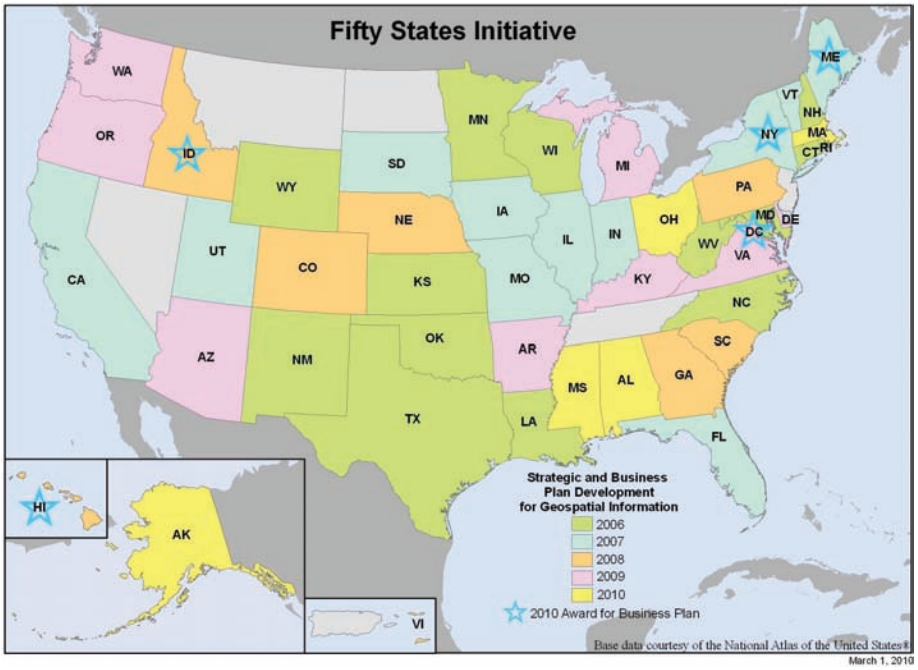
This year marked the fifth anniversary of the Fifty States Initiative. The Initiative strengthens statewide coordination by advancing strategic and business plans. Since 2006, 45 States plus the District of Columbia and the Virgin Islands have received support through the NSDI CAP program. In 2010, a new CAP category was initiated to support further business planning and plan implementation. Ten awards were given in the Fifty States CAP categories that are listed above.

A key activity of the Fifty States Initiative is the kickoff meeting held in conjunction with the National States Geographic Information Council mid-year conference. The kickoff meeting provides training on the use of strategic and business planning templates.

When the Fifty States Initiative started, there was a strong sense that the initiative needed to measure its progress. Last year, a status report "Measuring Progress of the Fifty States Initiative" was released. In it, four analyses were reported: (1) analyses of the nine criteria for successful geospatial coordination from the National States Geographic Information Council (NSGIC) Survey, (2) analyses of five questions from the NSGIC Survey as indicators of the level of success in coordination, (3) survey responses from Federal employees concerning the effectiveness of the Fifty States Initiative, and (4) a qualitative assessment based on five case studies of States that have received awards. This report concluded that there are strong indications that the Fifty States Initiative meaningfully improved State geospatial coordination.

In 2010, a survey of all the Fifty States awardees was undertaken to again gauge progress of the initiative. The State Geographic Information System (GIS) Coordinators and (or) Fifty States award recipients were asked to indicate their level of agreement with several statements describing the awards. In another series of statements, respondents were asked to identify tangible results that could be attributed to the State strategic planning process. As the graphic indicates, the results strongly reflect the positive results of the initiative even though these results take time to be realized. Those States receiving awards some years ago are more likely to see positive results.

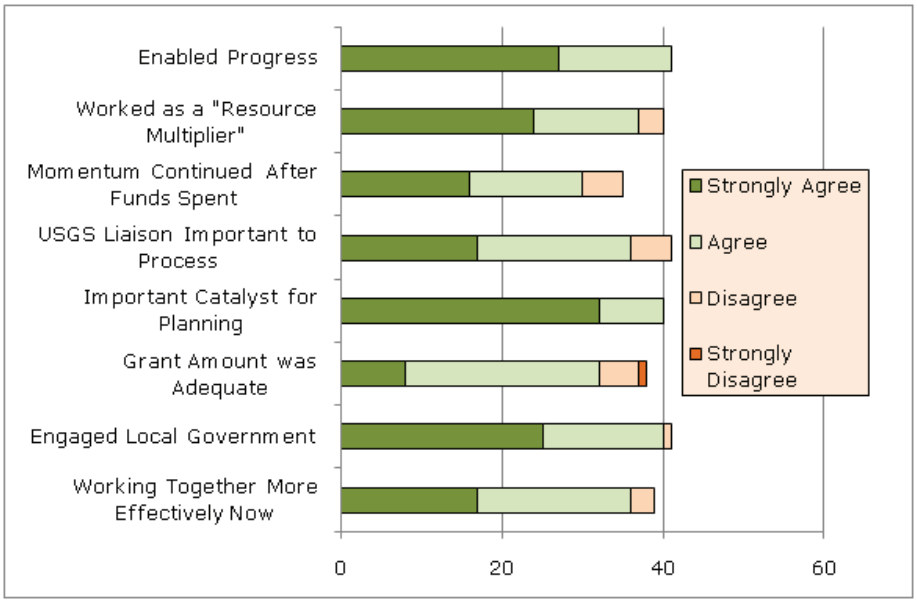
To support the FGDC's effort to advance the Geospatial Platform, the Fifty States Initiative prepared a



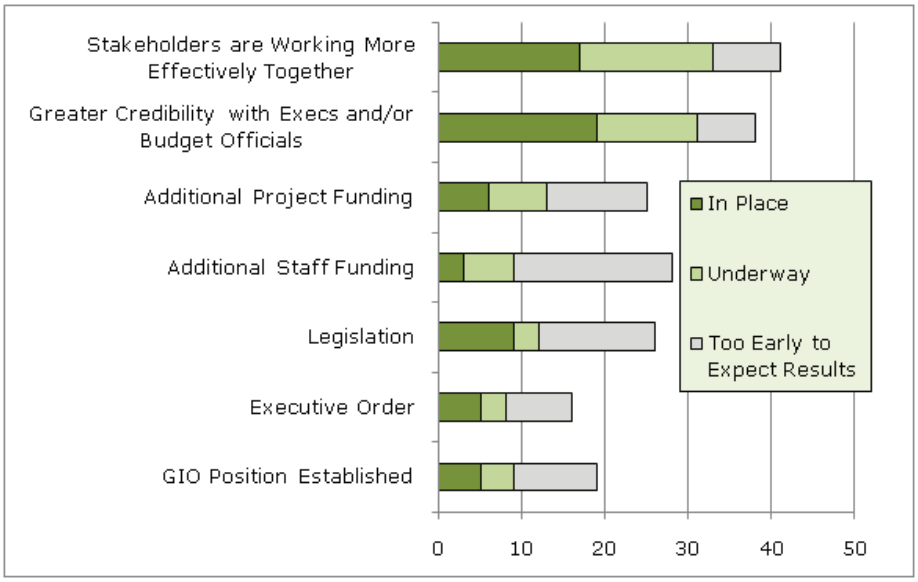
Map showing status of the Fifty States Initiative at the end of fiscal year 2010.

report evaluating how State activities align with the data, services, and applications model of the Geospatial Platform. In general, concepts regarding a geospatial platform are new to the geospatial community, but there is potential for beneficial alignment with State activities.

As the Fifty States Initiative continues into its sixth year, more emphasis will be placed on business planning and implementation. Additional efforts are planned to reach out and bring regional and local governments into the span of the initiative. Work on a Geospatial Maturity Assessment model also is being advanced to better measure the progress of geospatial coordination and the Fifty States Initiative.



Graphic showing the measure of agreement with statements about the Fifty States Initiative.



Graphic showing tangible results attributed to the Fifty States Initiative.

International Efforts Continue

The FGDC continued collaborative efforts with GeoConnections in Canada, sending U.S. Tribal representatives to the Information & Communications Technology (ICT) Summit in Vancouver, British Columbia. The event was sponsored by the First Nations Technical Committee for British Columbia and GeoConnections. One of the U.S. representatives, Robert Holden, Deputy Director of the National Congress of American Indians, provided opening remarks at the Natural Resources Day. The Summit included a presentation on cross-border issues related to the Columbia River Treaty and other issues that need a spatial data infrastructure. This was the first time U.S. Tribal representatives participated in the event.

The FGDC through the Global Spatial Data Infrastructure (GSDI) Association maintains collaborative efforts to advance the international SDIs. The FGDC coordinates and supports the GSDI Small Grants Program that reaches developing countries around the world. In 2010, thirteen projects

Robert Holden, Deputy Director of the National Congress of American Indians, making opening remarks at the ICT Summit.

were supported. The GISCorps of Urban and Regional Information Systems Association (URISA), partners in the GSDI Small Grants Program, provided time and services. Through the GSDI Association, FGDC supports the publication of regional Spatial Data Infrastructure newsletters. In addition, the FGDC hosts a visiting scientist from Korea who supports the Asia Pacific regional newsletter and other GSDI activities. Lastly, FGDC actively planned the GSDI world conference in the Garden City of Singapore in October 2010. The theme for the 12th GSDI conference was "Realizing Spatially Enabled Societies."

The FGDC Office of the Secretariat continued support for the intergovernmental Group on Earth Observations (GEO) and its Global Earth Observation System of Systems (GEOSS). In addition to providing a co-chair for the Architecture and Data Committee and a Task Force lead for the key architectural tasks within GEO, the FGDC sponsors the operation of a common search capability across all GEOSS assets, known as the GEOSS Clearinghouse, and the Component and Service Registry. Sponsorship is provided through technical support agreements with George Mason University.

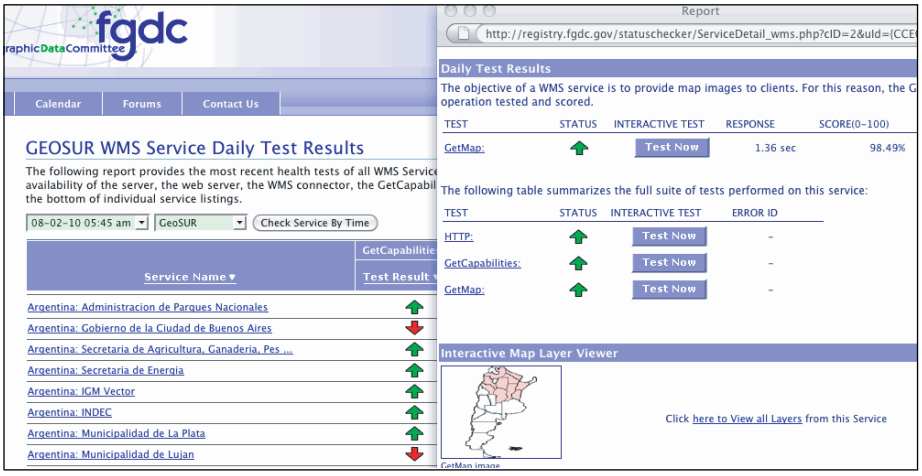
The FGDC supported the development and online availability of a Service Status Checker (SSC), written to provide service availability and limited capabilities testing of services registered with Geospatial One-Stop. Because it was based on testing open standards adopted by most NSDI Web Services, the SSC was offered for integration with other national and sub-national Spatial Data Infrastructures (SDIs) to promote monitoring and resolution of quality-of-service information. In 2010, the GeoSUR consortium of 11 countries in Latin America, the SDI of Catalunya, Spain (IDEC), and the Canadian Geospatial Data Infrastructure all registered geospatial Web services with the SSC for daily monitoring of catalogs, map, and data services. The FGDC Secretariat continues to support remote use and integration of these SSC services in the United States and abroad.

Standards Press Forward

Standards are a key component of the NSDI. Standards are critical to the development, sharing, and use of geospatial data. The FGDC develops geospatial data standards for implementing the NSDI, in consultation and cooperation with State, Tribal, and local governments; academic institutions; the private sector; and, to the extent feasible, the international community. The FGDC develops standards only when no equivalent external standards exist.

In fiscal year 2010, the FGDC released the draft "United States Thoroughfare, Landmark, and Postal Address Data Standard" for public review and comment. This standard specifies data content, data classification, data quality, and data exchange in XML for street addresses and landmark addresses and points of postal delivery. The FGDC also released the draft "Coastal and Marine Ecological Classification Standard" (CMECS) for public review. CMECS provides a means to classify ecological and habitat units using a common terminology. It provides a uniform protocol for identifying, characterizing, and naming ecological units in support of monitoring, protection, and restoration of unique biotic assemblages, protected species, critical habitat, and important ecosystem components. The FGDC is also sponsoring a project to update the standard for Classification of Wetlands and Deepwater Habitats of the United States, which was endorsed in 1996.

This year the FGDC began a process to endorse external standards. One goal of this effort is to endorse and adopt standards to support the Geospatial Platform. Another goal is to align with standards in the Department of Defense IT Standards Repository (DISR). Most of the standards are voluntary consensus standards developed through the International Organization for Standardization (ISO), the American National Standards Institute (ANSI), and the Open Geospatial Consortium; however, a few standards are de facto standards that have gained acceptance through implementation and use. This is the first time that the FGDC has sought endorsement of external standards by the FGDC through the FGDC Policy on



The FGDC Service Status Checker supports the quality-of-service testing for the GeoSUR Project in Latin America.

Recognition of Non-Federally Authored Geographic Information Standards and Specifications.

The FGDC conducted an online survey on the FGDC standards process in 2010. Thirty-seven participants completed the online survey. Survey participants commented on the length of time it takes to develop standards and identified reasonable lengths of time for steps in the FGDC standards process. Based on the survey findings and ISO guidance, the FGDC Standards Working Group proposed time frames for process steps that can be used as a guide for the developers of standards. The goal is to bring FGDC endorsement of a standard to three years or less after approval of a project proposal. The proposed time frame will hopefully result in standards that meet user needs in a timely manner, while maintaining the rigor necessary to ensure the legitimacy of a standard.

Metadata Remains Vital

The FGDC Metadata Working Group (MWG) benefits by representation from all sectors of the geospatial community: Federal, State, Tribal, regional, local, academic, nongovernmental, and private. Quarterly teleconferences keep the working group informed of developments in the metadata community. The MWG welcomes the Champaign County (Illinois) Regional Planning Commission, Marshall University (West Virginia), the National Association of Regional Councils, and Westat Inc. as the 2010 NSDI Cooperative Agreements Program awardees and new members of the MWG. The awardees are using classroom and Web-based training to train their interest groups on the intricacies of metadata, streamlining its creation, and making metadata the first step toward data integration. The training is available to Federal, State, Tribal, regional, and local governments, academia, and nonprofit

organizations. Visit *www.fgdc.gov/grants* for more project details.

In 2010, the InterNational Committee for Information Technology Standards (INCITS) registered a project to develop a "North American Profile of ISO 19110:2005, Geographic information – Methodology" for feature cataloging. United States and Canadian experts from INCITS Technical Committee L1 and its Canadian counterpart, the Canadian General Standards Board Committee on Geomatics, have developed content to tailor ISO 19110:2005 to meet the requirements of both countries. The North American Profile (NAP) of ISO 19110:2005 will enable users of the FGDC Content Standard for Digital Geospatial Metadata to migrate entity/attribute information into an ISO-compliant format.

The FGDC Metadata program has also posted to *www.fgdc.gov* a guidance document for the geospatial community, "Preparing for International Metadata."

NSDI Training

Fundamental to the NSDI is collaborative agency training and self-directed learning that explain various concepts of the NSDI. As mentioned above, the metadata program benefits from the Cooperative Agreements Program by utilizing the skills of stakeholders to train disparate audiences in metadata.

The FGDC benefits from a Tribal training agreement with the Department of Homeland Security's Federal Emergency Management Agency. The course "Emergency Management Framework for Tribal Governments" helps Tribal communities understand emergency management principles and develop and implement comprehensive emergency management systems. This 4-day course provides Tribal leaders and emergency management/response personnel with a basic understanding of emergency management principles and their role in leading and directing their tribes in developing and implementing comprehensive emergency management systems.

The NSDI Training Program is currently a curriculum of 20 self-

A metadata training session in Billings, Montana.

directed lessons that acquaint the trainee with the breadth of NSDI topics including Geospatial Data Discovery, Geospatial Integration, and Geospatial Partnerships, Policy, and Planning. The NSDI Training Program's lessons are reviewed and updated annually, and new lessons are added as they become available. Lessons for three Framework Data Themes (Geodetic Control, Elevation, and Transportation-Rail) were added this year and the "Value of Metadata" lesson has been converted to an e-Learning format as a means to provide the user an improved learning experience.

The FGDC encouraged the development of NSDI-related training materials by stakeholders. Content development guidelines have been published that outline best practices for the development of effective training materials (*www.fgdc.gov/training/nsdi-training-program/materials/NSDITraining_StakeholderContentDevGuidlines.pdf*), and training materials review and comments are provided by FGDC staff and contractors. In 2010, NSDI stakeholders, through a NSDI CAP Category 6 award, developed U.S. National Grid (USNG) lessons (*www.fgdc.gov/training/training-materials#stakeholderstraining*).

Imagery for the Nation Advances

Imagery for the Nation (IFTN) is envisioned as a Federal program conducted in partnership with State and local governments to address the Nation's basic business needs for imagery at 1-meter resolution and higher. The IFTN Phase 1 Project was initiated late in fiscal year 2008 to explore development of a comprehensive national imagery program. In August 2009 the Executive Committee approved a Record of Decision to finalize the program configuration, establish its governance, and document the basic agreements to complete the IFTN plan.

Building on this foundation, the Executive Committee and the Work Groups have begun development in fiscal year 2010 of a business case and funding request for IFTN. Led jointly by the U.S. Department of Agriculture (USDA) and the U.S. Department of the Interior (DOI), this process documents justification for capital investment and plans for executing IFTN for review by the Office of Management and Budget (OMB). This is a first step for obtaining OMB approval for a budget request related to the information technology aspects of IFTN.

A single, joint IFTN business case will represent both DOI and USDA business requirements and present analysis of several alternatives for implementing a national imagery solution that meets the needs of IFTN stakeholders. The IFTN Phase 1 project report, expected to be released by early 2011 on the FGDC Web site, outlines potential innovations being considered in this process. To support the process, the Executive Committee issued a Request for Information (RFI) to industry to gain additional information on the potential costs and benefits of different approaches to meet the goals of IFTN. The National Geospatial-Intelligence Agency led development of the RFI on behalf of the FGDC. The results of the RFI will be incorporated into later versions of the IFTN Joint Business Case.

Parcel Data and Public Land Data Move Forward

The FGDC Subcommittee for Cadastral Data continued to provide updates to the existing national inventory of cadastral data. Several State cadastral coordinators have been identified and have assumed the inventory update responsibilities. Following through on one of the recommendations from the 2009 Mortgage Stakeholders Meeting, the addition of the parcel number to the Home Mortgage Disclosure Act (HMDA) was enacted. Three workgroups were established to address various parcel-related issues. The workgroups are the National Parcel Workgroup, the Federal Parcel Workgroup, and the Public Land Survey System (PLSS) and Common Control Workgroup. Membership and goals have been established for the workgroups.

The National Parcel Workgroup reported that updated sets of parcel data were provided to the wildland fire community and efforts to establish sustainable standardized parcel datasets at the State level built on last year's efforts. In addition to New Mexico and Washington, California and Nevada have made significant advances toward sustainable systems. Washington State developed a tutorial on the use of parcel data with wildland fire (*www.ruraltech.org/projects/wrl/fldb/fgdc_fire_database.asp*) and California has established a parcel working group that is actively engaged in data collection and updates. All of the available parcel data in Nevada and California have been crosswalked and standardized.

The Federal Parcel Workgroup was organized and met several times via conference calls. The workgroup includes Federal agencies that create and maintain a record of federally managed rights and interests. Interviews with Federal agencies to establish Federal parcel needs, collection status, and future plans are complete. The interviews coupled with the workgroup meetings form the basis for defining a Federal parcel data core dataset. The Federal parcel core data is expected to complement and work with the core data standard for a national parcel data system.

The PLSS and Common Control Workgroup worked with the Bureau of Land Management to establish standardized Public Land Survey System datasets in 12 western States. This data is compliant with the FGDC Cadastral Data Content Standard and publication guidelines. In addition, the data is proposed as the initial standard set of data that is used across government agencies and private industry and collaboratively maintained by multiple data stewards. The data is being provided to the States as requested.

The Cadastral Subcommittee completed an essential metadata profile including the tools to produce HTML and XML documents of essential metadata. This tool is Web based and can be found at *www.vertex3.com*.

Success Stories

Integration of the National Hydrography Dataset and the Watershed Boundary Dataset

Challenge: Linking the two principal geospatial surface-water datasets of the United States, the National Hydrography Dataset (NHD) and the Watershed Boundary Dataset (WBD) makes it possible to work with these two datasets in the same geospatial file. The linkage also advances the WBD into a more capable geospatial model to give it additional analytical power, similar to the NHD. This combined file then provides interoperability between the two datasets, creating a true integration of the data through data structure links and encouraging more accurate spatial alignment.

Action: In the spirit of Office of Management and Budget Circular A–16, the U.S. Geological Survey, the Natural Resources Conservation Service, and the U.S. Environmental Protection Agency joined forces to lead a consortium of Federal and State agencies to update the WBD for the Nation and advocate for the integration and joint management of the WBD and the NHD. By loading the combined NHD and WBD into a joint database, permanent links between the two datasets are established. This allows any location in the country to easily be reference to a specific drainage unit, the network of streams and lakes that make up the unit, all units upstream and downstream, and all the scientific data linked to the affected drainage network.

Result: By integrating these national datasets (the seamless uniform watershed boundaries of the WBD and the networked surface-water component of *The National Map*), the NHD allows users to obtain both datasets in a single transaction. As the links between the two datasets are reinforced over time, the cross-referencing of information is improving the integrity of both datasets. As the number of links increases, more analytical power is created for analyzing watershed characteristics and hydrologic flow in a place-based system.

FGDC Goals for Fiscal Year 2011

1. Implement OMB Circular A–16 Supplemental Guidance

The Office of Management and Budget (OMB) Circular A–16 Supplemental Guidance provides additional detail and definition to Federal agencies on fulfilling their roles and responsibilities originally established in OMB Circular A–16. In 2011, the FGDC agencies will begin implementing the strategies and practices defined in the Supplemental Guidance that put into place a portfolio management capability for geospatial data and resources. This will include finalizing the list of nationally significant geospatial data themes and data sets, implementing the tested geospatial lifecycle management practices, developing reporting metrics, and providing report templates, training materials, and other support to implementing agencies.

2. Advance the Geospatial Platform

In fiscal year 2011, the development of the Geospatial Platform will continue to progress with the enhancement of the "Modernization Roadmap for the Geospatial Platform" document. New joint business applications, such as the initial Gulf Response application, will be identified for hosting through the GeoPlatform.gov Web site. Increased outreach and inclusion of State, Tribal, and local governments in the governance and requirements development of the Geospatial Platform capabilities will be initiated. An active and inclusive governance model supporting the implementation of business requirement-based common services, data, and applications, hosted on a shared infrastructure, will continue to develop into operational capabilities to support the needs of government and the Nation.

3. Proceed with the Geospatial Line of Business

The Geospatial Line of Business (Geospatial LoB) has identified activities to focus on in fiscal year 2011, and the Geospatial Platform offers an opportunity to move toward full implementation of the policies, guidance, and access to geospatial data established by the Geospatial LoB. The activities to focus on include:

- Optimizing sharing of secured data via a shared infrastructure.
- Deploying Cloud Computing capabilities.
- Implementing Portfolio Management as identified in the approved revised OMB Circular A–16 Supplemental Guidance.
- Establishing a multiagency enterprise license agreement for a suite of common geospatial application requirements.

4. Expand Data.gov

Data.gov geospatial capabilities are projected to expand. The initial preview capability, GEO Viewer, will continue to develop and it is also anticipated that Web Map Service (WMS) listings will also be included. A challenge to be addressed is the gap between Data.gov's Federal data mission and Geospatial One-Stop's broader NSDI mission that includes non-Federal data. Addressing this gap becomes a key point as the development of the Geospatial Platform, outlined in the President's 2011 budget, is directed to increase governance and inclusion of requirements from State, Tribal, and local governments. Data documentation, cataloging, and discovery continue to be one of their important geospatial requirements.

As the migration of capabilities from Geospatial One-Stop to Data.gov continues, and the Geospatial Platform develops, the role of each will need to be further defined to ensure that both meet their mission requirements and provide complimentary service capabilities.

5. Migrate Geospatial One-Stop

In 2011, Geospatial One-Stop will continue to implement its transition plan, focusing on migration of geospatial search and visualization capabilities into Data.gov. Additionally, a plan will be developed to enable the continued support for geospatial data index, search, and retrieval of the other Geospatial One-Stop registered datasets from the geospatial network of State, Tribal, local, and other Federal partners and constituents.

6. Collaborate with the National Geospatial Advisory Committee

The National Geospatial Advisory Committee (NGAC) will hold three to four public meetings in fiscal year 2011. The FGDC will manage the review, disposition, and implementation of NGAC recommendations. Goals for the NGAC in fiscal year 2011 include the following:

- Provide ongoing review, feedback, and recommendations regarding the development and implementation of key Administration initiatives, including the Geospatial Platform and the Place-Based Policies initiatives. These areas will be a primary focus of the NGAC's work in fiscal year 2011.
- Through its subcommittees, the NGAC will also provide advice and recommendations to the FGDC in the subject areas of

emerging technology, governance, partnerships, broadband mapping, geospatial workforce, and *The National Map*.
- The FGDC will review and respond to advice and recommendations from the NGAC.
- The FGDC will complete the next cycle of NGAC nominations and appointments in fiscal year 2011.

7. Align the Fifty States Initiative

In fiscal year 2011, ten awards are planned for the Fifty States Initiative, with a kickoff meeting in February or March 2011. In addition, efforts to align the FGDC return-on-investment efforts with the Fifty States Initiative will proceed. Efforts to include regional and local governments in the initiative are expected—to align regional and local efforts with the initiative's strategic plans. Lastly, the initiative will continue to support the Geospatial Platform.

8. Advance International Activities

The FGDC Office of the Secretariat will continue to support the Group on Earth Observations (GEO) and its Global Earth Observation System of Systems (GEOSS) through operational support for the federated search facility (GEOSS Clearinghouse) and the Component and Service Registry. FGDC staff members will also continue to support tasks within and co-chairmanship of the GEO Architecture and Data Committee.

9. Advance Standards Activities

The FGDC is coordinating with the National Geospatial-Intelligence Agency to align the standards activities. Goals include alignment of the FGDC standards process and the Geospatial Intelligence Standards Working Group (GWG) standards process with respect to the timing and review of documents and the FGDC endorsement of standards in the Department of Defense IT Standards Repository (DISR), where appropriate.

The following standards are expected to be endorsed by the FGDC in fiscal year 2011:

- United States Thoroughfare, Landmark, and Postal Address Data Standard
- Update of the Classification of Wetlands and Deepwater Habitats of the United States

10. Advance the Implementation of Imagery for the Nation

It is expected that by early 2011 a report on the FGDC Phase 1 Project will be released. The 2011 goals for the IFTN include advancing the IFTN Joint Business Case and funding request for fiscal year 2012, refining the vision and plans for IFTN governance, and continuing to develop community support for IFTN.

Appendix A
FGDC Leadership Profiles

Ken Salazar
Secretary of the Interior
Chair, FGDC Steering Committee

Mr. Ken Salazar was confirmed as Secretary of the U.S. Department of the Interior on January 20, 2009. Before his confirmation, he served as a U.S. Senator from Colorado from 2005 to 2009. He spent 11 years as a water and environmental lawyer and served as the State of Colorado's Attorney General from 1999 to 2004. Mr. Salazar earned a bachelor of arts degree in political science from Colorado College in 1977 and a juris doctorate from the University of Michigan Law School in 1981.

Michael Howell
Deputy Administrator for Electronic Government and Information Technology
Office of Management and Budget
Acting Vice Chair, FGDC Steering Committee and Executive Committee

Mr. Michael Howell previously served as the Chief Information Officer for the Department of the Interior and the Chief Information Officer for the U.S. Fish and Wildlife Service. His career began with the U.S. Forest Service. Mr. Howell graduated in 1977 from Pennsylvania State University with a bachelor of science degree in forest science.

Karen Siderelis
Geographic Information Officer, U.S. Department of the Interior
Acting Chair, FGDC Executive Committee

Ms. Karen Siderelis became the first Geographic Information Officer for the Department of the Interior when she was appointed to the position in September 2008. She previously served as Associate Director for Geospatial Information and Chief Information Officer for the U.S. Geological Survey. Before that, she was Director of the North Carolina Center for Geographic Information and Analysis. Ms. Siderelis earned her master's and bachelor's degrees from the University of Georgia.

Ivan DeLoatch
Executive Director
Federal Geographic Data Committee

Mr. Ivan DeLoatch has served as the Executive Director of the FGDC for the past 7 years. Previously he served as Chief of the Data Acquisition Branch in the U.S. Environmental Protection Agency's Office of Environmental Information. He earned a bachelor of science degree in biology from Bowie State University.

FGDC Executive Committee

Daniel Cotter
Chief Technology Officer
U.S. Department of Homeland Security

Mr. Daniel Cotter is responsible for the Department of Homeland Security's enterprise architecture, enterprise data management, and geospatial programs. He holds a master's degree in business administration from Texas A&M University and a master of science degree in geospatial and cartographic sciences from George Mason University. He is a Fellow of the American Association for the Advancement of Science.

Adrian Gardner
Chief Information Officer, Goddard Space Flight Center
National Aeronautics and Space Administration

Mr. Adrian Gardner came to the National Aeronautics and Space Administration from the National Weather Service where he had served as Chief Information Officer since January 2007. He is currently Chair of the Point of Contact (POC) Working Group for Data.gov. Mr. Gardner completed a master's degree in public administration at the University of Southern California School of Public Policy and Planning. He also holds a master of science degree in environmental studies from Hood College and a bachelor of science degree in biological science and ecology from the Tuskegee Institute.

Jerry Johnston
Geographic Information Officer
U.S. Environmental Protection Agency

Dr. Jerry Johnston holds a master's degree and doctorate in environmental science from Indiana University, Bloomington, as well as a bachelor of science degree in environmental science from Michigan State University. He is a member of the National Geospatial Advisory Committee and is honored in this report as the National Spatial Data Infrastructure Champion for 2010 (see page iv).

FGDC Executive Committee (continued)

Joseph Klimavicz
Chief Information Officer and Director, High Performance Computing and Communications, National Oceanic and Atmospheric Administration
U.S. Department of Commerce

Mr. Joseph Klimavicz previously served at the U.S. Department of Defense as the National Geospatial-Intelligence Agency's Deputy Chief Information Officer. He received a bachelor of science degree and a master's degree in engineering from Virginia Polytechnic Institute and State University.

Stephen Lowe
Associate Chief Information Officer for Technology Planning, Architecture, and E-Government
U.S. Department of Agriculture

Mr. Stephen Lowe holds graduate degrees in management of information technology from the University of Virginia and in public administration from Virginia Polytechnic Institute and State University. He also holds a bachelor of arts degree in political science from James Madison University.

Steven Wallach
GEOINT Executive Officer
U.S. Department of Defense

Mr. Steven Wallach serves on the National Geospatial-Intelligence Agency's Executive Committee. He holds a master's degree in computer resources management from Webster University and is a graduate of the Armed Forces Staff College and the Industrial College of the Armed Forces. He is a member of the National Geospatial Advisory Committee.

Appendix B
FGDC Structure and Membership

The Federal Geographic Data Committee (FGDC) operates under Office of Management and Budget (OMB) Circular A–16 (revised August 2002). The circular incorporates Executive Order 12906 and reaffirms the FGDC's role to provide leadership for the National Spatial Data Infrastructure (NSDI) and coordinate the development, use, sharing, and dissemination of the Nation's geospatial data. The effective use of geospatial information requires close coordination among the many agencies involved in its development.

The FGDC is an organized structure of Federal geospatial professionals and constituents that provide executive, managerial, and advisory direction and oversight for geospatial decisions and initiatives across the Federal Government. In accordance with OMB Circular A–16, the FGDC is chaired by the Secretary of the Interior, and the OMB Deputy Director for Management serves as Vice Chair.

FGDC Structure

The FGDC is governed by a Steering Committee that sets the FGDC's high-level strategic direction. The Executive Committee, which is a subset of the Steering Committee, provides advice and guidance to the Chair and the Vice Chair.

The National Geospatial Advisory Committee (NGAC) is a Federal advisory committee that provides advice and recommendations on Federal and national geospatial programs. The FGDC Coordination Group conducts the FGDC's day-to-day business. The FGDC Office of the Secretariat, which is located at the U.S. Geological Survey headquarters in Reston, Virginia, provides strategic support and management for FGDC committees, components, and initiatives.

The FGDC infrastructure also includes committees, agency-led working groups and subcommittees, Geospatial Line of Business Work Groups, and collaborating partners that represent State, Tribal, and local governments, as well as industry and academic and professional groups. All participants initiate and (or) support the following activities that are crucial to expanding the NSDI and addressing national priorities:

- Providing advice and leadership in applying geospatial capabilities to address national priorities and Presidential initiatives.
- Developing and establishing the National Geospatial Data Clearinghouse on the Internet.
- Developing and implementing standards.
- Creating a national digital geospatial data framework. The framework covers seven fundamental geographic themes (cadastral, elevation, geodetic control, governmental units, hydrography, orthoimagery, and transportation) and is used in concert with many other mission-specific data resources.
- Promoting collaborative relationships for sharing geospatial data among non-Federal partners.
- Developing policies and processes to better harmonize collective action.

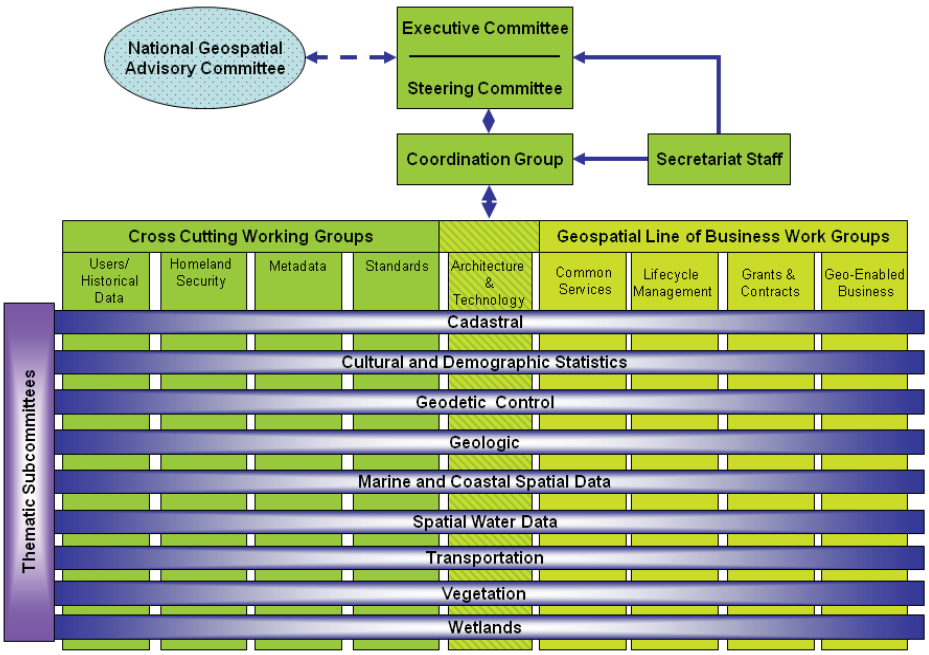


Chart showing the structure of the Federal Geographic Data Committee.

Steering Committee

The FGDC is governed by the Steering Committee, which is the policy-level interagency group whose central focus is to provide executive leadership for the coordination of Federal geospatial activities between, among, and within agencies. The Committee does this by establishing policy and providing guidance and direction to the member agencies. The Steering Committee is responsible for overseeing Office of Management and Budget (OMB) Circular A–16 related activities and for the implementation of the National Spatial Data Infrastructure. The FGDC Chair and Vice Chair lead the Committee, which is made up of senior agency officials for geospatial information and includes representatives from Federal organizations, including the Executive Office of the President, the Federal Executive Departments, and independent Federal agencies.

A subset of the Steering Committee, the **Executive Committee** (see page 23) provides advice and guidance to the FGDC Chair and the Vice Chair on major Federal geospatial priorities and initiatives. The FGDC Chair and Vice Chair lead this committee, which includes representatives from the OMB and the seven Federal agencies that have the largest investments in geospatial technologies. The Executive Committee makes recommendations to the Steering Committee and provides a focal point for coordination with the National Geospatial Advisory Committee.

2010 Steering Committee Members

Chair, U.S. Department of the Interior	www.doi.gov	Ken Salazar
Acting Vice Chair, Office of Management and Budget	www.omb.gov	Michael Howell
Federal Communications Commission	www.fcc.gov	Julius Knapp
General Services Administration	www.gsa.gov	Diane Herdt*
Library of Congress	www.loc.gov	John Hébert
National Academy of Sciences	www.nas.edu	vacant
National Aeronautics and Space Administration	www.nasa.gov	Adrian Gardner*
National Archives and Records Administration	www.archives.gov	Michael Kurtz*
National Capital Planning Commission	www.ncpc.gov	vacant
National Science Foundation	www.nsf.gov	vacant*
Office of Personnel Management	www.opm.gov	Janet Barnes*
Small Business Administration	www.sba.gov	Deborah Anderson*
Smithsonian Institution	www.si.edu	vacant*
Social Security Administration	www.socialsecurity.gov	Linda Maxfield*
Tennessee Valley Authority	www.tva.gov	Roy Teal*
U.S. Agency for International Development	www.usaid.gov	vacant*
U.S. Army Corps of Engineers	www.usace.army.mil	James Dalton
U.S. Department of Agriculture	www.usda.gov	Stephen Lowe*
U.S. Department of Commerce	www.commerce.gov	Joseph Klimavicz*
U.S. Department of Defense	www.defenselink.mil	Steven Wallach*
U.S. Department of Education	www.ed.gov	Stuart Kerachsky*
U.S. Department of Energy	www.doe.gov	William Turnbull*
U.S. Department of Health and Human Services	www.dhhs.gov	John Teeter*
U.S. Department of Homeland Security	www.dhs.gov	Daniel Cotter*
U.S. Department of Housing and Urban Development	www.hud.gov	Raphael Bostic*
U.S. Department of the Interior	www.doi.gov	Karen Siderelis*
U.S. Department of Justice	www.usdoj.gov	Harrell Watkins*
U.S. Department of Labor	www.dol.gov	vacant*
U.S. Department of State	www.state.gov	Janice Fedak*
U.S. Department of the Treasury	www.treasury.gov	Gayle Bracy*
U.S. Department of Transportation	www.dot.gov	Steven Dillingham*
U.S. Department of Veterans Affairs	www.va.gov	Mark Gorenflo*
U.S. Environmental Protection Agency	www.epa.gov	Jerry Johnston*
U.S. Nuclear Regulatory Commission	ww.nrc.gov	Darren Ash*

**Designated senior agency official for geospatial information.*
Note: Executive Committee members are in **bold**.

Coordination Group

The FGDC Coordination Group provides advice on the day-to-day business of the FGDC to facilitate interagency coordination and implementation of the NSDI at the operational level. The Coordination Group oversees and provides the functional leadership for the FGDC subcommittees and working groups, as well as the Geospatial Line of Business Work Groups. The Coordination Group is co-chaired by the Executive Director of the FGDC Office of the Secretariat and an elected Federal member of the Coordination Group. Non-Federal collaborating partners participate in most of the Coordination Group meetings and participate in subcommittees and working groups.

2010 Coordination Group Members

Co-Chair, FGDC Office of the Secretariat	Ivan DeLoatch
Co-Chair, U.S. Department of Defense, National Geospatial-Intelligence Agency	William Mullen
Federal Communications Commission	Donald Draper Campbell
Federal Energy Regulatory Commission	Susan Tseng
General Services Administration	Autumn Foard
General Services Administration, Office of Governmentwide Policy, Office of Real Property Management	Sandra Downie
Library of Congress	Colleen Cahill
National Academy of Sciences	vacant
National Aeronautics and Space Administration	vacant
National Archives and Records Administration	Brett Abrams
National Capital Planning Commission	Shane Dettman
National Science Foundation	Clifford Jacobs
Office of Management and Budget	Adrienne Walker
Office of Personnel Management	vacant
Small Business Administration	Trisha Christian
Smithsonian Institution	vacant
Social Security Administration	David Timmons
Tennessee Valley Authority	Charles Smart
U.S. Agency for International Development	vacant
U.S. Department of Agriculture, Farm Service Agency	Shirley Hall
U.S. Department of Agriculture, Natural Resources Conservation Service	Marisa Capriotti
U.S. Department of Agriculture, U.S. Forest Service	Elizabeth Kanalley
U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Coastal Services Center	Tony LaVoi
U.S. Department of Commerce, National Geodetic Survey	Juliana Blackwell
U.S. Department of Commerce, U.S. Census Bureau	Randy Fusaro
U.S. Department of Defense, OSD Defense Installations Spatial Data Infrastructure Office	David LaBranche
U.S. Department of Defense, U.S. Army Corps of Engineers	Nancy Blyler
U.S. Department of Education	Tai Phan
U.S. Department of Energy	David Morehouse
U.S. Department of Health and Human Services	Carl Kinkade
U.S. Department of Homeland Security	Jeffrey Booth
U.S. Department of Housing and Urban Development	Jon Sperling
U.S. Department of the Interior	Robert Pierce
U.S. Department of the Interior, Bureau of Land Management	Don Buhler
U.S. Department of the Interior, Bureau of Ocean Energy Management	Douglas Vandegraft
U.S. Department of the Interior, National Park Service	Joe Gregson
U.S. Department of the Interior, U.S. Fish and Wildlife Service	vacant
U.S. Department of the Interior, U.S. Geological Survey	Jean Parcher
U.S. Department of Justice	vacant
U.S. Department of Labor	Edward Hugler
U.S. Department of State	Ray Milefsky
U.S. Department of the Treasury	Elaine Boston
U.S. Department of Transportation	Mark Bradford
U.S. Department of Veterans Affairs	Pheakdey Lim
U.S. Environmental Protection Agency	Wendy Blake-Coleman
U.S. Nuclear Regulatory Commission	Stuart Reiter

FGDC Office of the Secretariat

The FGDC Office of the Secretariat staff provides support for the FGDC and performs the following tasks:

- Serves as Managing Partner for the Geospatial Line of Business electronic government (E-Gov) initiative on behalf of the U.S. Department of Energy.
- Serves as the designated Federal official for the FGDC National Geospatial Advisory Committee (NGAC).
- Provides staff support for the FGDC Chair, Vice Chair, and their designees.
- Initiates, participates, and (or) leads FGDC committees, subcommittees, and working groups.
- Drafts policies and procedures for consideration and approval by the Coordination Group, the Steering Committee, and the Executive Committee.
- Provides support to the NGAC.
- Provides project management support for FGDC initiatives.
- Administers the FGDC standards program.
- Administers the NSDI Cooperative Agreements Program.
- Administers the FGDC International Spatial Data Infrastructure program.
- Manages the NSDI training and outreach program.
- Maintains the FGDC Web site.
- Manages all administrative requirements associated with scheduling and conducting meetings.
- Undertakes staff analyses, technical development, and other activities on behalf of the Coordination Group.

2010 Secretariat Staff

Executive Director	Ivan DeLoatch
Deputy Executive Director	Kenneth Shaffer
Senior Policy Advisor	John Mahoney
Program Analyst	Carol Greenough
Program Assistant	Vanessa Hardnett
Program Analyst	Arista Salimi Maher
Senior Technology Advisor	Douglas Nebert
FGDC Interagency Liaison	vacant
Framework and Cooperating States Coordinator	Milo Robinson
Metadata Coordinator	Sharon Shin
Standards Coordinator	Julie Binder-Maitra
Training and Education/Tribal Liaison Coordinator	vacant
NSDI CAP Coordinator	Brigitta Urban-Mathieux
Program Analyst Geospatial Line of Business	Roxanne Lamb
Senior Program Analyst	vacant
Webmaster	Vaishal Sheth
Volunteer (International Coordination)	Alan Stevens
Visiting Scientist, Global Spatial Data Infrastructure	Wonkug Baek
Student Assistant	Steven Hak

National Geospatial Advisory Committee

The National Geospatial Advisory Committee (NGAC) was established under the Federal Advisory Committee Act and is sponsored by the U.S. Department of the Interior. It is an advisory body that provides advice and recommendations on Federal geospatial policy and management issues and a forum to convey views representative of partners in the geospatial community. NGAC membership includes representatives from 28 Government and nongovernmental organizations. The committee holds public forums to discuss geospatial activities and solicits input from State, Tribal, regional, and local governments, academic institutions, and the private sector.

National Geospatial Advisory Committee Mission Statement

The mission of the NGAC is to provide strategies for the creation, management, and dissemination of cohesive geospatial data, information, and knowledge to enable commercial, academic, and nonprofit organizations and all levels of government to more effectively—

- Empower and serve the public
- Protect the homeland
- Foster economic growth
- Advance science
- Manage the Nation's resources
- Govern the Nation
- Prepare for and respond to emergencies

2010 National Geospatial Advisory Committee Members

Anne Hale Miglarese, Chair	Booz Allen Hamilton Inc.
Steven Wallach, Vice Chair	National Geospatial-Intelligence Agency
Sean Ahearn	Hunter College—City University of New York
Robert Austin	City of Tampa, Florida
Sophia Beym	State of New Mexico
Timothy Bull Bennett	North Dakota Association of Tribal Colleges
Allen Carroll	National Geographic Society
Richard Clark	State of Montana
David Cowen	University of South Carolina
Jack Dangermond	Environmental Systems Research Institute, Inc.
David DiSera	EMA, Inc.
Dennis Goreham	National States Geographic Information Council
Kass Green	Kass Green and Associates
Randy Johnson	Hennepin County, Minnesota
Randall L. Johnson	Metropolitan Council, St. Paul, Minnesota
Jerry Johnston	U.S. Environmental Protection Agency
Barney Krucoff	District of Columbia
Timothy Loewenstein	Buffalo County, Nebraska
Xavier Lopez	Oracle USA
Kimberly Nelson	Microsoft Corp.
Matthew O'Connell	GeoEye, Inc.
Jay Parrish	State of Pennsylvania
Jack Pellicci	Intergraph Corp.
Cynthia Salas	CenterPoint Energy
David Schell	Open Geospatial Consortium, Inc.
Eugene Schiller	Southwest Florida Water Management District
Christopher Tucker	Yale House Ventures

Note: Ivan DeLoatch, Executive Director, Federal Geographic Data Committee, is the NGAC Designated Federal Official.

Thematic Subcommittees

Office of Management and Budget Circular A–16 identifies 34 data themes of national significance and assigns responsibility for each of the themes to one or more Federal agencies. FGDC thematic subcommittees are established for nine of these data themes.

Federal agencies lead and have responsibility for the thematic subcommittees; each subcommittee focuses on a particular NSDI spatial data theme. Lead agency responsibilities and new data themes may be added or altered by FGDC recommendation and OMB concurrence.

Definitions of the nine active thematic subcommittees appear in the chart opposite.

Thematic Subcommittees by Lead Agency and Definition

Cadastral*	DOI BLM	The geographic extent of past, current, and future right, title, and interest in real property; the framework to support the description of that geographic extent. Geographic extent includes survey and description frameworks.
Cultural and Demographic Statistics	DOC USCB	Geospatially referenced data that describe the characteristics of people: nature of structures in which they live and work; economic and other activities they pursue; facilities they use to support their health, recreational, and other needs; environmental consequences of their presence; boundaries, names, and numeric codes of geographic entities used to report information collected.
Geodetic Control*	DOC NOAA	Common reference system for establishing coordinates for all geographic data. All NSDI framework data and users' applications data require geodetic control to register spatial data accurately. The National Spatial Reference System is the fundamental geodetic control for the United States.
Geologic	DOI USGS	Geologic mapping information and related geoscience spatial data that can contribute to a national geologic map database pursuant to Public Law 106–148.
Marine and Coastal Spatial Data	DOC NOAA	Marine spatial data are data that exist seaward to the extent of U.S. jurisdiction. Coastal spatial data are data that exist within the coastal waters and the adjacent shorelands, strongly influenced by each other and in proximity to the shorelines of the several coastal states, and includes transitional and intertidal areas, salt marshes, wetlands, and beaches.
Spatial Water Data (Advisory Committee on Water Information)*	Co-leaders: DOI USGS and USDA NRCS	Includes information about streams, lakes, reservoirs, groundwater, estuaries, coastal areas, marine environments precipitation and other hydrometeorological information related to water resources management, and other aquatic habitats such as wetlands.
Transportation*	DOT BTS	Used to model geographic locations, interconnectedness, and characteristics of transportation systems in the United States; includes physical and nonphysical components representing all modes of travel that enable movement of goods and people between locations.
Vegetation	USDA Forest Service	Collection of plants or plant communities with distinguishable characteristics that occupy an area of interest. Existing vegetation covers or is visible at or above land or water surface and does not include abiotic factors that tend to describe potential vegetation.
Wetlands	DOI FWS	Describes lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is covered by shallow water part of the year. Also includes related deepwater and riparian habitats.

** Indicates framework theme.*
Note: Abbreviations are defined in the glossary in Appendix D.

FGDC Working Groups

FGDC working groups crosscut the subcommittees and focus on infrastructure issues common to or supporting many of the NSDI data themes. In fiscal year 2010 the Homeland Security Working Group was retired. Descriptions of the working groups are listed in the chart to the right.

Geospatial Line of Business Work Groups

The Geospatial Line of Business (Geospatial LoB) Work Groups were developed by the Office of Management and Budget (OMB) to support the electronic government (E-Gov) initiative. The OMB has assigned responsibility for these work groups to the FGDC. The Geospatial LoB Work Groups focus on cross-agency geospatial issues related to geospatial policy, business requirements, and business management processes. Each work group has work plans that are updated and approved annually through the Coordination Group and the Steering Committee. Descriptions of the active work groups are listed in the chart below.

FGDC Working Groups by Lead Agency and Description

Technology and Architecture	FGDC	The primary objective of the Technology and Architecture Working Group is to develop requirements and recommendations for the Federal Enterprise Architecture to better organize the use of geospatial technology and data across the Federal enterprise. The working group also supports the Geospatial LoB architecture and technology-focused tasks.
Users/Historical Data	NARA	The Users/Historical Data Working Group promotes awareness among Federal agencies of the historical dimension to geospatial data to facilitate the long-term retention, storage, and accessibility of selected historically valuable geospatial data. In addition, the group is exploring becoming a general users group, for which historical data would be one subactivity.
Homeland Security	DHS	The Homeland Security Working Group ensures that the NSDI supports the preparation for, prevention of, protection against, response to, and recovery from threats to the Nation's population centers and critical infrastructures; these threats may be of terrorist, criminal, accidental, or natural origin.
Metadata	FGDC	The Metadata Working Group promotes and coordinates geospatial metadata activities among FGDC member agencies in support of the NSDI. The Metadata Working Group promotes awareness among FGDC member agencies of the metadata dimension to geospatial data; facilitates the evolution and revision of the Content Standard for Digital Geospatial Metadata; and establishes a mechanism for the coordination, development, use, sharing, and dissemination of geospatial metadata among FGDC member agencies.
Standards	FGDC	The Standards Working Group actively promotes and coordinates FGDC standards activities. The Standards Working Group provides guidance on FGDC standards policy and procedures, facilitates coordination between subcommittees having overlapping standards activities, and reviews and makes recommendations on the approval of standards proposals, draft standards for public review, and draft standards for FGDC endorsement.

Note: Abbreviations are defined in the glossary in Appendix D.

Geospatial Line of Business Work Groups by Lead Agency and Description

Common Services	EPA	The Common Services Work Group is responsible for evaluating and expanding Governmentwide and intergovernmental procurement opportunities related to geospatial services and data sharing.
Geo-Enabled Business	FGDC	The purpose of the Geo-Enabled Business Work Group is to demonstrate and communicate the value of geospatial approaches to business processes and agency mission functions, especially to audiences that have had limited experience with geo-enabled decision support.
Grants and Contracts	FGDC	The Grants and Contracts Work Group is responsible for developing and implementing common grants and cooperative agreements and contract language requirements for geospatial data, products, and services to better leverage geospatial data produced by Federal partners. The overall goal of the Grants and Contracts Work Group is to capture, for the greater benefit of the geospatial community and agency program managers, the large amount of geospatial information produced with Federal funding.
Lifecycle Management	EPA	The Lifecycle Management Work Group (or Lifecycle Work Group) is responsible for evaluating existing geospatial data lifecycle management frameworks and, based on these assessments, developing standard terminologies and processes for the geospatial data lifecycle. This group proposed actions affecting OMB Circular A–16 and governance in the geospatial community.
Technology and Architecture	FGDC	The primary objective of the Technology and Architecture Work Group is to develop requirements and recommendations for the Federal Enterprise Architecture to better organize the use of geospatial technology and data across the Federal enterprise. The work group also supports the FGDC's working group technical and architecture tasks.

Note: Abbreviations are defined in the glossary in Appendix D.

Collaborating Partners

The FGDC solicits the involvement of public interest groups who participate within the committee structure to ensure that their needs are included in the developing NSDI. These collaborating partners include State, Tribal, and local governments; academic institutions; and a broad array of private sector geographic, statistical, demographic, and other business information providers and users. NSDI strives to build upon local data wherever possible.

Collaborating partnerships are open to public, private, and nonprofit organizations whose missions are complementary to the mission of the FGDC. Organizations interested in becoming partners are invited to send a written request to the FGDC Chair. Current non-Federal collaborating partners include the organizations listed to the right.

Collaborating Partners and Descriptions

American Congress on Surveying and Mapping (ACSM)	A nonprofit educational organization that advances the sciences of surveying and mapping and related fields to further the welfare of those who use and make maps.
Association of American Geographers (AAG)	A scientific and educational society whose members share interests in the theory, methods, and practice of geography and geographic education.
Cartographic Users Advisory Council (CUAC)	An organization of representatives from national and regional library organizations who are dedicated to cartographic interests.
Geospatial Information and Technology Association (GITA)	A nonprofit educational association serving the global geospatial community.
International City/County Management Association (ICMA)	A professional and educational organization for chief appointed managers, administrators, and assistants in cities, towns, counties, and regional entities throughout the world.
National Association of Counties (NACo)	A national association representing U.S. counties. The association advances issues with a unified voice before the Federal Government, improves the public's understanding of county government, assists counties in finding and sharing innovative solutions through education and research, and provides value-added services to save counties and taxpayers money.
National Association of Regional Councils (NARC)	An association of regional councils, councils of governments, regional planning and development agencies, and metropolitan planning organizations that advocates for regional cooperation to address a variety of community opportunities and issues.
National Association of State Chief Information Officers (NASCIO)	An organization that represents State CIOs and information resource executives and managers from the 50 States, the District of Columbia, and 6 U.S. territories.
National League of Cities (NLC)	A national organization whose mission is to strengthen and promote cities as centers of opportunity, leadership, and governance.
National States Geographic Information Council (NSGIC)	A national organization that provides a unified voice on geographic information and technology issues, advocates State interests, and supports its membership in their statewide initiatives.
Open Geospatial Consortium, Inc.® (OGC)	A nonprofit, international, voluntary consensus standards organization of more than 365 companies, government agencies, research organizations, and universities; leads the development of standards for geospatial and location-based services.
University Consortium for Geographic Information Science (UCGIS)	A nonprofit organization of more than 50 universities and other research institutions.
Urban and Regional Information Systems Association (URISA)	A multidisciplinary educational association for geospatial professionals around the world.
Western Governors' Association (WGA)	A nonpartisan association of 22 U.S. Governors established to address important policy and governance issues in the West, advance the role of the Western States in the Federal system, and strengthen the social and economic fabric of the region.

Appendix C
Status of NSDI Data Themes

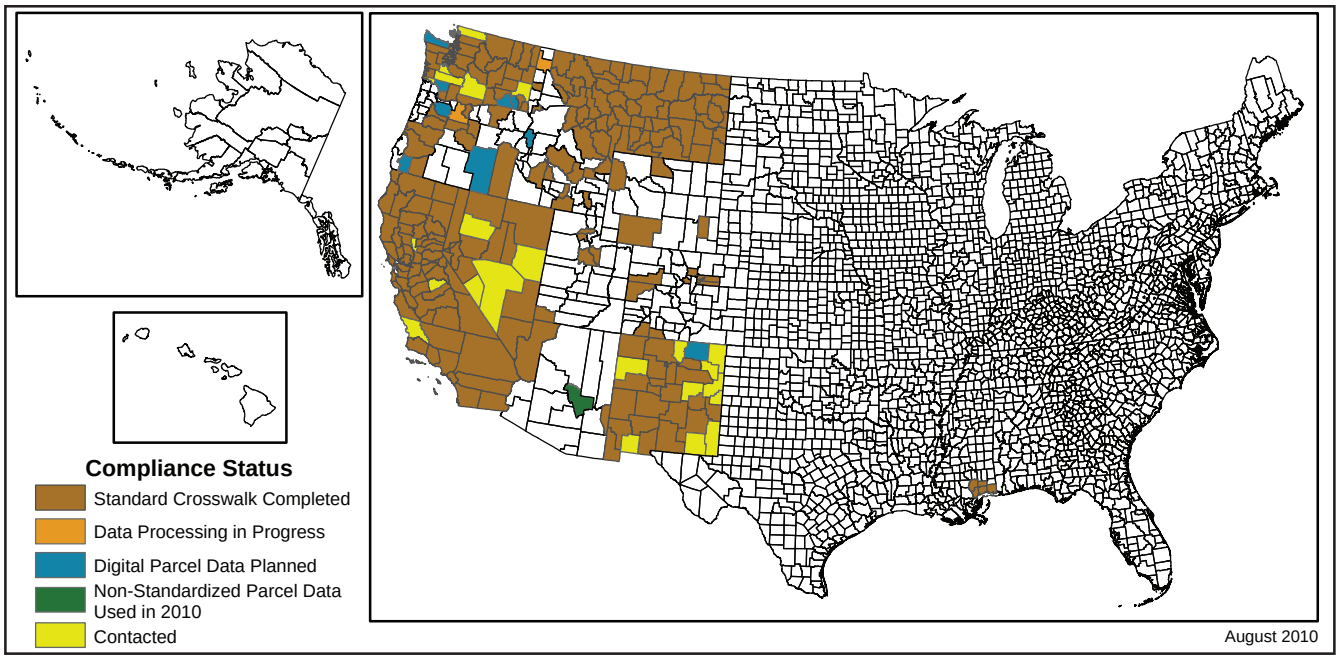
Office of Management and Budget (OMB) Circular A–16 provides direction for Federal agencies that produce, maintain, or use spatial data in the National Spatial Data Infrastructure (NSDI). The circular identifies 34 data themes of national significance and denotes which are framework data themes. This appendix includes descriptions of the following framework data and data themes: cadastral, digital orthoimagery, elevation, geodetic control, hydrography, soils, watershed boundaries, and wetlands.

Framework Data Theme: Cadastral

Responsible agency: U.S. Department of the Interior, Bureau of Land Management (BLM)

Description: The BLM is the lead Federal agency for cadastral data and chairs the FGDC Cadastral Subcommittee. Cadastral data describe the geographic extent of rights and interests in real property. The term "cadastral data" is synonymous with "land parcel data." Under BLM's leadership, the Cadastral Subcommittee develops and implements plans to coordinate cadastral data-related activities among Federal, State, Tribal, and local governments and the private sector and reports on its activities to the FGDC. In the western United States, the FGDC Cadastral Subcommittee continues to work with the wildland fire community to identify sources of parcel data, standardize available data, and build sustainable operational procedures to provide parcel data in coordination with States. In other regions of the country, such as the Midwest and the Southeast, the Subcommittee continues to work with State coordinators to identify county cadastral data contacts.

County Parcel Data Standard Compliance Status

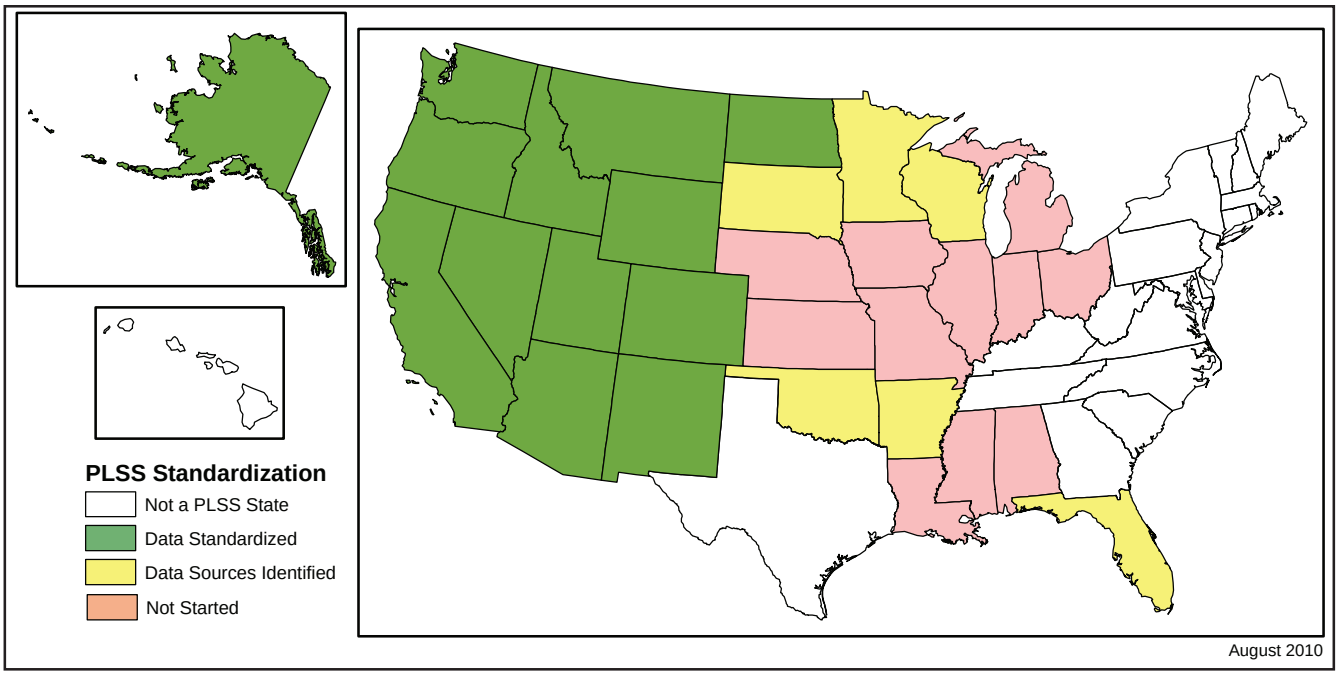


Framework Data Theme: Cadastral (continued)

The Public Land Survey System (PLSS) is a cadastral reference system used to divide public domain lands, which are lands owned by the Federal Government. The original public domain included the land ceded to the Federal Government by the thirteen original States, supplemented with acquisitions from native Indians and foreign powers. It encompasses major portions of the land area of 30 States. Standardized PLSS representation supports geographic information system (GIS) applications that facilitate data integration, which enables searches by PLSS location. The statewide standardization PLSS representation is based on legal cadastral survey records.

The Cadastral Subcommittee has developed guidance for States to use when developing, publishing, and maintaining standardized cadastral information for government-to-government data sharing. State stewardship of cadastral data has seven levels, or phases, that lead to a State aggregating and publishing authoritative local data and serving as a trusted source. The levels range from level 1, in which a State coordinator identifies and assembles a current inventory of the State's sources of cadastral data, to level 7, in which statewide data are assembled into a single dataset that can be combined seamlessly with other State and Federal land parcel data.

PLSS Standardization Status by State



Framework Data Theme: Digital Orthoimagery

Responsible agency: U.S. Department of the Interior, U.S. Geological Survey (USGS)

Description: The USGS is the designated lead Federal agency for the NSDI orthoimagery data theme and executes its OMB Circular A–16 responsibilities as the theme lead through the National Digital Orthophoto Programs (NDOP). NDOP was chartered in 1993 as a consortium with the purpose of developing and maintaining national orthoimagery coverage in the public domain by establishing partnerships with Federal, State, Tribal, local, and private organizations. The consortium members include the Bureau of Land Management, the Farm Service Agency, the Federal Emergency Management Agency, the National Geospatial-Intelligence Agency (NGA), the National Oceanic and Atmospheric Administration, the National Resources Conservation Service, the National States Geographic Information Council, the U.S. Census Bureau, the U.S. Forest Service, and the USGS. The primary Federal programs for NDOP are the USDA National Agriculture Imagery Program (NAIP), the NGA Homeland Security Infrastructure Program (HSIP) 133 Cities Urban Area Initiative, and the USGS National Orthoimagery Program.

USGS National Orthoimagery Program

The USGS National Orthoimagery Program concentrates on acquiring imagery through partnerships with Federal, State, Tribal, regional, and local agencies. The USGS, along with other Federal and State agencies, contributes funds annually to support the Farm Service Agency's National Agriculture Imagery Program (NAIP) current maintenance cycle. In addition to direct funding support, the USGS (through the Geospatial Liaisons) coordinates partnerships with State and local agencies to further leverage the National Geospatial-Intelligence Agency's 133 Cities Urban Area Initiative funding pool and expand the project to support local needs. The USGS also provides quality assurance support for the 133 Cities Urban Area Initiative. The USGS makes all public domain digital orthoimagery acquired through its partnership agreements available to the general public through *The National Map* Seamless Server and provides for data archiving. Currently, 1-meter orthoimagery from the NAIP and higher resolution orthoimagery in support of the 133 Cities Urban Area Initiative is available on the Seamless Server. Data availability graphics can be found at *seamless.usgs.gov/data_availability.php?serviceid=Dataset_5* and *seamless.usgs.gov/data_availability.php?serviceid=Dataset_7.*

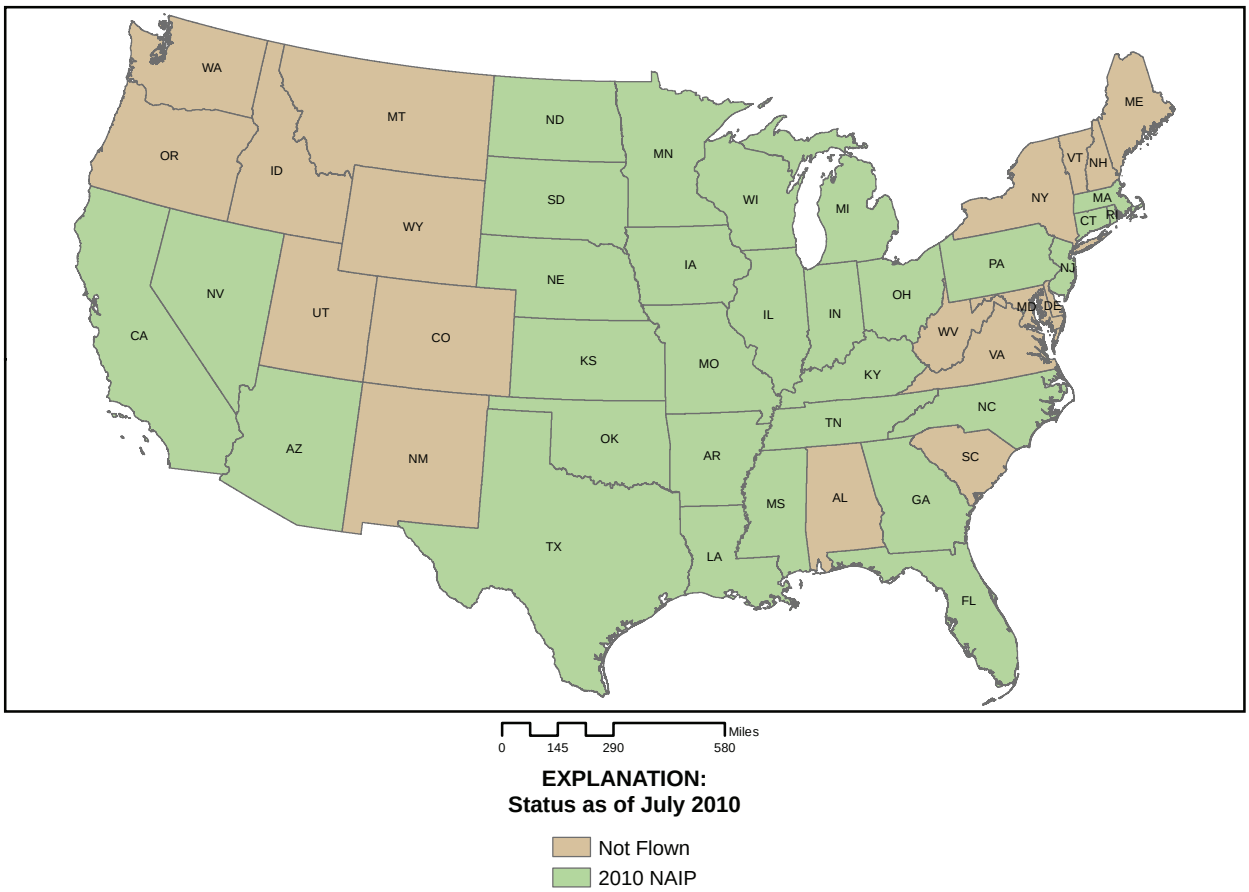
The USGS National Orthoimagery Program supports the National Geospatial Program by making the imagery available in US Topo and through USGS Web services. The USGS National Orthoimagery Program also supports the USGS science programs.

Framework Data Theme: Digital Orthoimagery (continued)

USDA National Agriculture Imagery Program

The National Agriculture Imagery Program (NAIP) annually acquires imagery during the growing season and is the largest single civilian mapping program in U.S. history. The Farm Service Agency (FSA) and other U.S. Department of Agriculture (USDA) agencies use the imagery to administer farm programs and agriculture-related disaster recovery programs. The imagery is in the public domain and is widely used by Federal, State, and local agencies, as well as by private entities and businesses. A few examples of the business processes that the data have been used to support are economic development, emergency response, environmental management, growth planning, health and human services, homeland security, precision farming and other agribusiness activities, and transportation planning. FSA's priority is to collect data on privately owned farmland as identified by common land unit boundaries, and the agency has established effective cost-share participation with other Federal and State partners for collection outside of those areas. In 2010, FSA acquired NAIP imagery for 30 States. Since the program began as a pilot in 2002, it has provided two full cycles of complete 1-meter coverage of the continental United States, giving all States in the lower 48 an imagery currency age of 2 years or less.

NAIP Orthoimagery



EXPLANATION:
Status as of July 2010

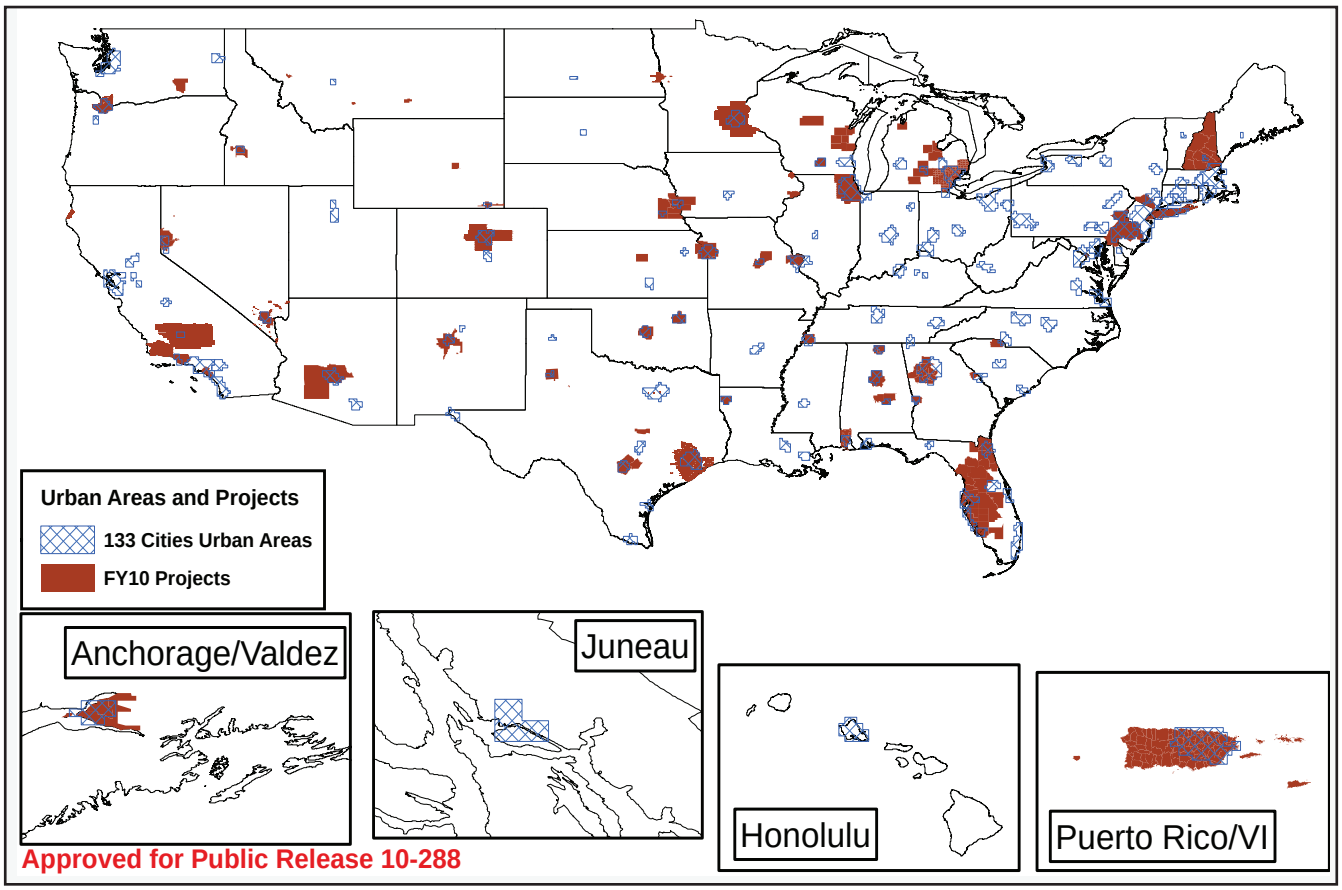
Not Flown
2010 NAIP

Framework Data Theme: Digital Orthoimagery (continued)

NGA HSIP 133 Cities Urban Area Initiative

The Homeland Security Infrastructure Program (HSIP) 133 Cities Urban Area Initiative annually acquires imagery during the spring and fall leaf-off seasons; the focus of this initiative is the 133 cities that are defined in the 2002 tiger team report that was produced jointly by the National Geospatial-Intelligence Agency (NGA) and the U.S. Geological Survey (USGS). NGA collects this imagery through partnership with the USGS and uses it to support the Homeland Defense, Homeland Security, and Emergency Preparedness, Response, and Recovery mission to protect the Nation's infrastructure in accordance with Homeland Security Presidential Directive/HSPD–7 and the National Strategy for the Physical Protection of Critical Infrastructure and Key Resources. The collected imagery data also support mutually beneficial partnerships to both enhance and share data among Federal Government agencies and with State and local jurisdictions. This initiative supports partnership and coordination efforts with other Federal agencies such as the Department of Homeland Security, the USGS, and the U.S. Army Corps of Engineers. The collected imagery is largely in the public domain and is widely used by Federal, State, and local agencies, as well as by commercial, private, and nonprofit entities. The USGS provides this imagery to the civilian community through *The National Map* Seamless Server located at the EROS Data Center, and the NGA coordinates imagery distribution to its mission partners. The goal for this initiative is to refresh imagery for the 133 cities on a 2- to 3-year cycle, which has been largely accomplished since the initiative's inception in 2002; imagery for nearly all the cities has been collected twice and collections for many cities are on their fourth or fifth iteration. In 2010, the initiative funded 60 imagery projects in 33 States, as well as the Commonwealth of Puerto Rico and the U.S. Virgin Islands.

HSIP 133 Cities Urban Area Imagery Initiative: Fiscal Year 2010 Imagery Acquisitions



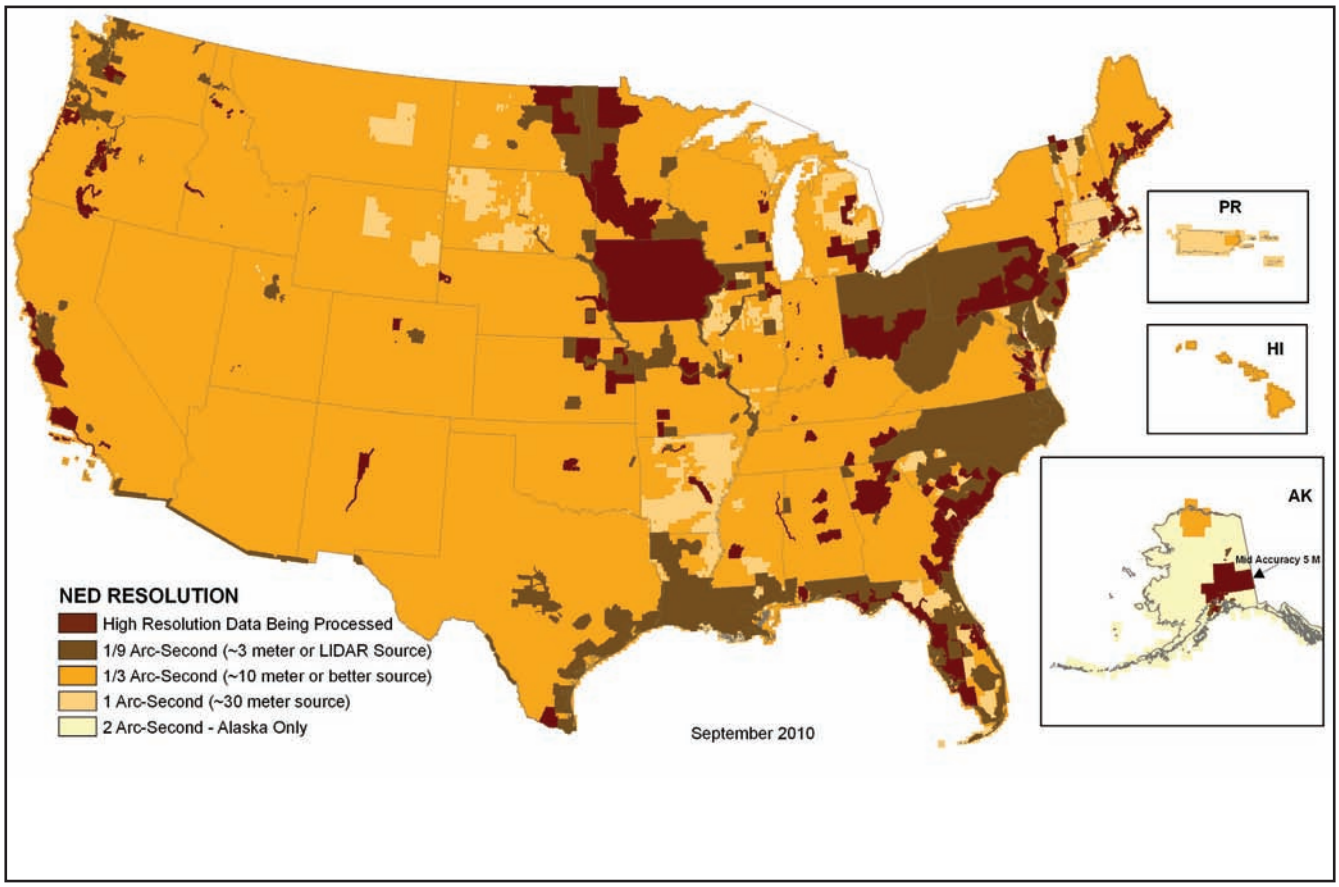
Framework Data Theme: Elevation

Responsible agency: U.S. Department of the Interior, U.S. Geological Survey (USGS)

Description: The National Elevation Dataset (NED) contains elevation data that provide three-dimensional surface models of the Earth's surface. The USGS makes elevation data available for land areas and, in cooperation with the National Oceanic and Atmospheric Administration, under coastal waters. The USGS identifies digital elevation data based upon the resolution (spacing between the points) of a grid. One arc-second-resolution (equivalent to 30-meter resolution) elevation data are complete and available for the entire United States, except Alaska. Current USGS efforts are concentrated on providing finer resolution of elevation data at 1/3 and 1/9 arc-second (equivalent to 10- and 3-meter resolutions, respectively) grid spacing. The data are developed from the best available data from Federal, State, and local agencies and private sector partners.

In fiscal year 2010, approximately $32.58 million of Federal appropriations, monies from the American Recovery and Reinvestment Act, and partnership funds were used to support lidar acquisitions primarily across priority areas along the coastal regions of the contiguous United States and Interferometric Synthetic Aperture Radar (IfSAR) collections across one-sixth of the State of Alaska. These projects will result in more than 125,000 square miles of new 1/9 arc-second (equivalent to 3-meter resolution) data and 250,000 square miles of revised 1/3 and 1 arc-second data (equivalent to 10- and 30-meter resolutions, respectively).

National Elevation Dataset Source Resolution

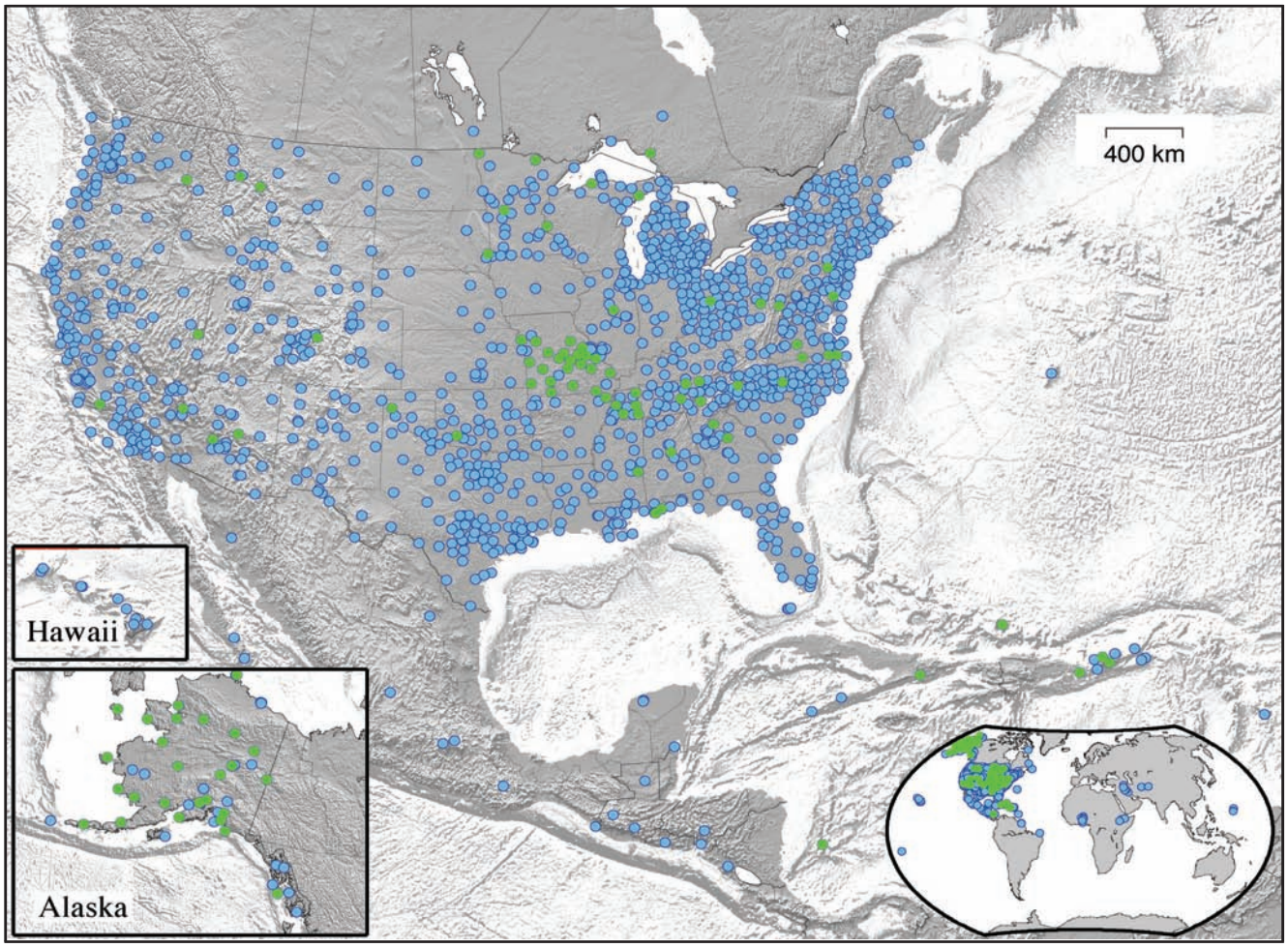


Framework Data Theme: Geodetic Control

Responsible agency: National Oceanic and Atmospheric Administration (NOAA), National Geodetic Survey

Description: NOAA's National Geodetic Survey manages a network of continuously operating reference stations (CORS) that provide Global Navigation Satellite System data to define and maintain the National Spatial Reference System. As a multipurpose cooperative endeavor involving more than 200 government, academic, and private organizations, CORS data support three-dimensional positioning, meteorology, space weather, and geophysical applications. Improved coordinates for these geodetic control stations, which are the result of improved analysis of more than 10 years of data, will be made available in fiscal year 2011. The map shows the distribution of 1,542 stations, including 106 recent additions (green dots).

Continuously Operating Reference Stations (CORS) Network, August 2010



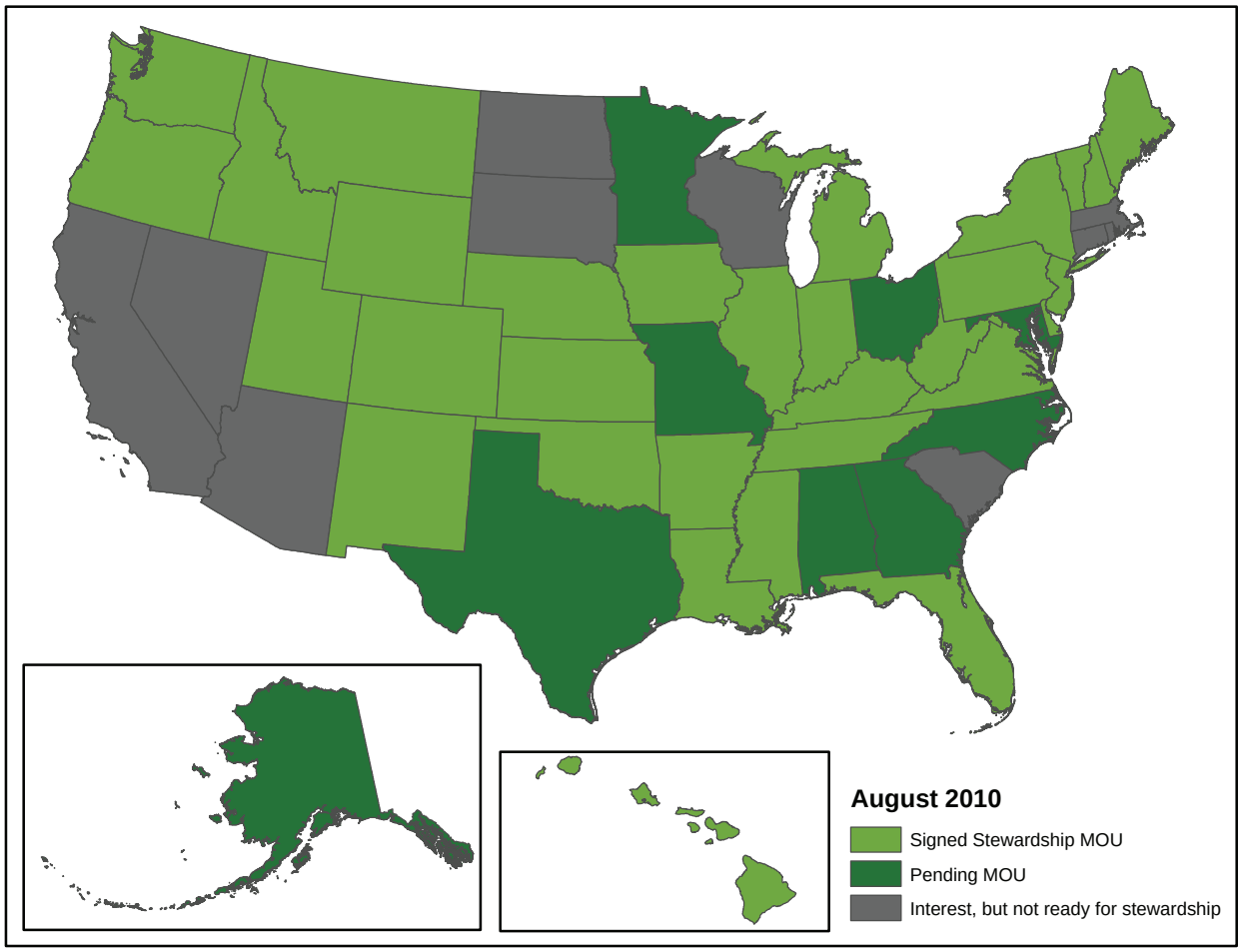
Framework Data Theme: Hydrography

Responsible agency: U.S. Department of the Interior, U.S. Geological Survey (USGS)

Description: The National Hydrography Dataset (NHD) includes a common data model that contains nationwide coverage of surface water features at 1:100,000 scale and 1:24,000 scale. These data provide a universal solution for hydrography across the Nation and have widespread application in pollution control, hydrology, resource management, and fisheries research. The USGS provides the central database, technical development, distribution, data integration, leadership, program management and coordination.

Maintaining these data is largely accomplished through a program of data stewardship using Memorandums of Understanding (MOUs) where the user community is empowered to make necessary updates. The USGS facilitates the stewardship by providing the methods, tools, training, and guidance to allow users to assume responsibility for maintenance. A complete modernization of the maintenance toolset is underway to expand the user base able to participate in data stewardship. The USGS provides grant funding to States to help them establish stewardship operations. A number of States are now revising their hydrography data to 1:4,800- and 1:2,400-scale resolutions.

Status of National Hydrography Dataset Stewardship Program



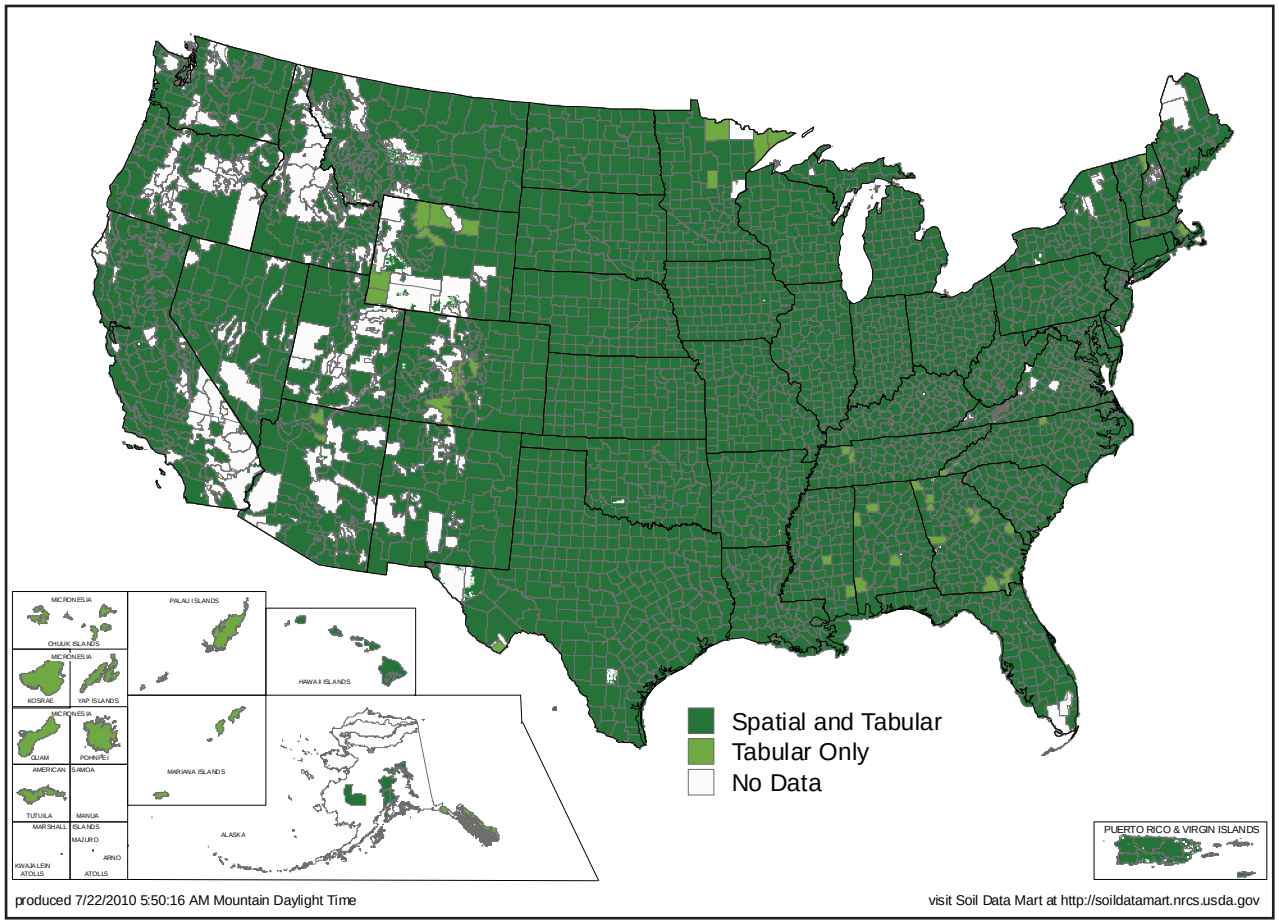
Data Theme: Soils

Responsible agency: U.S. Department of Agriculture (USDA), Natural Resources Conservation Service Soil Survey Division

Description: The USDA National Resources Conservation Service Soil Survey Division provides leadership and services to produce and deliver science-based soil information (including digital maps, attribute tables, and other types of publications) to help in the understanding and management of global resources. This service is provided through the National Cooperative Soil Survey (NCSS) program. The NCSS is a nationwide partnership of Federal, State and local agencies, and private entities and institutions. This partnership works collaboratively to investigate, inventory, document, classify, interpret, disseminate, and publish information about soils of the United States and its trust territories and Commonwealths. The activities of the NCSS are carried out on national, regional, and State levels.

The map below illustrates the current status of the Soil Survey Geographic database (SSURGO) for the United States. Dark green color indicates that detailed digital maps and associated attribute tables are available. Light green color indicates that only attribute tables are available. White areas indicate that no soil survey has been completed. During fiscal year 2010, NCSS staff had the goal of completing approximately 38 million acres of initial and update soil survey mapping. In fiscal year 2009, 28 new SSURGO datasets were added to the Web Soil Survey (*websoilsurvey.nrcs.usda.gov/*), 545 SSURGO datasets had spatial updates added, and approximately 37.5 million acres of initial and update soil survey mapping were completed.

Available Soil Survey Data



Data Theme: Watershed Boundaries

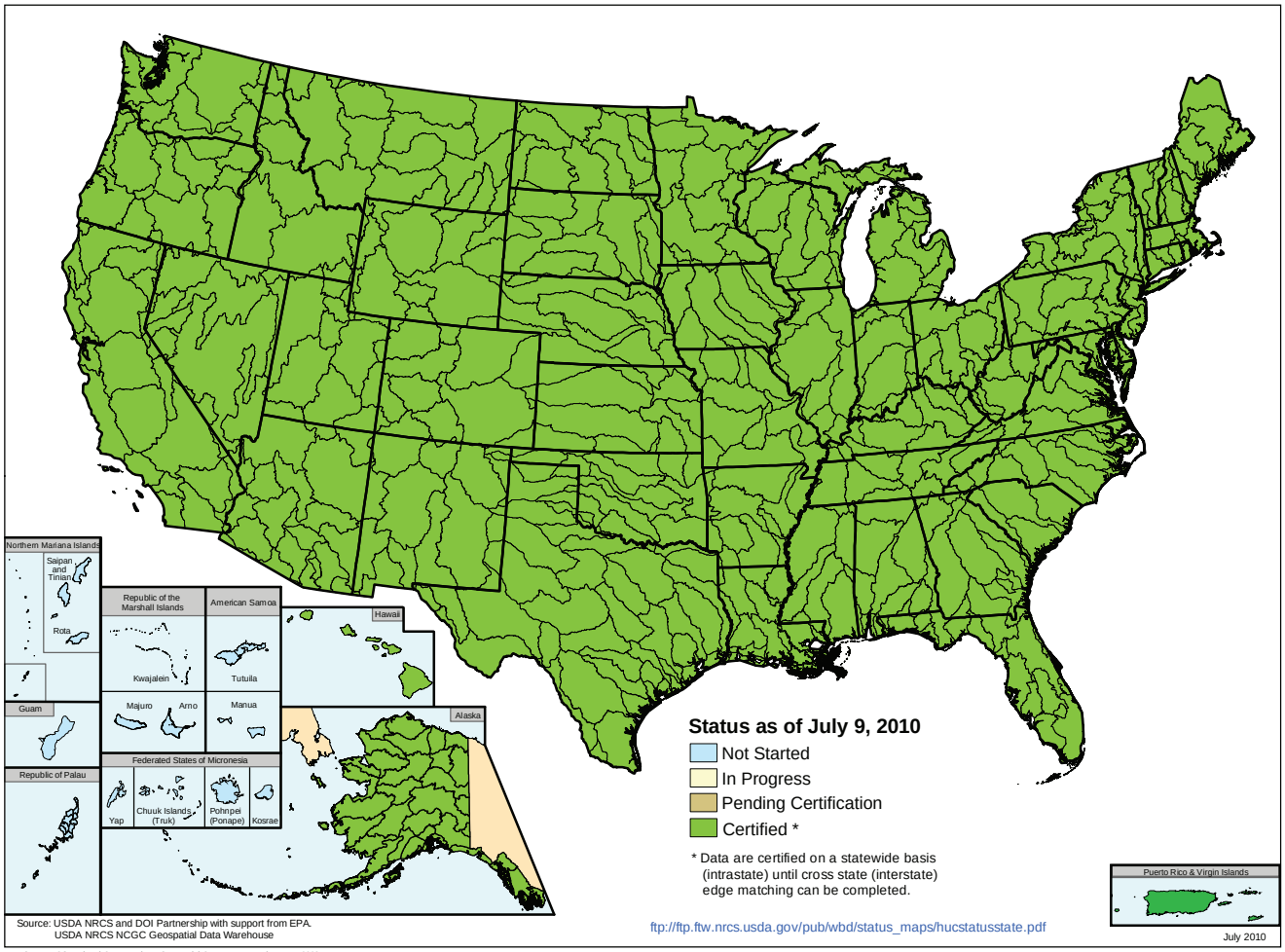
Responsible agency: U.S. Department of the Interior, U.S. Geological Survey (USGS), and U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS)

Description: The seamless national Watershed Boundary Dataset (WBD) is a hydrologic unit framework of uniform size for the United States. It is used for program planning, implementation, and reporting at the national, regional, and local levels. The WBD is also useful in analytical and statistical applications. The WBD is certified to national certification standards for the conterminous United States and Hawaii at 1:24,000 scale, the Caribbean at 1:25,000 scale, and Alaska at 1:63,360 scale. Its development and strategic direction are guided under the leadership of the interagency Subcommittee on Spatial Water Data. The NRCS and the USGS have joint management responsibilities under OMB Circular A–16.

Current efforts are focused on stewardship and integration of the WBD with the National Hydrography Dataset and other datasets, such as the Geographic Names Information System, and harmonization of hydrologic units with Canada and Mexico. Adding functionality to the dataset, including, for example, the addition of flow tables and more useful interpretations along coastal areas, is also a key activity. WBD planning allows for (but does not require) the incorporation of local partner data at high resolution.

This dataset is available through the Geospatial Data Gateway, located at *datagateway.nrcs.usda.gov/*.

Watershed Boundary Dataset Status



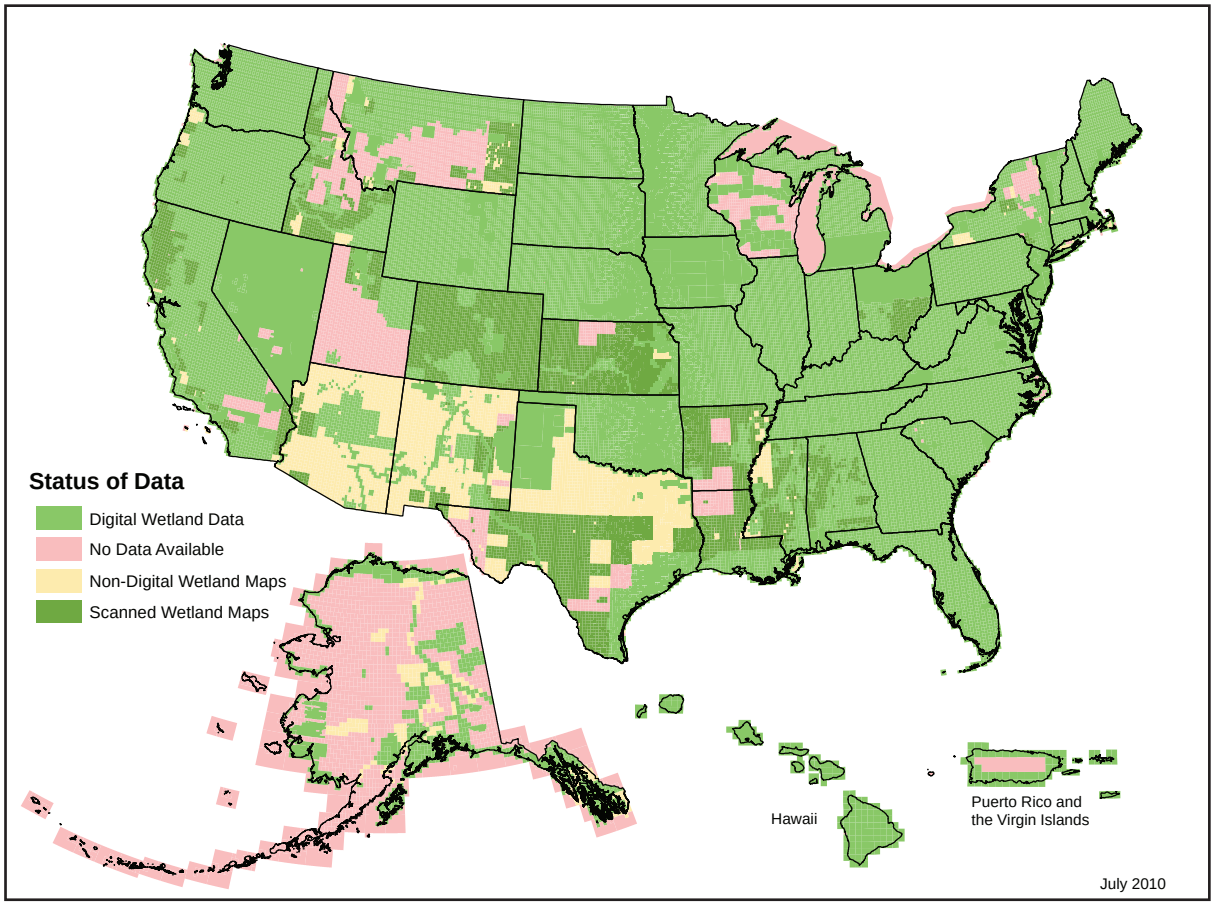
Data Theme: Wetlands

Responsible agency: U.S. Department of the Interior, Fish and Wildlife Service (FWS)

Description: The National Wetlands Inventory (NWI) provides management, coordination, and delivery of the Wetlands Layer of the NSDI as required under the Emergency Wetlands Resources Act and as part of OMB Circular A–16. The Wetlands Layer consists of wetlands, deepwater, and riparian geospatial data that are served in a seamless geospatial data repository using a state-of-the-art Wetlands Mapper, served through a Web Mapping Service (WMS), downloaded by State, and available on the Google Earth™ mapping service. Wetlands data provide the classification, location, and extent of wetlands and deepwater habitats. To facilitate wetlands data development, the FGDC endorsed the Wetlands Mapping Standard in July 2009. The Wetlands Mapping Standard is designed to support current and future digital mapping requirements. It is intended to be extensible, forward-looking, and able to accommodate technology enhancements over time. Adherence to the Wetlands Mapping Standard is required for all wetlands mapping activities funded or conducted by the Federal Government.

The wetlands data layer is 63 percent complete as shown in the status map. In fiscal year 2010, NWI received 60 million data requests, upgraded the Wetlands Mapper, and added a riparian layer. NWI also developed a natural resources Gulf Oil Spill Mapper. Wetlands data are registered through Geospatial One-Stop and Data.gov and can be viewed, analyzed, or downloaded on demand from the U.S. Fish and Wildlife Service's Wetlands Mapper; the data may also be viewed by the general public using the Google Earth™ mapping service. The current availability of wetlands data is shown below.

Status of Online Wetlands Data



Appendix D
Glossary of Abbreviations and Terms

ANSI	American National Standards Institute
BLM	Bureau of Land Management
BTS	Bureau of Transportation Statistics
CAP	Cooperative Agreements Program
CIO	Chief Information Officer
CMECS	Coastal and Marine Ecological Classification Standard
CORS	Continuously Operating Reference Stations
CS-W	Cataloging Service for the Web
CSWG	Common Services Work Group
DHS	U.S. Department of Homeland Security
DISR	Department of Defence IT Standards Repository
DOC	U.S. Department of Commerce
DOI	U.S. Department of the Interior
DOT	U.S. Department of Transportation
EPA	U.S. Environmental Protection Agency
FGDC	Federal Geographic Data Committee
FSA	Farm Service Agency
FSAM	Federal Segment Architecture Methodology
FWS	U.S. Fish and Wildlife Service
FY	Fiscal Year
GEBWG	Geo-Enabled Business Work Group
GEO	Group on Earth Observations
Geospatial LoB	Geospatial Line of Business
GEOSS	Global Earth Observation System of Systems
GIS	Geographic Information System
GOS	Geospatial One-Stop
GSDI	Global Spatial Data Infrastructure
GWG	Geospatial Intelligence Standards Working Group
HSIP	Homeland Security Infrastructure Program
HTML	HyperText Markup Language
ICT	Information and Communications Technology
IDEC	Infraestructura de Dades Espacials de Catalunya
IfSAR	Interferometric Synthetic Aperture Radar
IFTN	Imagery for the Nation
INCITS	InterNational Committee for Information Technology Standards
ISO	International Organization for Standardization
IT	Information Technology
LMWG	Lifecycle Management Work Group
MOU	Memorandum of Understanding
MWG	Metadata Working Group
NAIP	National Agriculture Imagery Program
NARA	National Archives and Records Administration
NARC	National Association of Regional Councils
NCSS	National Cooperative Soil Survey
NDOP	National Digital Orthophoto Programs (rechartered in 2010 as the National Digital Ortho-imagery Program, a subcommittee of the FGDC)
NED	National Elevation Dataset
NGA	National Geeospatial-Intelligence Agency
NGAC	National Geospatial Advisory Committee
NHD	National Hydrography Dataset
NOAA	National Oceanic and Atmospheric Administration
NRCS	Natural Resources Conservation Service
NSDI	National Spatial Data Infrastructure
NSGIC	National States Geographic Information Council
NWI	National Wetlands Inventory
OMB	Office of Management and Budget
PLSS	Public Land Survey System
RFI	Request for Information
SDI	Spatial Data Infrastructure
SRTM	Shuttle Radar Topography Mission
SSC	Service Status Checker
SSURGO	Soil Survey Geographic Database
TAWG	Technology and Architecture Work Group
URISA	Urban and Regional Information Systems Association
USCB	U.S. Census Bureau
USDA	U.S. Department of Agriculture
USGS	U.S. Geological Survey
USNG	U.S. National Grid
WBD	Watershed Boundary Dataset
WMS	Web Map Service
XML	Extensible Markup Language

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