1.0 Background

1.1 What is the National Spatial Data Infrastructure (NSDI)?

Presidential Executive Order 12906 defines the NSDI as "the technology, policies, standards, and human resources necessary to acquire, process, store, distribute, and improve utilization of geospatial data."

As detailed in Office of Management and Budget (OMB) Circular A-16, the NSDI "assures that spatial data from multiple sources (federal, state, local, and tribal governments, academia, and the private sector) are available and easily integrated to enhance the understanding of our physical and cultural world."[1] The Federal Geographic Data Committee (FGDC) is designated as the coordinating entity responsible for developing and implementing national strategies to advance the goals of the NSDI.

1.2 Background on the FGDC/NSDI Future Directions Planning Activity

The purpose of the National Spatial Data Infrastructure (NSDI) Future Directions Initiative was *to craft a national geospatial strategy and implementation plan to further the development of the NSDI*. Drawing on the collective insights and contributions of the geospatial community at-large, the following overarching action areas emerged.

1.2.1 *Forging Partnerships with Purpose: A governance structure that includes representatives of all stakeholder groups guides the development of the NSDI.*

The NSDI cannot be maintained and enhanced by a single organization. A well-coordinated, concerted effort inclusive of the private sector, academia and all levels of government led by the Federal Geographic Data Committee (FGDC), is needed to leverage resources, minimize redundancies and collaboratively solve problems to achieve the NSDI vision. A governance structure that fosters collaboration and shared responsibilities among stakeholders is critical to ensure success of this effort. Essential elements for achieving the objectives are a bottom-up approach and partnerships forged to achieve a common goal.

1.2.2 *Making Framework[2] Real: Nationally coordinated programs that include collection, documentation, access, and utilization of data are in place for generating framework data themes.*

Standardization of framework themes is critical to the achievement of interoperability among diverse geospatial data suppliers and users. The national acceptance and

[1]The revised version of OMB Circular A-16 is available at http://www.whitehouse.gov/omb/circulars/a016/a016_rev.html#4#4

[2] Framework data themes: The most commonly used set of base geographic data - specifically geodetic control, orthoimagery, elevation and bathymetry, transportation, hydrography, cadastral, and government units.

utilization of American National Standards (ANSI) for framework data themes is the first step toward interoperability. Expansion of the current framework layers to encompass more themes of national, regional, local or topical importance is an FGDC priority.

1.2.3 ***Communicating the Message: The NSDI is recognized across the nation as the primary mechanism for assuring access to reliable geospatial data.***

The geospatial community must be able to communicate the benefits and value of the NSDI beyond the current user and supplier communities. The development of the business case, a strategic communications plan and training programs that support NSDI implementation will contribute to reaching this goal.

2.0 Purpose of this Action Plan

2.1 The desired outcome of this effort is that **"By 2006, fifty state Coordinating Councils are in place and routinely contributing to the governance of the NSDI."** This activity is the fourth objective of "Forging Partnerships with Purpose: *A governance structure that includes representatives of all stakeholder groups guides the development of the NSDI*."

As noted in Section 1.2.1, it will not be possible to build the NSDI without taking advantage of the day-to-day efforts of all levels of government[3]. This will require that effective statewide coordination[4] mechanisms be put in place. This document describes the coordination criteria that must be in place, the characteristics of an effective statewide coordination council or office, the geospatial coordination activities that must be conducted, and the benchmarks for measuring state participation in the NSDI. It also recommends strategies to the FGDC and all Federal agencies on ways they can assist the implementation of effective statewide coordination activities.

2.2 The FGDC requested that NSGIC take the lead on this objective since it represents the national "voice" of state coordination activities as they relate to geospatial technologies. A work group including federal, state and local representatives was formed to develop this action plan (see Appendix A)

2.3 Although the stated objective is "By 2006, fifty state coordinating councils are in place and routinely contributing to the governance of the NSDI," the goal had to be expanded to include the contributions to, or development of the NSDI. This expansion was required to ensure that a positive outcome is achieved. It is not enough to ensure

[3] For the purposes of this document, the definition of "all levels of government" includes tribal, state, regional and local government, including Washington, D.C. and the recognized territories of the United States.
[4] The term "statewide coordination" applies to each of the fifty states, each of the recognized territories, and Washington, D.C. Statewide coordination efforts must be inclusive of all user groups as delineated in Section 3.1.3.1.

that all states are involved in the governance of the NSDI. Their involvement must result in tangible improvements to the NSDI that can be measured.

2.4 This Action Plan was created under a relatively severe time constraint. Although the work group believes that this document is comprehensive and represents the best available information, it should be considered as a "living" document that can be subsequently edited and modified by the individual(s) that are responsible for its implementation.

3.0 Proposed Strategy

3.1 NSGIC has already defined an appropriate model for statewide coordination criteria and completed a self-rating survey of the states to serve as a benchmark. This document expands that model to include the characteristics of an effective statewide coordination council/office and the activities that must be pursued by these groups to ensure their contributions to the NSDI are meaningful.

The challenge we face is bringing consistency and parity to all fifty states. This will require buy-in from top elected and appointed officials in state, local and tribal governments, by using strategies that aggressively engage these officials to relate, in ways they will identify with, the importance of geospatial technologies to the delivery of citizen services. The entire geospatial community must also be able to "buy-in" to the strategies being developed and be willing to help support their implementation.

3.1.1 The work group proposes that FGDC adopt the following characteristics and activities as the model for statewide geospatial coordination activities and contribution to the NSDI.

3.1.2 Establish a benchmark for statewide coordination activities. As noted, NSGIC has published the following nine criteria (3.1.2.1 through 3.1.2.9) that its members believe are essential for effective statewide coordination of geospatial technologies.

> **3.1.2.1** A full-time, paid coordinator position is designated and has the authority to implement the state's business and strategic plans.
>
> Explanation: Many states have created one or more full time positions to oversee coordination of geospatial technologies. These individuals are responsible for implementing the state's business plan and are typically assigned to the Governor's Office, Chief Information Officer, Budget Department, or the Technology Office. In some states, these duties fall on a volunteer and in others, no one is willing to assume this role. It is presumed that having a full-time paid individual is advantageous and that a significant portion of their energy is channeled into on-going statewide coordination council activities.

3.1.2.2 A clearly defined authority exists for statewide coordination of geospatial information technologies and data production.

Explanation: A responsible individual or group has been designated in many states through executive orders, budget authorizations, or legislation. These individuals, or groups, are usually better able to deal with difficult coordination issues since they are empowered to perform this function. In other cases, "all volunteer" efforts are very effective at coordinating statewide activities through consensus building. In some instances, these groups are recognized as a "clearly defined authority" although they have no specific powers.

3.1.2.3 The statewide coordination office has a formal relationship with the state's Chief Information Officer (or similar office).

Explanation: Geospatial technologies are clearly a component of any state's information technology architecture, but they are not always viewed as such by "old school" IT leaders. A close relationship with the state CIO is essential to move major geospatial technology initiatives forward.

3.1.2.4 A champion (politician or executive decision-maker) is aware and involved in the process of coordination.

Explanation: A visionary political champion who understands geospatial technologies is a valuable ally that can help obtain recognition and funding to support new initiatives. Without a strong political champion, new initiatives often fail.

3.1.2.5 Responsibilities for developing the National Spatial Data Infrastructure and a State Clearinghouse are assigned.

Explanation: The responsibility for the component pieces of the NSDI should be assigned to appropriate staff and agencies to ensure that stewards are identified, and to prevent duplication of effort. Assignment of responsibilities should happen in advance of actual need to ensure that the appropriate activities are appropriately planned and incorporated into the state's business plan.

3.1.2.6 The ability exists to work and coordinate with local governments, academia, and the private sector.

Explanation: Each state must have the capability to routinely meet and coordinate with all other sectors. Safeguards should be developed to ensure that the needs of other sectors can be incorporated through consensus building activities.

3.1.2.7 Sustainable funding sources exist to meet projected needs.

Explanation: Sustainable funding is the foundation of effective partnerships. Data production tends to be the highest component cost for implementation of geospatial technologies and most users have requirements for continuous updating of data layers that requires a steady fund source. Effective consortia can only be established when each of the players brings something to the partnership and non-lapsing funds help stabilize partnerships.

3.1.2.8 Coordinators have the authority to enter into contracts and become capable of receiving and expending funds.

Explanation: To be effective, individual state GIS coordinators or the agencies identified as the stewards for the component pieces of the NSDI must be able to readily contract for software, systems integration, training, and data production costs. Often partnerships can be "brokered" to capture end-of-year funds when contracting mechanisms are already in place.

3.1.2.9 The Federal government works through the statewide coordinating authority.

Explanation: It is essential that Federal agencies use statewide GIS Coordination offices and councils as a type of "clearinghouse" to make sure that grant opportunities are being used wisely to implement the business plans of the states. Going through the coordination offices and councils will also help to minimize duplications of effort.

3.1.3 Coordination Council Characteristics. In addition to the Coordination Criteria, the work group believes that a more consistent system of statewide councils (or "authorities") should be established that incorporate the following characteristics:

3.1.3.1 Provides a mechanism for broad representation and inclusion in decision-making of user communities, including Federal, state, county, municipal and tribal governments; private sector GIS users and vendors; academic sector; non-profit organizations; utilities; and the general public.

3.1.3.2 A Strategic Plan that incorporates a vision statement, with appropriate goals and objectives related to implementing the NSDI.

3.1.3.3 A Business and Marketing Plan that details the development of a geospatial technology infrastructure (including data) to mirror the definition of the NSDI in Section 1.0.

3.1.3.4 Formal authorization establishing the council along with appropriate bylaws.

3.1.3.5 A relationship and linkage with the nine coordination criteria (3.1.2.1 through 3.1.2.9) to feed consensus based decision-making into official statewide initiatives.

3.1.3.6 Funding and support to enable the operation.

3.1.4 Coordination Council/Office activities for statewide participation in, and contribution to the NSDI. The Strategy Work Group offers the following list of activities that can be used to measure the successful implementation of the NSDI by state coordination councils/offices.

3.1.4.1 Local, state, tribal and federal agencies have data sharing agreements in place unless they routinely provide data in the public domain.

3.1.4.2 A published list of local, state, tribal and federal data stewards/integrators for each of the framework layers is available.

3.1.4.3 Local, state and tribal framework data are being posted to the statewide clearinghouse or otherwise being made available through OGC interfaces.

3.1.4.4 Local, state and tribal data producers create metadata for data holdings and post it to the GOS Portal

3.1.4.5 A functioning clearinghouse or appropriate inventory tool is available to all interested sectors in a state

3.1.4.6 Local, state and tribal agencies participate in *The National Map*

3.1.4.7 Local, state and tribal agencies adopt and incorporate OGC standards.

3.1.5 Develop promotional materials aimed at elected and appointed officials that describe the tangible values associated with statewide participation in the NSDI. The Strategy Work Group suggests that effective promotional materials be developed and that their distribution be approved by NSGIC and FGDC. Target audiences will include the National League of Cities, National Association of Counties, National Association of State CIO's, National Conference of State Legislatures, National Governor's Association, and Western Governor's Association. The suggested materials include:

3.1.5.1 "Classic" public relation materials that highlight the value of improved coordination. These materials must immediately attract interest and can be consumed within 30 seconds or less.

3.1.5.2 Professional video, print and web-based materials that distill the essence of technical (e.g. architecture) and coordination issues (e.g. data consortia) to show their importance to government and how funds will be saved by organized and integrated approaches.

3.1.5.3 Printed and web-based materials that highlight service improvements and cost savings from showcase applications.

3.1.6 Engage statewide coordination councils, appointed and elected officials, and other organizations to deliver the message. The Strategy Work Group recommends a list of proposed outreach activities between the FGDC, NSGIC, and the national associations listed in 3.1.5.

3.1.6.1 Representatives of the listed organizations should meet at least once per year to strategize on the "Fifty States Initiative." (Suggest the NSGIC mid-year meeting as the appropriate venue.)

3.1.6.2 Representatives of the listed organizations should be made available for "cross fertilization" by giving presentations at conferences and business meetings.

3.1.6.3 Federal grant announcements should be conditioned on participation in the "Fifty States Initiative." Reminder letters emphasizing that grant activities require adherence to these characteristics should be routinely sent by granting agencies. In addition, Federal agencies should require a letter of support from state coordination councils for all grants involving geospatial information technologies or development of the NSDI, other than research activities.

3.1.6.4 NSGIC and appropriate Federal agencies will actively engage and send letters of support to the organizations listed in 3.1.5 that will invoke actions by their respective memberships such as the issuance of resolutions.

3.1.6.5 Letters offering support from "targeted" Federal agencies (e.g. DHS, EPA and Interior) and NSGIC should be sent to each Governor and CIO requesting full participation in the "Fifty States Initiative."

3.1.6.6 The FGDC should replace previous cooperating partner agreements with new agreements (cooperating partners) based on states that are conforming to these initiatives.

3.1.6.7 New cooperating partners should be invited to regular meetings to help implement the new governance structure of the NSDI.

3.1.6.8 NSGIC and the FGDC should advocate that the "Fifty States Initiative" activities be included in the Digital States Survey conducted by the Center for Digital Government.

3.1.7 Recommend strategies to the FGDC and all Federal agencies on ways they can assist the implementation of effective statewide coordination activities. Many Federal geospatial mapping and grant programs are designed for quick success by "picking the low hanging fruit." However, a viable NSDI can only be constructed on a solid foundation. Long-term strategies must be in place to promote incremental

development of the NSDI using available Federal resources to assist all levels of government. The Strategy Work Group recommends that Federal agencies should establish assistance programs to meet **targeted** state and local needs. As a starting point, The National Map Partnership Project[5] has collected information on impediments and incentives reported by the states regarding participation in The National Map (Appendix B and C). They can logically be extrapolated to the entire NSDI. The FGDC should coordinate the grant programs of its member Federal agencies to target assistance programs that are appropriate for each statewide coordination council.

3.1.8 Measure the improvement of statewide coordination activities against the established benchmark. As noted, NSGIC conducted the "benchmark" survey in Appendix D during 2003/04 to measure the nationwide status of statewide coordination activities.

3.1.9 Measure the improvement of statewide participation in, and contribution to the NSDI. The Strategy Work Group recommends the following benchmark measures for participation and contribution by local, state and tribal governments in the NSDI.

3.1.9.1 Percentage of the extents for which framework data meeting national standards are available through the clearinghouse, The National Map, or other OGC interface by local, state and tribal governments.

3.1.9.2 Business plans are available that detail the funding levels required for coordination and clearinghouse activities as well as initial data production and data maintenance.

3.1.9.3 The number of Cooperating Partner Agreements based on the suggested Fifty States characteristics and activities.

3.1.9.4 The number of steward/integrator agreements that are being signed.

3.1.9.5 State Clearinghouse Measures, including absence or presence, incorporation of OGC protocols, ease of use, and other factors.

3.1.9.6 Measures that demonstrate local and tribal government participation in statewide coordination council activities (e.g. what percentage of the counties they have agreements with, or are using data from or supplying data to the state clearinghouse).

[5] For further information on the Partnership Project go to: http://geography.usgs.gov/nsgic-naco-usgs/partnership/

4.0 The "Costs" to Implement this Action Plan

4.1 Implementation of this action plan will require direct and indirect expenses that should be fully understood and acknowledged prior to implementation. This section attempts to provide a qualitative overview of those expenses which include a variety of staff actions by Federal agencies and NSGIC that are in addition to recommended public relations materials that will be critical to successful implementation of the plan. The expected costs are broken-out by category in the following sections.

4.2 Full implementation and staffing of the NSDI Partnership Offices by USGS – The Work Group believes that essential components of the Action Plan will require the presence of NSDI PO staff (USGS State Liaisons) that are working locally in each state. These staff must help facilitate the implementation of functioning statewide coordinating councils and work with them to develop strategic and business plans. This activity will have additional costs identified below.

> **4.2.1** NSDI PO staff should be base funded to ensure they are available to work with the local community.
>
> **4.2.2** States should be willing to provide NSDI PO staff with office space, computer and clerical support where needed and appropriate.
>
> **4.2.3** NSDI PO staff must have an appropriate travel budget to conduct in-state business, meet with headquarters and regional office executives, and to attend recognized GIS coordination meetings such as the NSGIC annual and mid-year meetings. These travel costs will be variable depending on the size and location of each state.
>
> **4.2.4** NSDI PO staff must be provided with a modest operating budget so they can partner with statewide coordination councils on small initiatives that advance the NSDI.

4.3 NGPO and NSGIC staff must be provided with adequate time and support to engage in all relevant activities, but particularly those activities identified in Section 3.1.6 of the Action Plan. In addition, NGPO and NSGIC staff will likely be engaged in the performance measurement activities identified in Section 3.1.9 of the Action Plan.

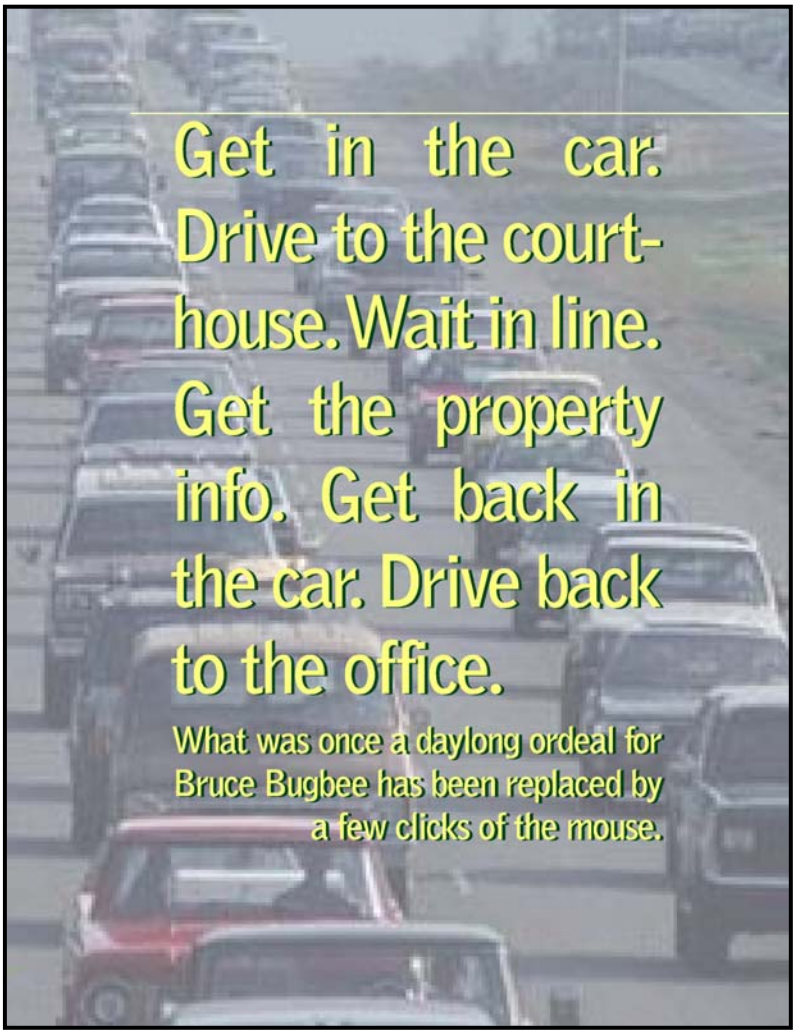
4.4 The Work Group identified a need for a new category of CAP or other grant to assist state and local governments with implementing coordination activities, and for strategic and business planning in particular.

> **4.4.1** The Work Group discussed and recommends an additional alternative to CAP grants that would substitute the use of regional FGDC-hired contractors that would work directly with NSDI PO and state coordination councils to develop their strategic and business plans.

4.5 The Work Group recommends that the public relations materials specified in the Action Plan should be developed by a professional communications firm working in concert with NSDI PO staff; NSGIC state representatives; and tribal and local government staff.

4.5.1 Due to the diversity of materials required (web, print & video), a minimum of $50,000 dollars should be allocated to this activity.

4.5.2 All public relations materials envisioned as part of the Fifty States Initiative must be able to relate a specific message on the value of GIS and statewide coordination to the user (government executives) within 30 seconds. These materials must also evoke a response by the intended recipients to support the Fifty States Initiative. The following example comes from a recent Montana Coordination Council publication.



Appendix A – Participants Involved in Drafting this Action Plan

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Gene Trobia	State of Arizona
Larry Zink	State of Nebraska

Appendix B - Survey on Impediments to Participation in The National Map Program

9/30/2004 1 = Highly Agree 2 = Somewhat Agree 3 = No Opinion 4 = Somewhat Disagree 5 = Highly Disagree

Jurisdiction	Lack USGS Coordination	No USGS Staff in Local Community	Not Enough Staff	No Time to Coordinate	Statewide Coordination Efforts Need Improvement	No Buy-in from State Coordination Council	No Incentives to do the Extra Work	No Budget	Don't Need Web Mapping Service	Lack Technical Expertise	Need Broadband Internet Service	Don't Have Data to Share	Data Policies Prevent Sharing	Data Format and Management Issues	Legal Issues	Homeland Security Concerns	Use Non-OGC Software
Alabama	4	4	2	3	1	3	1	1	5	5	5	5	5	5	5	5	5
Alaska	5	5	4	4	2	2	2	1	5	5	4	5	5	1	5	5	1
Arizona	4	4	2	2	2	2	2	2	5	4	2	4	1	1	1	3	4
Arkansas	4	4	1	1	2	4	2	1	4	4	2	4	5	4	5	5	5
California	4	4	1	2	1	1	2	1	4	4	5	4	2	3	3	3	5
Colorado	5	5	2	4	1	3	5	1	5	4	5	5	3	2	2	2	3
Connecticut	2	1	1	1	1	1	1	1	5	4	5	5	2	2	3	4	4
Delaware	4	4	2	1	1	4	2	1	5	4	5	5	4	4	3	2	4
D.C.																	
Florida																	
Georgia	2	3	2	2	2	2	2	2	5	5	5	5	4	3	3	4	4
Hawaii	5	5	2	3	4	5	4	1	4	2	5	2	4	4	4	2	3
Idaho	5	5	2	3	2	4	4	2	5	4	4	5	2	3	3	5	5
Illinois	2	2	1	2	1	1	1	1	5	2	5	5	2	4	4	4	2
Indiana	3	3	3	2	2	5	3	3	2	2	5	2	2	2	2	2	1
Iowa	2	4	1	1	1	2	1	1	4	4	5	5	4	3	3	3	3
Kansas	5	5	4	4	5	5	4	4	5	5	5	5	5	5	5	5	5
Kentucky																	
Louisiana	2	5	2	4	2	2	1	2	5	5	5	5	4	5	4	4	4
Maine	5	3	2	2	4	3	2	2	5	5	5	5	4	2	3	3	5
Maryland	2	2	2	1	1	1	1	1	5	2	2	3	1	1	2	2	3
Massachusetts	2	1	3	2	2	2	1	2	4	5	4	5	3	4	4	2	4
Michigan	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Minnesota	4	5	2	2	2	4	1	2	5	5	5	5	4	2	2	4	4
Mississippi	2	2	2	4	2	1	1	1	5	2	3	4	2	2	1	2	2
Missouri	3	2	2	4	3	4	2	1	5	3	3	5	2	3	4	3	4
Montana	5	5	3	3	3	4	3	3	5	4	5	5	5	3	4	4	4
Nebraska	4	3	1	2	4	3	2	1	5	5	5	5	4	3	3	3	4
Nevada	5	1	2	1	2	2	3	1	4	3	5	4	3	3	3	2	3
New Hampshire	4	4	1	2	1	4	3	2	5	4	5	5	4	3	5	5	5
New Jersey	1	2	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5

New Mexico	4	4	2	2	4	2	2	1	5	4	2	5	5	4	3	3	5
New York	2	1	2	3	4	1	1	1	4	4	5	5	1	4	1	1	4
North Carolina	5	5	1	4	5	5	5	1	5	2	2	5	2	4	4	4	4
North Dakota	4	4	2	2	2	4	4	2	5	4	5	5	4	4	4	4	5
Ohio	5	4	2	2	4	5	4	2	5	4	5	5	5	2	4	3	4
Oklahoma	4	5	1	1	2	4	2	2	4	2	5	2	4	2	4	4	4
Oregon	2	4	2	2	4	2	2	2	4	4	4	5	2	2	2	5	5
Pennsylvania	1	5	1	1	1	4	1	2	5	2	5	5	2	2	2	4	5
Rhode Island	3	2	1	1	2	2	2	1	5	4	4	5	4	4	4	2	5
South Carolina	2	5	2	2	1	2	3	2	4	4	5	4	2	3	2	3	4
South Dakota	3	3	1	2	2	3	2	1	5	4	5	5	3	3	3	3	3
Tennessee	1	4	4	2	5	3	1	1	3	3	2	5	4	5	4	4	4
Texas	2	4	1	1	1	2	1	1	5	4	4	5	4	4	4	2	4
Utah	5	5	2	2	2	5	4	5	5	5	4	5	5	4	2	2	5
Vermont	3	2	3	3	2	2	3	2	5	5	5	5	5	5	5	2	5
Virginia	3	3	3	3	3	3	1	3	3	3	3	3	3	3	3	3	3
Washington 1	4	5	2	2	2	2	1	2	5	4	5	5	2	2	2	4	4
Washington 2	5	5	1	1	2	5	2	2	4	4	5	5	5	4	4	5	5
West Virginia 1	2	4	2	1	2	2	2	2	5	2	5	5	4	4	4	2	5
West Virginia 2	2	4	2	2	2	2	2	4	5	1	4	5	4	4	4	2	4
Wisconsin	2	2	1	2	2	2	2	4	5	5	5	5	5	2	2	4	4
Wyoming	3	4	1	1	2	3	3	1	5	4	5	5	5	3	3	3	3
United States	3.3	3.6	2.0	2.2	2.4	2.9	2.3	1.9	4.6	3.7	4.3	4.6	3.5	3.2	3.3	3.3	4.0

Appendix C - Survey on Incentives Required to Increase Participation in the National Map

9/30/2004 1 = Highly Agree 2 = Somewhat Agree 3 = No Opinion 4 = Somewhat Disagree 5 = Highly Disagree

Jurisdiction	Federal Contact	Funding	Data Partnerships	Training on The National Map Technical Issues	Training on Applications Development	Other Training	Help Installing Systems	Broadband Internet Service	Subsidy for Hardware	Subsidy for Software	Additional Staff	Improved State Coordination	Improved Coordination with USGS	Political Help or Support in Outreach
Alabama	1	1	1	2	4	2	5	5	2	2	1	1	2	1
Alaska	1	1	2	2	1	4	4	4	4	4	1	2	2	4
Arizona	2	1	1	1	1	2	1	1	1	1	2	1	1	1
Arkansas	2	2	1	2	3	3	4	4	2	2	1	1	1	1
California	3	1	2	2	3	3	4	5	4	4	1	1	2	1
Colorado	1	1	1	1	1	1	1	3	1	1	1	1	1	1
Connecticut	1	1	1	1	1	2	2	5	4	4	1	1	2	1
Delaware	1	2	2	2	2	3	4	3	2	2	1	1	1	1
D.C.														
Florida														
Georgia	1	1	1	2	2	2	2	4	4	2	2	2	2	2
Hawaii	2	1	2	2	2	2	3	5	4	4	1	4	4	1
Idaho	1	1	1	1	1	1	3	3	2	2	2	2	3	1
Illinois	1	1	1	1	1	1	2	5	2	2	1	1	1	1
Indiana	3	2	1	2	2	3	2	5	3	3	2	2	3	1
Iowa	2	1	1	1	1	3	3	5	2	2	1	1	2	1
Kansas	2	2	2	2	2	2	2	5	5	5	2	2	3	2
Kentucky														
Louisiana	1	1	1	2	2	2	5	5	5	5	2	1	1	2
Maine	2	1	1	4	4	3	4	5	2	2	2	4	5	2
Maryland	1	1	1	1	1	2	1	3	2	2	2	1	1	1
Massachusetts	3	1	1	4	3	3	4	4	1	4	2	1	1	1
Michigan	3	1	1	1	1	3	3	1	1	1	3	2	3	2
Minnesota	2	1	2	4	4	4	4	4	2	2	2	3	4	4
Mississippi	2	1	1	1	1	1	1	2	1	1	1	1	1	1
Missouri	2	1	3	3	3	3	2	2	2	2	1	2	2	2
Montana	2	2	1	2	2	3	2	3	3	2	2	3	3	2
Nebraska	2	1	1	3	2	4	5	5	2	2	2	3	3	3
Nevada	2	1	2	2	2	3	3	3	2	2	1	2	2	1
New Hampshire	3	1	2	2	3	4	4	5	4	4	1	1	3	2
New Jersey	2	2	1	4	4	4	5	5	2	2	2	5	1	3
New Mexico	2	1	2	1	1	1	2	1	4	4	2	2	3	2
New York	1	1	1	2	2	3	4	5	5	5	1	4	1	2

North Carolina	1	1	1	2	1	3	1	1	4	2	1	4	5	2
North Dakota	2	2	1	2	3	3	3	3	4	4	2	2	2	2
Ohio	4	2	2	2	2	3	3	3	3	3	2	4	2	2
Oklahoma	2	1	1	2	2	3	3	4	4	4	1	1	2	2
Oregon	2	2	1	2	4	3	2	3	2	2	2	2	2	2
Pennsylvania	2	1	1	2	4	2	4	5	4	4	1	1	1	1
Rhode Island	3	1	3	2	2	2	3	4	4	4	1	3	2	2
South Carolina	3	1	2	2	2	3	3	3	3	2	2	1	2	2
South Dakota	2	1	2	2	2	3	3	3	2	2	1	2	2	2
Tennessee	4	1	1	3	4	3	3	4	4	4	3	5	2	1
Texas	1	1	1	1	1	3	2	5	5	5	2	2	2	2
Utah	1	1	1	2	2	2	4	1	2	2	1	2	2	4
Vermont	2	1	1	4	4	4	2	4	2	2	4	3	2	2
Virginia	5	2	2	5	5	5	5	5	4	4	4	5	3	5
Washington 1	4	1	2	2	2	3	2	4	1	1	2	2	2	2
Washington 2	2	1	1	3	3	3	4	5	2	2	1	2	4	2
West Virginia 1	4	1	1	2	2	2	1	5	2	4	1	2	2	1
West Virginia 2	4	1	1	1	1	2	1	3	2	2	1	2	2	1
Wisconsin	2	1	1	2	2	3	4	5	2	2	2	1	1	1
Wyoming	2	2	2	2	2	2	2	5	2	2	1	2	2	1
United States	2.1	1.2	1.4	2.1	2.2	2.7	2.9	3.8	2.8	2.7	1.6	2.1	2.2	1.8

Appendix D - NSGIC State Model for Coordination of Geographic Information Technologies - 2003/2004 Survey Results

States Grouped by the Number of Criteria Met	Paid Coordinator	Defined Authority	CIO Interest	Political Champion	NSDI Responsibilities Assigned	Local Coordination Capability	Sustainable Funding	Contractual Authority	Federal Interaction through Council
9 Criteria Met									
Kansas	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Michigan	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
New Jersey	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
New York	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Oregon	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Utah	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vermont	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Virginia	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Wisconsin	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
8 Criteria Met									
Arizona	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
Arkansas	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Indiana	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Kentucky	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Maine	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Minnesota	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Montana	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
North Carolina	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
South Dakota	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Tennessee	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Texas	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Washington	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
7 Criteria Met									
Delaware	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Idaho	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes
Missouri	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes

Ohio	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes
6 Criteria Met									
Georgia	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes
Hawaii	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes
Louisiana	No	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Massachusetts	Yes	Yes	Yes	Yes	No	Yes	No	Yes	No
North Dakota	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes
Pennsylvania	Yes	Yes	Yes	No	Yes	No	No	Yes	Yes
West Virginia	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes
5 Criteria Met									
Alaska	No	No	Yes	Yes	Yes	Yes	No	No	Yes
California	No	Yes	Yes	Yes	No	Yes	No	No	Yes
Iowa	Yes	No	No	No	Yes	Yes	No	Yes	Yes
Maryland	No	Yes	No	Yes	Yes	Yes	No	Yes	No
Mississippi	No	Yes	Yes	Yes	Yes	No	No	No	Yes
Nebraska	No	Yes	No	Yes	Yes	Yes	No	No	Yes
Wyoming	No	Yes	Yes	No	Yes	Yes	No	No	Yes
4 Criteria Met									
Illinois	No	Yes	Yes	Yes	Yes	No	No	No	No
New Hampshire	No	Yes	No	No	Yes	Yes	No	No	Yes
Rhode Island	Yes	Yes	Yes	No	No	Yes	No	No	No
3 Criteria Met									
Alabama	No	No	No	Yes	Yes	Yes	No	No	No
Nevada	No	No	No	Yes	No	Yes	No	No	Yes
2 Criteria Met									
Connecticut	No	No	No	No	No	Yes	No	No	Yes
New Mexico	No	No	No	No	Yes	Yes	No	No	No
Oklahoma	No	No	No	No	No	Yes	No	No	Yes
South Carolina	No	No	No	No	No	Yes	No	No	Yes
1 Criteria Met									
Colorado	No	No	No	No	Yes	No	No	No	No
No Criteria Met									
Florida	No	No	No	No	No	No	No	No	No