

Community/Federal Information Partnership



Community Solutions Through The National Spatial Data Infrastructure

An Interagency Proposal To Advance the National Spatial Data Infrastructure

**Coordinated by the
Federal Geographic Data Committee**

June 1999

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Community/Federal Information Partnership:

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INTRODUCTION:

Our nation's communities are addressing a wide range of complex economic, social and environmental issues. Geospatial data plays a key role in helping communities synthesize information relevant to these issues, unfortunately data are often difficult to locate, obtain, and integrate. Geography creates the unifying element that brings people together to identify key issues, develop a vision, set goals and determine the actions necessary to improve their community. The Glen Canyon Restorative Flood project shows the value of a geographic information system (GIS) in this collaborative process. The Department of the Interior received 33,000 written comments that identified 2,300 separate concerns about this flooding that was designed to restore spawning areas downstream of the Glen Canyon Dam. GIS played an important role by enabling stakeholders to keep abreast of their concerns, but more importantly to see the totality of the situation--to place their concerns in context with those of other stakeholders and reach consensus. Geographic information is the key because with it citizens and communities can better address the challenging issues they face. Coordinated geospatial data from all levels and sectors that is produced, integrated, and made readily available to all citizens can empower communities to move toward consensus rather than conflict.

The nation's communities are re-discovering that geography is important. In 1998, for example, New York State set aside \$1 million for state-wide cancer mapping in response to citizens concerns about the environmental risks that can cause cancer. This mapping effort, the first such program in the nation, was sought by cancer survivors to help identify environmental risks in their communities. Communities need geospatial data to address issues of concern like cancer. As a nation we need to respond to the importance of developing and using geographic information to help our communities deal with these complex issues.

The National Spatial Data Infrastructure (NSDI) offers a mechanism to link technologies, policies, standards, and resources necessary to improve the way geospatial data is acquired, stored, processed, disseminated, and used. The *Strategy for the National Spatial Data Infrastructure* published in April 1997, creates a vision of the NSDI that “Current and accurate geospatial data will be readily available to contribute locally, nationally, and globally to economic growth, environmental quality and stability and social progress.” This vision will be realized only when federal, state, local and tribal governments and the private sector and academia are working collaboratively to develop integrated geospatial data and promote better access to this data to improve the decisions affecting the nation’s communities.

The initial development of the NSDI responded to a recommendation contained in the Vice Presidents’s National Performance Review of 1993 and has involved activities by federal agencies and many organizations outside the federal government, including the National Research Council (NRC). These have resulted in considerable progress but much work remains. The 1998 report from the National Academy of Public Administration *Geographic Information for the 21st Century* follows a 1993 study by the NRC, *Toward a Coordinated Spatial Data Infrastructure for the Nation*, both of which endorse vigorous development of the NSDI. The need for geographic information is booming, some have called it a geospatial revolution. Now is the time to ensure progress among all sectors by investing in our NSDI, because with it our nation can improve the opportunity for all citizens to participate in community-driven solutions while better meeting crucial Federal responsibilities. This progress in implementation of the NSDI will also serve to continue to keep the United States in the forefront of global spatial data initiatives and will support an emerging global spatial data infrastructure.

PROPOSAL

The Community/Federal Information Partnership is designed to make geospatial data available for use by governments, businesses, academic organizations and citizens to use in addressing everyday and long-term issues. A component of the Administration's Livability Agenda, the Community/Federal Information Partnership seeks to promote collaborative decision making at the community and regional level by providing the resources, tools, and information for community members to make well informed community and regional planning choices.

The proposed four year initiative, beginning in FY2000 with \$39.5 million, has two integrated components. The first is a grant, cooperative agreement and partnership program to advance the capacity of communities to create and use geospatial data for sound decision-making. The second component is a series of actions to improve federal agencies’ capabilities to meet community information needs by further implementing the NSDI. Working together, these two efforts will result in a comprehensive, integrated, nationwide NSDI that is kept up-to-date and is accessible to all Americans and will serve to help keep the United States in a leadership position in global spatial data management and use.

GOALS AND OBJECTIVES

The long term goals of the *Community/Federal Information Partnership* are to help promote:

- informed decision-making at the community level
- improve land and resource use
- a more informed public
- greater opportunities for public participation in decision-making
- ready transfer of data between the Federal government and communities
- contributions of communities to data sets of national and global interest

In support of these goals, the initiative has three major objectives:

- 1) stimulate local and regional and national entities to engage in community-based geospatial data collection, sharing, and use;
- 2) build federal agencies capabilities to meet their responsibilities for NSDI implementation, particularly the transfer of geospatial information to communities; and
- 3) ensure that every local government jurisdiction in the nation has the technical infrastructure, data access and training to meet their basic needs to use geospatial data to make informed place based decisions.

The two components of the *Community/Federal Information Partnership* are:

I. Advancing the Capacity of the Nation's Communities to Create and Use Geospatial Data

This component would provide a multi-agency grant, cooperative agreement and partnership program to support community-based efforts to build the NSDI. All projects would require a contribution from the participating non-federal partners sufficient to demonstrate commitment. Multi-jurisdictional proposals (i.e. multi-county, city/county, local/state, private/public etc,) and proposals that compliment the relevant objectives of the Livability Agenda for grant, cooperative agreement and partnership projects are particularly encouraged. These types of projects support the goals of the NSDI for building networks of organizations and can lead to efficient cost-effective data collection sharing and use. Activities supported through this component will include:

- Building the capacity to access data and to use Geographic Information Systems technology. This would include software and hardware, metadata development and collection, clearinghouse activities, and local standards development. This also would include participation in standards development activities at the federal or state levels, the coordination of data collection activities of organizations to provide for a more consistent approach to building the NSDI, and the implementation of Federal Geographic Data committee (FGDC) Data standards where available or other commonly agreed to standards for data content when

FGDC or national standards are not available for use. Included are activities to organize and improve the use of existing data or enhance the data collection activities of ongoing programs to provide data that is appropriate to community needs and can be integrated with other data. Data sets included are:

- NSDI Framework Themes - Framework themes are geographic data themes used by most organizations such as geodetic control, orthoimagery, elevation, transportation, hydrography, governmental units, and cadastral information.
 - Other Priority Themes - Among the numerous other geographic data themes watershed boundaries, flood plains, earth cover, soils, natural hazards, wetlands and shoreline have been identified for priority attention by this initiative.
- Research, developmental or implementation activities to support architectures and technologies that enable data sharing or that address institutional, policy or economic issues that will support implementation of the NSDI.
 - Use of integrated decision support tools to aid decision-makers in analyzing, visualizing or determining probable effects of decision.

This component will be funded pursuant to a consolidated announcement developed by FGDC member agencies and appropriated to individual agency accounts. The program will be announced by a joint Request for Proposals (RFP) that will be issued through the auspices of the FGDC. The RFP will describe the overall objectives and parameters of the initiative. Each of the participating agencies will have a program element that is part of the RFP which supports the initiative through the mission of the agency. Agencies are encouraged to join together to identify and support crosscutting program elements that are relevant to more than one agency. Each of these program elements will further describe the specific funding agency, project criteria, submittal requirements, and other information needed by prospective applicants.

The grants, cooperative agreements and partnerships will be selected through a criteria and performance based award process and will be administered through the funding agency. Recipients may be tribal, local, or state government agencies, government corporations, from the private sector, non-profit organizations or academic institutions. Awards will only be made for activities that support the implementation of the NSDI in a manner that builds networks of organizations linked through commitments to solving problems of common interest to the community. Projects that partner with federal agencies, particularly those of the FGDC are encouraged in order to leverage existing program activities. The project funds will be distributed and administered by the individual agencies of the FGDC and coordinated by the FGDC Steering Committee.

II. Improving Federal Agency Capabilities to meet community information needs

This second component provides funding for FGDC member agencies to use specifically for critical agency tasks to enhance their ability to support the advancement of NSDI goals pertaining to communities. This component includes: the use of metadata standards to document all new geospatial data sets as well as high priority existing data sets and the use of the NSDI Clearinghouse to provide access to agency geospatial data. Agencies also will use these funds to develop and implement data standards that are important to improve the transfer and use of data by communities, to organize and integrate data and make it available to communities. Equally important, this component includes outreach and education programs to increase the awareness and understanding of the NSDI by agency employees, and activities to understand community and stakeholders needs for geospatial data.

This component supports the Goals of the NSDI Strategy with emphasis on federal agency responsibilities and their internal capabilities to support improved documentation, access, and delivery of geospatial data. It will be funded through individual agency appropriations. Activities to be funded must be consistent with the NSDI and also be included in the agency's Government Performance and Results Act plans. While these activities will be part of individual agency plans, they will be integrated into consistent federal agency actions that will be coordinated through the FGDC Coordination Group and the FGDC Executive Secretariat.

EXISTING PROGRAMS

There are many Federal programs that rely upon non-Federal contributions to advance the use of geospatial data. Examples of these programs include: The Soil Survey Program, The One Stop Reporting Program, and the State Advisor Program, Community 2020, and the National Mapping Program.

The Department of Agriculture's Soil Survey Program involves partnership with Federal, state, and local units of government that provide soil survey information necessary for managing, conserving and sustaining the nation's soil resources. These surveys provide a scientific inventory of soil resources which includes detailed maps. These soil surveys, with their maps, provide basic information to manage soils and are important to planners, engineers, and homeowners, as well as agricultural producers. As digital soil information is developed, it must be part of a uniform system for geospatial soil resources.

The One Stop Program, EMPACT, and other EPA grant programs partner with states and communities to improve reporting and management of environmental data. Despite efforts to improve data systems and incorporate geographic information systems (GIS) capabilities, often these systems lack the integrated data needed to detect and prevent pollution. Communities, States and the Environmental Protection Agency (EPA) are expanding their use of GIS capabilities to integrate geospatial data with other data. A number of governmental entities have begun major efforts to reform environmental reporting processes and data management systems. The One Stop Program and other programs provide grants to leverage state and local resources

into developing a long-term plans for effective environmental reporting and management. This includes enhancing public access to this environmental data.

The State Advisor Program provides regional outreach and technology transfer enhancing access to the Geodetic Control Network. The purpose of the program is to provide liaison between National Oceanic and Atmospheric Administration's National Ocean Service (NOS) and a host state, with a jointly-funded NOS employee residing in the state to guide and assist the state's charting, geodetic, and surveying programs. The program is designed to fill a need for more accurate geodetic surveys, and is in response to states desiring to improve their surveying techniques to meet Federal Geodetic Control Subcommittee (FGCS) standards and specifications. The advisor also trains and assists state personnel in the preparation of survey data in a format compatible with FGCS standards and specifications.

Community 2020 is a GIS product that was developed through a partnership between the Department of Housing and Urban Development and the private sector to describe the location, type, and performance of HUD-funded activities throughout the United States at scales ranging from neighborhoods to regions. In 1996, HUD's Consolidated Plan and the software systems that support it were a recipient of the Ford Foundation's Kennedy School of Government's Innovations in American Government Award. HUD's goal for Community 2020 is to expand community participation in the development of HUD's 5-year Consolidated Plan covering nearly \$7 billion in annual expenditures in nearly 1,000 cities and counties.

In the U.S. Geological Survey, the National Mapping Program leverages federal, state, and local government agencies' investments in accurate map and remotely sensed information. The result is a common, consistent base map needed for community-based decision making. This base map also provides a framework through which additional information can be registered, integrated, and reused. Examples of these data include orthoimage data of the earth, on which many organizations collect data and register observations; and hydrography data, to which organizations spatially register and model information about water quality and quantity, along with biotic, and other characteristics of streams and lakes.

These programs recognize the value of geospatial data and along with many others are moving to improve their collection, dissemination, sharing and use of geospatial data. However there are critical shortfalls in the capability of agencies and communities to obtain and use the data needed to address the challenges they face. For example, the FHWA has a massive highway infrastructure program, yet building a coordinated national transportation geospatial framework is a new program area not specifically identified under the Transportation Equity Act for the 21st Century (TEA-21). In another program critical nationally and locally, millions of dollars are spent on studies and assessments of Superfund sites but little funding is available for ensuring long term usefulness of geospatial data. Environmental assessments are conducted by all sectors and range from site specific to regional level analyses. However little of the geographic data developed for environmental assessment or impact statements is available for more than a one time use. This initiative will help these and other existing programs implement the NSDI as well as provide an

Information Infrastructure that will support future programs at the federal, state, local or tribal levels.

JUSTIFICATION

Economic Benefits

The heart of the proposed initiative is a multi-agency grant, cooperative agreement, and partnership program to support community-based efforts to build the NSDI. The benefits that can be expected from this program can be estimated based upon the actual benefits obtained from similar programs conducted in the past. The projects that would be funded by the proposed initiative are similar to those involved in the NSDI Competitive Cooperative Agreements Program (CCAP) a relatively small program of approximately \$2 million per year initiated in 1994. CCAP activities are consistent with action items contained in the NPR Report on the Department of Interior that accompanied the Report of the National Performance Review and with recommendations contained in the National Research Council 1994 report, *Promoting the National Spatial Data Infrastructure Through Partnerships*. Through 1996, CCAP had provided funding for 62 projects. The FGDC examined the benefits obtained from these projects and issued a report, "Impacts of the NSDI CCAP", September, 1997. This report reflects:

- Most participants (74%) stated that their projects had made geospatial data more accessible
- "Has inspired several of our clients to open up their data to the GIS user community"
- In almost all (98%) of the projects, partnerships started in the project are expected to continue beyond the agreement period
- Benefits grow over time: for projects started in 1996, 24% reported benefits greater than expected, while for projects started in earlier years, 41% and 57% reported benefits greater than expected
- More than half (60%) are aware of other organizations that have instituted similar efforts as a result of their project work
- CCAP funding was a significant factor in the success of the projects.

CCAP provided seed funds which resulted in significant and growing benefits in terms of improved accessibility and increased use of geospatial data. Illustrative of the benefits that can be achieved is the experience of the North Carolina Center for Geographic Information and Analysis.

- In 1994 a clearinghouse with compliant metadata was established. The clearinghouse was accessed 299 times that first month.
- The number of times accessed grew to an average of 2267 times per month in 1996 and 13,745 time per month through the first four months of 1998.
- This is a six-fold increase in use of the clearinghouse in less than three years.

Projects aimed at improving Federal agency capabilities to meet community information needs are expected to generate significant benefits that will support community-based efforts to build the NSDI. This is because of the great volume, extensive geographic coverage, and wide applicability of Federal geospatial data sets. Illustrative of the benefits that can be achieved is the experience of the Fish and Wildlife Service's National Wetlands Inventory Project.

- Wetlands data from the NSDI was first made available on the Internet in 1995
- In the 13 years prior to this, the FWS sold an average of 2,920 wetland map files per year
- In the 3 years on the Internet, an average of almost 135,000 data files per year have been downloaded
- This is more than an order of magnitude increase in the public's use of the wetlands data

Investments are needed to support needs of Federal agencies. For example, in 1998 Interior agencies stated needs for \$154 million in data production. Currently, there are \$11 million available to satisfy this demand. These resources are currently extended through partnerships with other organizations, but the resources available for partnerships fall far short of the total required to meet the need. Additional resources to expand capacity for partnerships would provide data to meet federal agencies' needs as well as data required by state and local programs.

An important sector that could benefit is the strong commercial Geographic Information (GI) industry that has developed in the U.S. and that is globally competitive. The U.S. is estimated to export about \$1 billion in GI hardware and software. The U.S. efforts to build NSDI have served as a model for initiatives in the European Community and Japan. Further, the U.S. industry is believed to dominate the global GI market. In general, the GI industry benefits from Federal efforts to make geospatial data more accessible and shareable. This initiative would stimulate competitiveness in the U.S. GI industry since stimulating NSDI also leads to benefits in the commercial sector.

A study conducted by the USGS focusing on the GIS in Government found that the use of GIS is growing. The number of government organizations that are starting to use GIS is increasing, and the rate of growth is increasing. Further, the use of GIS within an organization continues to increase after the initial start-up. Most benefits accruing to GIS in the startup phase are usually attributed to efficiency benefits, while more complex applications of GIS, including new uses of geospatial data--uses that were previously impossible, take some time to evolve but can lead to large effectiveness benefits. The benefits from GIS are likely to grow as the organizations and people gain new insights into using geospatial data to address community issues. An important finding of the USGS study was that 60 percent of GIS users indicated the GIS outputs resulted in better decision making. Thus, this initiative could stimulate benefits from the growing use of GIS and, over the long term, lead to compounded benefits as the diffusion of GI influences community decision making.

Geospatial data is involved in much of our economic activity, the 1998 NAPA report estimates

that \$3.5 trillion is spent in major sectors of our nation's economy which are impacted by Geographic Information (GI). This is about half of the total economic activity of our nation. Further, the NAPA report estimated the total commercial data and information market for North America in GI to be \$4.2 billion. In addition, an FGDC study estimated Federal agencies spend about \$4 billion on GI. While these numbers do not indicate the benefits derived from GI, they do suggest that the nation is using and benefitting from geospatial data. To fully realize the benefits of GI we must avoid the creation of disjoint geospatial data, and thus the goal of this initiative is to leverage, through cost sharing incentives, these existing resources to make geospatial data compatible and shareable for the benefit our nation's communities.

Programmatic Relationships

The experiences described above lead the Federal Geographic Data Committee to conclude that the Competitive Cooperative Agreements Program (CCAP) has been an effective pilot project for the C/FIP program that is now being proposed to support a wide range of Federal programs. The initiative would comply with the mandates contained in the National Spatial Data Infrastructure Executive Order (12906) of April 11, 1994, including:

- Development and use of The National Geospatial Data Clearinghouse - The Clearinghouse is the distributed network of data producers and users, that is being used for discovery and access to standardized metadata and geospatial data. It uses the Internet, internationally accepted protocols and standard methods that enable spatial data discovery and access in ways not currently available through standard Web search engines.
- A national distributed framework of common base themes of data for use in registering and referencing other themes of geospatial data. Framework data themes are transportation, hydrography (rivers and lakes), geodetic control, digital imagery, government boundaries, elevation and bathymetry, and land ownership, and will become available through the Clearinghouse to all users at Federal, state and local levels, as well as to the private sector, academia, and the general public.
- FGDC endorsed standards for data content, classification and management that would apply to Federal agencies and would be available for use by the entire community of geospatial data producers and users.

Recent initiatives to implement the NSDI have produced many instances where Federal agencies have partnered to produce common collections of geospatial data and have shared geographic data in a mutually beneficial manner with substantial cost savings and enhancements of analytical and management capabilities. Additionally, a growing number of state, local and private organizations are likewise sharing data, using the FGDC Metadata Standard to document their data and are implementing clearinghouse nodes to make data accessible. These NSDI "proofs of concept" provide further justification for proceeding with an accelerated and more broadly based

program, as is being proposed.

The activities conducted under C/FIP would support a variety of high priority Federal programs and initiatives, including:

- The Administration is launching a comprehensive Livability Agenda to help communities across America grow in ways that ensure a high quality of life and strong, sustainable economic growth. The Livability Agenda aims to help citizens and communities: (1) preserve green spaces that promote clean air and clean water, sustain wildlife, and provide families with places to walk, play and relax; (2) ease traffic congestion by improving road planning, strengthening existing transportation systems, and expanding use of alternative transportation; (3) restore a sense of community by fostering citizen and private sector involvement in local planning, including the placement of schools and other public facilities; (4) promote collaboration among and within neighboring communities to develop regional growth strategies and address common issues; and (5) enhance economic competitiveness by nurturing a high quality of life that attracts well-trained workers and cutting-edge industries. This initiative will allow communities to achieve these goals by leveraging Federal dollars that will provide them with the information and other decision-making tools for land preservation, regional collaboration and planning, and economic development according to the communities own values.
- The Department of Transportation's budget totals over \$50.5 billion. Major programs that will support geospatial data improvements include the Federal Highway Administration (FHWA) and the Federal Railroad Administration FRA. FHWA's FY2000 proposed budget, in particular, contains funding to support development of a coordinated national geospatial data infrastructure not specifically identified in the Transportation Equity Act for the 21st Century (TEA-21). This improved data will enhance Federal, State, and local transportation decision-making.
- The Department of Commerce FY2000 budget of \$7.2 billion includes funds for the Census Bureau and NOAA, two key producers and users of geospatial data. (Census requested an additional \$1.7 billion on 6/1/1999 to comply with the requirements of a Supreme Court ruling earlier this year regarding procedures for Census 2000.) In NOAA, there is a 13 percent increase -- \$282 million over last year's appropriation -- to protect natural resources and better protect people and property from the enormous cost of natural disasters. *This initiative will strengthen the ability of the Department to work with local communities in making data from the above programs more readily available. It also will enable the Department to better utilize state and local data in its programs and to provide current data and more effective services to its customers.*
- EPA's FY2000 budget proposal totals \$7.2 billion, including \$1.6 billion for Clean Water and Drinking Water State Revolving Fund (SRF) programs that provide assistance for the construction of drinking water and wastewater treatment facilities, and \$1.5 billion in

Superfund to continue cleanup of toxic waste sites. EPA's mission areas which have significant need for geospatial data include water, air, solid waste, emergency response and pesticides and toxic substances. *Consistent with EPA's Community Right-to-Know program, this initiative will expand EPA's activities to provide relevant information to communities to help them understand, plan and manage a variety of issues associated with environmental health and pollution control and abatement.*

- In the Department of the Interior, the FY2000 budget requests \$8.7 billion for public land management and related activities. This includes programs for informed and scientifically sound management of public and other lands; conservation and enhancement of rivers, lakes, and wetlands; protection and restoration of ecosystems and watersheds; protection and management of park, historical and archaeological resources; management of land and mineral records; fulfilling trust responsibilities to Native Americans, and implementation of clean water initiatives. The use and availability of geospatial data play an important role in the management of federally-administered public lands. Equally important is providing the private and public sectors with access to this data for use in planning efforts. *Funds under this initiative will be used to work with state, tribal, and local government agencies, the private sector, and others (1) to develop and provide access to data that improve collaborative planning processes for Federal land and water resources, (2) to increase advantages afforded by spatial data by leveraging the department's data investments with those of others, and (3) to improve public access to the department's spatial data holdings, while also protecting the security of sensitive data including any federally or state listed endangered, threatened, or sensitive species (plants or animals) and archaeological sites.*
- The Department of Agriculture FY2000 budget of \$55.2 billion includes programs conducted by the Farm Services Agency, the Natural Resources Conservation Service, and Forest Service that rely on geospatial data. Key business areas of these agencies requiring geospatial data are farm and community programs; farm program conservation planning, assessment and monitoring; the application of conservation practices; and natural resources inventory and assessment. *The activities supported by this initiative will include cooperative work on critical framework data themes and the establishment of partnerships for data access through NSDI clearinghouse nodes in counties where NRCS has offices.*
- In Housing and Urban Development, the FY2000 budget requests \$28 billion, including Community Development Block Grant funding of \$4.775 billion and two new proposals, Regional Connections and Redevelopment of Abandoned Buildings. HUD proposes the \$50 million Regional Connections program to develop and implement smarter growth strategies across jurisdictional lines which will include: 1) compact development rules and incentives for new growth areas in neighboring jurisdictions, and 2) coordinated reinvestment in already built-up and infrastructure-rich areas of participating regions. The Redevelopment of Abandoned Buildings program, proposed funding at \$50 million, will

address some of the primary sources of blight in our urban neighborhoods: abandoned apartment houses, single family homes, warehouses, and office buildings. Through a competitive process, HUD will award Redevelopment grants to local governments to support the demolition and or deconstruction of blighted, abandoned buildings as part of a comprehensive plan to redevelop properties for commercial use.

Accurate and accessible geographic information is key to effective implementation of a wide range of programs. The Community/Federal Information Partnership is designed to ensure that Federal agencies have the capacity to develop, organize and transfer this information.

PROPOSED COMMUNITY/FEDERAL INFORMATION PARTNERSHIP FUNDING

Funding Requested for FY 2000
(\$Million)

AGENCY	FY 1999 BASE	FY 2000 Component I	FY 2000 Component II	FY 2000 TOTAL
Commerce (Census & NOAA)	10.0	2.0	8.0*	10.0 (no new funds)
Interior (USGS & BLM)	2.0	8.0	6.0	14.0 (\$12 million increase)
Transportation (FHWA)	0	5.0	1.0	6.0 (\$6 million increase)
EPA	2.5	1.0	1.5**	2.5 (no new funds)
HUD	2.0	0	2.0	2.0 (no new funds)
Agriculture (NRCS)	0	3.5	1.5	5.0 (\$5 million increase)
TOTAL	16.5	19.5	20.0	39.5 (\$23 million increase)

* The Census Bureau's contribution to this process in FY2000 is limited to support of objective 2, to increase federal agency capabilities regarding the transfer of geospatial information to communities. These contributions include the widely available TIGER/Line files and related LandView software, data from the American Community Survey and the 1997 Economic Census,

and implementation of the Internet-based American FactFinder system to support Census 2000, American Community Survey, and other data dissemination activities. The Census Bureau is not a fund-granting agency.

** A portion of EPA agency funds will be used to support community NSDI related projects through regional office efforts.

The figures in this table reflect the proposed agency budgets for FY2000. The distribution of funding between agencies and between the components of the Initiative will change as the needs and priorities of the communities and the Federal government agencies shift over time. Other agencies are actively considering joining the partnership in FY 2001 and beyond.

APPENDICES

Department of Commerce

Appendix 1

Community/Federal Information Partnership Participation

Participating Bureaus:

Bureau of the Census, National Oceanic and Atmospheric Administration

Bureau of the Census

Bureau of the Census FY2000 budget includes ongoing programs that support the goals of the Community/Federal Information Partnership. Census, which maintains the TIGER database and a Master Address File for programmatic use, will benefit from local infrastructure improvement, particularly where local governments can exchange geographic data with the Census Bureau as part of preparations for Census 2000 and the American Community Survey.

The TIGER database is a publicly available geospatial dataset that supports Census Bureau activities and the Nation's statistical program infrastructure. Support from this initiative will facilitate local, state, and tribal agency efforts to contribute locally produced geospatial data to the Census Bureau. This would enhance the value of the TIGER database and the Census Bureau's statistical data. Further, it would improve the ability of local, state, and tribal agencies to utilize geospatially related data obtained from the Bureau.

National Oceanic and Atmospheric Administration

Two of the administrative units within the National Oceanic and Atmospheric Administration (NOAA) National Ocean Service of NOAA focus specifically on working with coastal state agencies in support of resource management initiatives. The mission of the Office of Coastal Resource Management is to make sound decisions, with partners, that ensure diverse, healthy coastal and ocean resources and resolve conflicts among users. The NOAA Coastal Services Center (CSC) mission is to support the environmental, economic, and social well being of the coast by linking people, information, and technology. Both of these programs are participating in the Community Federal Information Partnership (C/FIP) for FY 2000. These offices fully support the goals of the Community Federal Information Partnership and have been focused resources to achieve the mission objectives, consistent with the intent of C/FIP, for several years.

Specific NOAA activities that support the C/FIP initiative in FY2000 will be:

- **Protected Areas Geographic Information System (PAGIS).** GIS implementation within every National Estuarine Research Reserve and National Marine Sanctuary. This project includes installation in 37 separate offices within 22 states and 2 territories.

- **Tijuana River Watershed Demonstration Project.** This project has been designated by the Federal Geographic Data Committee as an example of the National Spatial Data Infrastructure working at the bi-national level.
- **Metadata Training.** NOAA offers metadata training classes to a broad base of coastal constituents. All data sets created using federal funds must be documented using the FGDC metadata standard for data descriptions. The focus of FY 2000 activities will be on delivering training the trainers metadata curriculum.
- **Geographic Information Systems (GIS) Training**
NOAA provides GIS training classes to state and local project partners, other NOAA line offices, and internal staff. These training classes are designed specifically to meet the needs of the coastal resource management community. Courses offered are ESRI certified Introduction to ArcView® and Avenue® training as well as NOAA developed Intermediate ArcView® training.
- **Ocean Planning and Governance Geographic Information System (Ocean GIS).**
The Ocean GIS is a prototype on-line regional marine GIS, covering the ocean area of North Carolina, South Carolina, Georgia, and Florida, out to the exclusive economic zone. The Ocean GIS is being developed to provide coastal and ocean resource managers in the Southeast access to regional geographic data and mapping technologies to improve coordinated decision making and integrated ocean management.
- **Coastal Information Directory.** The Coastal Information Directory (CID) provides single query access via the Internet to a variety of descriptions of coastal data, products, and information from sources throughout the U.S.. All descriptions available through CID are compliant with federal metadata requirements and use the FGDC format for spatial data and the Machine Readable Code (MARC) for library items. As part of CID, CSC maintains an FGDC Clearinghouse node containing descriptions of CSC products and data. Recently, CSC has also become an FGDC Clearinghouse Gateway, providing access to the Clearinghouse for users in the southeastern U.S.

Community/Federal Information Partnership Participation

Participating Bureaus: U.S. Geological Survey, Bureau of Land Management

U.S. Geological Survey

The U.S. Geological Survey (USGS) works with state, local, and tribal governments, the private sector, and others to advance the capacity of communities to create and use geospatial data, and to improve the USGS's ability to provide spatially-referenced earth science information. The President's fiscal year 2000 budget includes an increase of \$10.0 million for the Community/Federal Information Partnership, of which two-thirds will be conducted through matching cooperative agreements and other mechanisms. This increase builds on current activities and base funds in the bureau's budget. The program will expand these activities:

- **Data:** The USGS will increase collaborative efforts with the public and private sectors to develop spatially referenced earth and biological science data. Rapidly expanding interest in these data provides opportunities to leverage Federal data investments, resulting in increased and more current data coverage for both communities and Federal agencies. Cooperative development of common geographic data also aids collaborative decisionmaking for issues of interest to both communities and Federal agencies, and helps to bring Federal scientific data and expertise to bear on issues faced by communities. The Community/Federal Information Partnership provides resources needed to spur these cooperative efforts to develop these data and to improve the compatibility of data. The emphasis will be on geographic orthoimage, elevation, and hydrography data, biological data needed for land management, and surficial geologic data. In addition, USGS will work with others to develop and test standards for spatially referenced geologic and water data. These standards will increase the benefits of future investments by ensuring that data can be combined and reused by many organizations and for many applications.
- **Access:** Spatially referenced data held by the USGS can aid decisions regarding economic, social, and environmental issues facing the Nation. The fiscal year 2000 budget increase will improve access to these data through the use of advanced Internet-based technologies and participation in the National Geospatial Data Clearinghouse. Communities, government, industry, and the public will be able to conduct Internet-based search, retrieval, and display of spatially referenced biologic, geographic, geologic, and remotely sensed data.

Bureau of Land Management

The Bureau of Land Management (BLM) FY 2000 budget includes \$2.0 million for the Community/Federal Information Partnership. Of the \$2 million that is requested, \$1 million is to

match investments by other Federal and nonfederal organizations for spatial data. BLM estimates that over \$2 million can be leveraged from state and local governments with this money. As a result, the BLM will be able to increase data coverage, currentness, and compatibility with less time and money through collaborative data development efforts. The second \$1 million is to integrate BLM information with data from other sources to produce common data solutions. The BLM estimates that it could leverage over \$1 million from other agencies and local governments to develop common coordinates where differences exist.

- Data developed and held by the BLM as well as other organizations contain information that supports better decision making about economic, social, and environmental issues on public and private lands. Unfortunately, this data often differs between organizations resulting in the distribution of conflicting information to our public as well as decision makers. The BLM will benefit from C/FIP funding by participating in NSDI efforts that support common data solutions across organizations. BLM will educate its program professionals on Geographic Information and the NSDI, and thereby move toward data that is integrated with other sources and available in a consistent format for decision making and commerce. The BLM, with other federal agencies and state and local governments, will develop a common foundation of information to support decision making across government agencies, reducing potential conflicts and delays.

Community/Federal Information Partnership Participation

The Federal Highway Administration (FHWA) requests \$6 million in FY 2000 to provide incentives for state and local governments to create geospatial databases depicting their transportation infrastructure and to make those databases available for use by the general public.

- The Bureau of Transportation Statistics (BTS) is the designated lead agency within the Department of Transportation for coordination of geospatial data related to ground transportation infrastructure, including roads, railroads, transit guideways, etc. Ground transportation is one of the seven critical geospatial data themes that comprise the framework layer of the NSDI. Transportation features are also among the most dynamic of the framework themes (e.g., new road construction, realignments, rail abandonments), and therefore require greater input from local sources to remain current. While many local agencies are developing geospatial databases for their own use, additional incentives are needed to encourage them to make their databases available to other organizations using national standards for data formats and documentation. The Bureau of Transportation Statistics (BTS) will carry out the work for this initiative via reimbursement from FHWA.
- The program consists of two integrated components. The first is a competitive matching grant program with state and local agencies for collecting, maintaining, documenting, and disseminating geo-spatial databases of transportation features that meet NSDI standards. The second part expands BTS's current NSDI standards development and spatial data clearinghouse activities to integrate locally collected data into a consistent national transportation framework layer, in coordination with the U.S. Geological Survey and the Bureau of the Census.

Community/Federal Information Partnership Participation

The \$2.5 million in FY2000 for the EPA under the Community/Federal Information Partnership initiative will go toward EPA regions, states, communities and other stakeholders to provide access, improvement and development of geographic information technologies and associated spatial data. These efforts will improve EPA's ability to meet mission needs.

- The EPA will take a step forward in our data integration endeavors through improved spatial data documentation, access, and increased use of spatial analysis tools. This improved data integration will help support environmental justice, community based environmental protection and risk-based targeting for environmental management. These efforts will improve data sharing between stakeholders, states and local communities, and EPA organizations, be they regions, labs, or headquarter program elements.
- The EPA will enhance and support opportunities for information and technology exchange necessary for sound environmental management. Spatial data and technologies will aid environmental planning. Coordination between federal agencies in environmental management will leverage funds used for spatial data discovery, open spatial data access, and foster spatial data production. These data will be documented and produced according to emerging FGDC standards.
- The EPA will improve public access and understanding of environmental information through the use of geographic data. This involves the coordinated development of spatial analysis tools and data for web deployment. These tools will assist environmental groups and citizens to better understand the impact of environmental programs and conditions both in small communities and in larger geographic areas such as cities and states.

Community/Federal Information Partnership Participation

At the Department of Housing and Urban Development (HUD) the \$2 million proposed under the fiscal year 2000 Community/Federal Information Partnership initiative will be used to work with State and local government agencies, the private sector, and others in the development of partnerships to break down the barriers to the effective use of the nation's geospatial data resources to improve the nation's communities.

- Citizens and local governments will be better able to develop Plans and Strategies on a sound and comprehensible information base, a shared understanding of the scope and magnitude of the problems they face, and the resources and opportunities potentially available to them.
- Collaboration will increase the effectiveness of federal data for community use. HUD sees economic development opportunities by promoting the application of geographic information systems and information databases to advance local agendas for economic development. HUD is aware of the opportunity to use geographic information systems and information databases to help those involved in disaster prevention, mitigation and relief. HUD shares environmental justice functions, prevention of environmental disaster, remediation of contaminated buildings and sites with other agencies--another opportunity to use geographic information. The impact of crime and drug abuse permeates all sectors of city and community enterprise; HUD is partnering with other Federal agencies to develop data sets and use geographic information to address crime related issues.
- HUD will extend the Community 2020 GIS software into the administrative framework of additional HUD Programs. This common approach among HUD's programs will help enable HUD's clients to benefit from improvements to the Community 2020. The use of the Community 2020 software is basic to the way the participating communities prepare and submit their applications to HUD.

Community/Federal Information Partnership Participation

Participating Bureaus: Natural Resources Conservation Service (NRCS)

NRCS conservationists spend most of their time on agricultural land- cropland, pasture, and rangeland - the predominant use of private lands in this country. They work in close cooperation with conservation districts through field offices that serve nearly every county in the nation. The agency emphasizes voluntary, science-based assistance, partnerships, and cooperative problem solving at the community level. The \$5 million proposed by NRCS under the fiscal year 2000 Community/Federal Information Partnership initiative will be used to:

- Improve collaborative efforts to work with local governments to develop geospatial data that aid and facilitate the development of conservation plans, resource inventories, and soil surveys. NRCS will use cooperative agreements with state and county governments to foster the development of geospatial data layers such as hydrography, roads, soils, watershed boundaries, county boundaries, incorporated cities, minor civil divisions, and public land survey, at the digital orthophoto quad level of resolution or better.
- Improve collaborative efforts to disseminate local geospatial data using FGDC developed procedures of metadata and clearinghouse. NRCS will assist states and counties in establishing an Internet web-server in compliance with FGDC clearinghouse and metadata standards. This will provide locally produced geospatial data to the USDA Service Centers and to the public on a public access server.
- Improve capability to administer local cooperative agreements for geospatial data as well as develop metadata for internal geospatial data development for such data as soils, plants, climates and watersheds. NRCS has offices in over 2500 counties in the country with authority to enter in to and administer cooperative agreements at the state and county level. To administer these new geospatial data agreements, relevant NRCS offices will have a GIS specialist to coordinate with other federal agencies, state, and local partners, develop the cooperative agreements, and monitor progress.