FGDC Annual Report to OMB
Format for Agency Reports – FY 2002

The following outline should be used by FGDC Member Agencies (or Bureaus) for their Annual Spatial Data Reports, which will be consolidated by the FGDC and submitted to OMB. Reports **should be brief, using bullets where possible**. Please provide only the information that will be useful for OMB to assess the agencies' achievements and for establishing future direction.

Part A
GENERAL FEDERAL AGENCY RESPONSIBILITIES REPORT (All Agencies)

1. *Agency or Bureau:*
   USDA Forest Service

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5. *Subcommittee or Working Group Participation: Subcommittees or Working Groups in which your agency is actively involved, but does not lead:* (NOTE: Active is defined as those staff who attend meetings when convened.)

Subcommittees	Working Groups
Base Cartographic	**Clearinghouse**
Federal Geodetic Control	**Metadata Ad Hoc**
Cadastral	**Sustainable Forest Data – Co-Lead**
Spatial Water	**Homeland Security**
Vegetation	**Civilian Remote Sensing Ad hoc**
Geology	
Spatial Water Data	

6. *Strategy: Has your agency prepared a detailed strategy for integrating geographic information and spatial data activities into your business process - in coordination with the FGDC strategy, pursuant to OMB Circular A-16? If yes, briefly describe.*

The Forest Service has prepared a detailed strategy for the integration of geospatial activities into our business process. The Forest Service is responsible for managing our Nation's natural resources and providing quality service to the public. Information to meet these mission requirements is housed in the Forest Service Natural Resources Applications (FSNRA). Forest Service professionals use a wide range of natural resources information, held in the various FSNRA, to perform complex analyses that affect management decisions at all levels, on a daily basis. An interface for the FSNRA, which enables the end-user to access the separate data holdings through one "front door", is needed to perform this work effectively. The Forest Service recognizes that the geospatial nature of these data is the common element by which FSNRA can be integrated with one another and into the business process.

The Forest Service Natural Resources Applications (FSNRA) Geospatial Strategy was developed to:

- **Provide methodologies that access and integrate tabular and spatial data among the FSNRA**
- **Maximize reusability of application components and data**
- **Reduce development and implementation timeframes for geospatial applications and database development.**

It is the primary objective of this FSNRA Geospatial Strategy to provide an integrated solution that not only supports the spatial component, but also is transparent to our user communities through a similar user interface, similar functionality, and a similar data models.

The Forest Service has also developed a Tactical Plan for the FSNRA geospatial interface, which will begin implementation of the Geospatial Strategy. Directors from the various FSNRA Staffs have endorsed the Geospatial Strategy and Tactical Plan and have signed a Memorandum of Understanding supporting this initiative. The FSNRA Geospatial Strategy and Tactical Plan are available upon request.

7. *Compliance: How are your spatial data holdings compliant with FGDC Standards? Also, please list the FGDC Standards you are using or plan to use in your organization.*

Not all Forest Service spatial data holdings are compliant with FGDC standards. The Forest Service's, large, widely dispersed, decentralized organizational structure poses many challenges for the assurance of total compliance with FGDC standards. Over the past 2 years much work has been done to develop a management framework to support, encourage and verify that spatial data is FGDC compliant, and is accompanied by FGDC compliant metadata.

- **The agency has established a GIS Data Dictionary, which is undergoing continuous evolution and expansion. An operational principle governing the Change Management process for this GIS Data Dictionary is that its standards will be FGDC compliant for all areas covered by an FGDC standard and that elsewhere the standards will strive to represent the broadest consensus achievable.**
- **The Forest Service Geospatial Executive Board (GEB) sponsored the development and implementation of the Resource Mapping Evaluation Tool (RMET), which has been used to assess Forest Service spatial data holdings and determine compliance. The tool has been**

very helpful in determining where data compliance is lacking, so that efforts to correct this can be made.

- **The Forest Service has also developed a Metadata Policy, which provides guidelines for providing FGDC compliant metadata.**
- **Through the FS FGDC Coordinating Committee, every effort is made to be involved in the FGDC Standards Development process to ensure these standards meet our business needs.**
- **Efforts to convert legacy data to FGDC standards are underway.**

The Forest Service uses and/or plans to use the following FGDC Standards:

Content Standard for Digital Orthoimagery
Content Standard for Framework Land Elevation Data
Geospatial Positioning Accuracy Standard, Part 3: National Standard for Spatial Data Accuracy
Spatial Data Transfer Standard (SDTS) Part 5: Raster Profile and Extensions
Cadastral Data Content Standard
Geospatial Positioning Accuracy Standards, Part 1: Reporting Methodology
Geospatial Positioning Accuracy Standards, Part 2: Standards for Geodetic Networks
Spatial Data Transfer Standard (SDTS) Part 6: Point Profile
Geologic Data Model
Digital Cartographic Standard for Geological Map Symbolization
NSDI Framework Transportation Identification Standard
Metadata Profile for Shoreline Data
Hydrographic Data Content Standard for Coastal and Inland Waterways
Soil Geographic Data Standard
Federal Standards for Delineation of Hydrologic Unit Boundaries
National Hydrography Framework Geospatial Data Content Standard
Vegetation Classification Standard
National Standards for the Floristic Levels of Vegetation Classification in the United States: Associations and Alliances
Proposed Revisions to the National Standards for the Physiognomic Levels of Vegetation Classification in the United States: Federal Geographic Data Committee Vegetation Classification Standards, FGDC-STD-005, October 1997
Classification of Wetlands and Deepwater Habitats of the United States
Content Standard for Digital Geospatial Metadata, Part 1: Biological Data Profile
Biological Nomenclature and Taxonomy Data Standard
Encoding Standards for Geospatial Metadata Earth Cover Classification Standard
Facility ID Data Standard
Geospatial Positioning Accuracy Standard, Part 4: Architecture, Engineering, Construction, and Facilities Management
Spatial Data Transfer Standard (SDTS) Part 7: Computer-Aided Design and Drafting (CADD) Profile
Utilities Data Content Standard
Content Standard for Digital Geospatial Metadata (version 2.0)
FGDC Profile(s) of ISO 19115, Geographic information - Metadata
Content Standard for Digital Geospatial Metadata: Extensions for Remote Sensing Metadata
Content Standard for Remote Sensing Swath Data

Spatial Data Transfer Standard (SDTS)
U.S. National Grid

Geospatial One Stop Core Data Content Standards for Framework Themes

- **Transportation**
- **Cadastral**
- **Hyrography**
- **Elevation**
- **Orthoimagery**
- **Administrative Units**

Geospatial One Stop Interoperability Standards

8. Redundancy: Prior to collecting data, how does your agency ensure that the data are not already available?

The Forest Service avoids duplicative data collection through coordinated program management. This process will be enhanced with the new FSNRA Geospatial Strategy, which will enable the integration of natural resources databases. The FSNRA integration was built upon the principles of the 1992 Forest Service Information Framework, which established the policy of "collect data once – use many times." Internal coordination among various program areas and the FSNRA interface will provide further efficiency by enabling the Forest Service to reduce overall lifecycle costs; and optimize data acquisition, availability, distribution, and application support services.

Externally, the Forest Service will continue involvement with partners at the National level, for purposes of planning, program coordination and policy development. Participation in the National Digital Elevation Program (NDEP), the National Digital Orthophoto Program (NDOP) and other such interagency groups ensures that resources are effectively leveraged to meet mutual needs and that redundancy is avoided. Regional, Forest and District cooperation with State, County and local governments and other partners, on the working level, is also carried out on a project basis and for long-range programs, to ensure effective resource utilization by all parties and to avoid duplication of effort.

9. Collection: Do your agency contracts and grants involving data collection include costs for NSDI standard

National contracts include costs to cover collecting data to FGDC standards developed for the NSDI. Our National GIS Data Services Contract deals primarily with contracting work to covert legacy data to conform to FGDC standards, rather than actual collection of data. Contracts for actual data collection exist at the Region and Forest level and should contain provisions for FGDC standards.

10. Clearinghouse: Is all the data and/or metadata that your agency is able to share with the public published on the NSDI Clearinghouse? If not, please cite barriers encountered.

The Forest Service is very close to completing the development of an NSDI Clearinghouse node. The Forest Service Geospatial Service and Technology Center (GSTC) is installing telecom, hardware and software infrastructure to support serving of geospatial data, and FGDC compliant geospatial metadata over the Internet as an NSDI Clearinghouse Node. Installation of telecom capacity (T3 line) between GSTC and the USDA Natural Resource Conservation Service (NRCS) web farm in Ft. Collins

is in progress and will be complete by the end of October 2002. Metadata holdings at the Center are currently served as text files. Plans call for these files to be loaded into an SDE enabled Oracle database for serving through the metadata module of ESRI's ArcIMS 4. The Oracle environment enables full indexing of the data to accommodate NSDI Clearinghouse searches. Completion is planned for the first quarter of CY 2003 (delayed from the original 2002 target because of budget constraints and delays in telecom infrastructure acquisition). Once the service is available on the web, NSDI Clearinghouse Node certification will be sought from FGDC. The Center plans to offer the metadata, and geospatial data serving capability to any other Forest Service units who wish to utilize the service, and who are willing to comply with the FGDC requirements for metadata creation and maintenance.
The plan to provide the FGDC Clearinghouse node has been in work longer than originally anticipated. Note that the 2001 Annual report anticipated activation of the node by the end of June 2002.
Barriers encountered in complying with Agency and Department security regulations have slowed the process. Once the site is established, another challenge will be accurately inventorying the vast and varied holding of the Forest Service, and ensuring that FGDC compliant metadata exists.

11. *E-Gov: How are you using geospatial data in your mission activities to provide better services? (Please list)*

    The Forest Service is using geospatial data to enhance our mission of managing our Nation's natural resources and providing quality public service in a variety of ways.

    - **Forest Service geospatial data is critical to interagency fire fighting efforts and for Burned Area Ecosystem Recovery (BAER) efforts. Getting this data into the hands of fire crews on the ground can save lives and property and is an essential element of our mission. Geospatail data is also needed in BAER rehabilitation work, which is part of our mission of caring for our Nation's natural resources. Internet and other current technologies are utilized to ensure immediate access to data.**

    - **The Forest Service is responsible for the maintenance and update of the Geographic Names Information System (GNIS), the National, on-line database of domestic geographic names. GNIS is utilized by the Forest Service as a resource, for updating maps and GIS data.**

    - **Forest Service Enterprise Architecture includes current Geographic Information System (GIS) technology from the leading GIS vendor, ESRI. ArcIMS software and ArcSDE servers support 'live mapping' and GIS applications on the World Wide Web.**

    - **FGDC Clearinghouse Node – Forest Service Geospatial Data holdings will be made available through this node. Currently, many Forests and Regions serve their Geospatial data over the Internet. This effort will be centrally managed once the clearinghouse node is established.**

    - **Geospatial One Stop – this G2G e-Gov initiative will provide for better data sharing among business partners and result in a more efficient Geospatial program. It will allow our data to be more widely accessed.**

- **Recreation.Gov – this e-gov initiative will provide on-line recreation opportunities for the public with a geospatial component.**

- **The National Map – the Forest Service is a partner in the USGS National Map. Forest Service is involved in several National Map Pilots. We will be one of the National Map's major data providers.**

- **e-Permits – as the Forest Service's Infra National Application data becomes geospatially enabled, the public will have a geospatial reference for completing on-line permits.**

- **USGS/Forest Service interagency agreement for the sale of Forest Service Maps. The Forest Service engages in a cooperative agreement with the US Geological Service for the on-line sale of Forest Visitor Maps to the public. This on-line service is accessed by over 1500 vendors, making our maps more available to the public.**

12. Geospatial One-Stop: How is your agency involved in the Geospatial One-Stop?

The Forest Service has been very active in the Geospatial One-Stop since the initiative was launched early in FY2002. While the Forest Service is not a lead agency for any of the framework themes, we are a data provider for elevation, orthoimagery, hydrography, administrative boundary and cadastral data. We will be a provider of transportation data, in the near future. Therefore, Forest Service has provided FGDC and OMB with a point of contact to be involved in the standards development for each of these themes. The Forest Service has identified a Primary Point of Contact to be involved in coordination of Geospatial One Stop activities within the Forest Service and with our external partners. We have found funding within our budget to support the initial Geospatial One Stop standards work and interoperability tool-set development. Forest Service Senior Executives, and the GEB are aware of the Geospatial One Stop initiative and are incorporating its requirements into Forest Service Geospatial Policy. The statement below was submitted to OMB for the October 1 hearing as the Forest Service commitment to Geospatial One Stop:

What Geospatial One-Stop goals do these activities contribute to?

FS geospatial activities are intended to contribute to all the federal Geospatial One-Stop goals and, in particular FS geospatial activities are being undertaken to:

- **Lower geospatial data product development costs by working collaboratively with other government and private sector product developers**
- **Make geospatial data products available to the broadest spectrum possible of users of such data, consistent with national security concerns**
- **Develop data products in formats that promote their use with products developed by other suppliers by participating in standards development and then by promoting and complying with such standards**
- **Continuously improve quality (accuracy, reliability, etc.) of geospatial data products by, for example, assuring all data products accompanied by FGDC compliant metadata.**

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13. Enterprise Architecture: Is geospatial data a component of your enterprise architecture? Please provide a brief summary of how geospatial data fits into your enterprise architecture

The Forest Service Enterprise Architecture is being developed, which will provide an over-arching IT Framework to serve Forest Service business requirements. Geospatial Data is a component of this project, and is addressed in the *Forest Service Data and Applications Architecture Framework* (February 2002). The Forest Service has made an agency-wide investment in ESRI geospatial software. Recently, ESRI and the US Department of Agriculture have entered into a blanket purchasing agreement (BPA) that provides deployment of ArcSDE servers and connection licenses for the USDA Forest Service. The BPA also provides for a limited number of ArcIMS licenses and unlimited licenses for some ESRI desktop products that the Forest Service did not have previously, such as the Geospatial Analyst extension. The proposed Forest Service geospatial architecture supports geospatial-enabled applications through the Web, mobile computers, and thinner client technologies. This approach will maximize the Agency's ability to manage data standards, enterprise application development, hardware/software upgrades, and access to the Agency's substantial investment in geospatial data. The Forest Service Data and Applications Architecture Framework document is available upon request.

14. Partnerships: What efforts are being taken to coordinate data and build partnerships at the field level for data collection and standards development? Identify partnerships and data sharing activities with other federal agencies, state, local, and tribal governments and other entities.

The GEB has directed the field to continue and increase their level of involvement in cooperative agreements with federal agencies, state and local governments and tribes. A letter from the GEB chair to Regional Foresters and Station Directors was signed encouraging this effort and highlighting the benefits of cooperative partnerships. The Forest Service is active in I-Teams in Utah, Montana and other regions where I-Teams are at work. The attached spreadsheet provides a listing of various partnerships and participation in geospatial data sharing groups. Because the Forest Service's decentralized and dispersed nature, it is difficult to capture all the various cooperative partnerships, and this listing does not represent every partnership in which Forest Service is involved. National Cooperative Partnerships Include:

Federal Geographic Data Coordinating Committee/Subcommittees and Working Groups
National Digital Elevation Program (NDEP)
National Digital Orthophoto Program (NDOP)
US Board On Geographic Names (BGN)
Lewis and Clarke Bicentennial Commemoration Committee/Mapping Subcommittee
National Atlas
Civil Applications Committee (CAC)
National Aerial Photography Program (NAPP)
USGS/FS Single Edition Program
USDA GeoData Committee

15. Concerns or Lessons Learned: Are there areas or issues regarding spatial data that require attention, or lessons learned that you would like to share with others? Please describe.

The Forest Service is committed to developing an efficient, effective Geospatial program to address our business needs: to responsibly manage our Nation's natural resources and to provide quality public service.

We feel that the work accomplished through the agency's Geospatial Executive Board and Geospatial Advisory Committee has resulted in major improvements in this area. While there remains much to be done, we have plans and procedures in place to continue to meet the requirements of OMB Circular A-16 effectively.

The Forest Service is committed to our Geospatial Program, NSDI, FGDC and the Geospatial One Stop. An issue of concern in our involvement with these geospatial initiatives is the lack of coordination of OMB requests and inquiries through the Department of Agriculture, the Chief of the Forest Service and Forest Service Senior Executives. It would be helpful if future inquiries and data calls could be coordinated through Senior Executives at the Department Level and within the Forest Service. This will heighten management awareness of the OMB interest in our geospatial activities and avoid misdirection of requests within the agency and duplication of effort.