

Advancing the Fifty States Initiative



Measuring Progress of the Fifty States Initiative:

A Compilation of State Case Studies

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1 Introduction

As part of the Measuring Progress report and analysis that has been completed each year in support of the Fifty States Initiative program, narrative case studies have been prepared describing how states have benefited from the program. In 2010 and 2011, state case studies were initiated by a short presentation at the Fifty States Initiative workshop at the NSGIC midyear conference. These short presentations gave an overview of the project and highlighted the aspects that went smoothly as well as more challenging hurdles during the project. There has been consistent feedback from new grant recipients that the case studies provide valuable guidance to the strategic and business planning process for those just starting out.

The following is a compilation of 13 case studies developed for the 2009, 2010 and 2011 Measuring Progress reports. These case studies present the qualitative and subjective findings on how Fifty States CAP grants have impacted individual states and geospatial coordination within those states, and are republished in this document as a handy compendium.

These case studies clearly indicate that the States that received Fifty States CAP grants have realized many benefits for their geospatial programs based on these grants. Each state case study demonstrates positive outcomes resulting from Fifty States CAP grant funding, including desired organizational change and improved geospatial coordination from statewide strategic and business planning. Overall, this compendium of case studies describes how states are achieving results and making explicit progress toward advancing NSDI with the help of Fifty States Initiative.

2 State Case Studies

2.1 Arizona

Geographic Information Council (AGIC) GIS Strategic and Business Planning Project

2.1.1 Prior to Project

The use of Geographic Information Systems (GIS) and the presence of a community of geospatial data users go back more than 30 years in Arizona. The current Arizona Geographic Information Council (AGIC) started as a state-agency-centric organization in 1989, but it was not the first GIS organization in the state. Over the years, AGIC has achieved broader participation beyond state agencies, as evident from the diversity of the current AGIC executive and committee rosters, which include all levels of government and the university community.

An active and knowledgeable stakeholder community of GIS professionals exists across the state, involved in many different aspects of government and the economy. Expertise in the technology is a prerequisite for many jobs that depend on the availability of geospatial data. The productivity-related benefits of GIS are generally recognized in the professional community, and geospatial data is used in many jobs and business processes related to the generation of revenue and the delivery of services, such as taxation, utilities, permitting, public safety and many other daily operations.

Key GIS milestones in Arizona that preceded this project include the following selected items:

- **1980's**
 - Arizona Mapping Advisory Council (AZMAC) established by Executive Order 1982-10, by Governor Babbitt
 - Arizona Land Resource Information System (ALRIS) in 1982, and the State Cartographer's Office established under state statute, in 1989
 - AGIC formed to replace AZMAC by Executive Order 1989-24, by Governor Mofford

- **1990's**
 - Regional GIS consortia added to AGIC by Executive Order 1992-17, by Governor Symington
 - AGIC Strategic Plan developed in 1992
 - Administrative and Legal Recommendations
 - Data Resources Recommendations
 - Technology Recommendations
 - Education Recommendations
 - Information Exchange Recommendations
- **2000's**
 - State Homeland Security Strategy (SHSS) developed, 2003
 - AZ Map populates The National Map, c. 2005
 - AZ Geodata Portal developed, c.2005
 - FEMA grant received; Mapping Arizona document produced, 2005
 - Height Modernization undertaken, 2006
 - AZ3D initiative, 2008
 - FGDC grant received to assist Strategic and Business Planning
 - Senate Bill 1318 signed into law by Governor Brewer, 2009

2.1.2 Project Overview

The Arizona Geographic Information Council (AGIC) initiated this planning project to more effectively meet the geospatial needs and requirements of Arizona. AGIC applied for funding assistance through the Federal Geographic Data Committee (FGDC), as part of the Fifty States Initiative to advance the National Spatial Data Infrastructure (NSDI). In February 2009, Arizona was selected as a grant recipient, specifically to support Strategic and Business Planning for Geographic Information Systems (GIS). When Senate Bill 1318 (SB1318) was signed into law by Governor Brewer in July of 2009, it became a key focal point for the AGIC Steering Committee leading the planning process.

Outreach was conducted and input was collected from the diverse community of geospatial stakeholders throughout the state during 2009, including a series of Regional

Workshops held in Flagstaff, Kingman, Phoenix (Peoria), and Tucson. In addition, an online survey was conducted to gather input from GIS users and managers. Based on the input from the workshops and survey, preliminary findings and recommendations were compiled and presented at the Annual AGIC Conference, which was held in Tucson, in November 2009.

AGIC followed the methodology outlined in the Strategic Planning Guidelines produced for the Federal Geographic Data Committee (FGDC) Fifty States Initiative. A Steering Committee was formed to provide oversight and direction, and the members are acknowledged in the Foreword to this document. The following list includes the major milestones for the project:

- **June 2009:** Project Initiation Meeting
- **July 2009:** Project Initiation Report
- **July-Oct. 2009:** Online Survey
- **Sept-Oct. 2009:** Regional Workshops (Flagstaff, Kingman, Phoenix/Peoria, Tucson)
- **October 2009:** Preliminary Findings Summary Report
- **November 2009:** AGIC Annual Conference (Prelim. Findings and Additional Input)
- **December 2009:** Submit Draft Plans
- **January 2010:** Make Plan Revisions
- **February 2010:** Present Plans to AGIC Board
- **February 2010:** Plans Approved by AGIC Board

2.1.3 Project Outcomes

The project resulted in the development of strategic goals as part of the strategic planning effort, and a specific business plan to implement a statewide Clearinghouse. The goals were formulated to support the key requirements of Arizona Senate Bill 1318 (SB1318). They focus strategic efforts onto the creation, sharing, and governance of geospatial data and services that support the business drivers in Arizona, and enhance well-being and prosperity for all Arizonans. They also support the provisioning of reliable and accessible geospatial basemap data to support key statewide initiatives, including the Arizona Renewable Energy Project, AZ3D, and the Arizona Broadband Mapping Project.

The project also resulted in the alignment between the activities of the current AGIC committees and the goals of the plan. The leadership and membership of the current committees are key resources for enabling concerted action. AGIC committees were aligned with the overarching strategic goals, whereas the more granular programmatic goals varied by committee.

Arizona presented the following at the 2011 NSGIC Midyear Conference as “things that worked well”:

- The entire Arizona Geographic Information Council got involved in supporting the grant request and in creating a review committee to become involved in the project.
- SB1318, which facilitated data sharing in Arizona and established AGIC in legislation, was advanced and promoted. As SB1318 proceeded through the legislative process, changes were made to it based on findings from the Strategic Plan. SB1318 became law in September 2010 (ARS 37.171 - 178).
- Internal resources and expertise were lacking to conduct a strategic and business plan project, so AGIC obtained the services of highly knowledgeable and experienced consultants to provide guidance and expertise.

The following were identified as problems that were encountered:

- Geography made it difficult to hold enough workshops throughout the state to obtain input from all GIS stakeholders in Arizona and outreach efforts did not draw a crowd proportionate to the GIS activities in the Phoenix area.
- The burst of the housing bubble and large State budget deficits posed obstacles.
- The unexpected transition of Governor and replacement of most senior State executives was disruptive.

Successful results include the following:

- The planning process and the resulting strategic plan and goals helped to focus and prioritize the efforts of AGIC as a statewide body.
- The resulting business plan provided a “how to” guide for implementing a statewide Clearinghouse, to fulfill one of the key requirements of the legislation that became law (ARS 37-178) during the planning process.

2.2 Arkansas

Geospatial Strategic Business Plan: Arkansas Geographic Information Office (AGIO)

2.2.1 Prior to Project

Arkansas has had a rich history with GIS deployment by state government that dates back to the early 1990’s and President Bill Clinton’s governorship. Statewide governance is overseen by the Arkansas GIS Board and statewide data activity and coordination emanate out of the Arkansas Geographic Information Office (AGIO). Prior to 2009, the AGIO was located within the Department of Information Systems (DIS), but

in 2009 it was re-organized into its own, small, independent agency reporting directly into the Governor's office.

The AGIO currently has five full-time staff, which are supplemented by interns and contract workers who are dedicated to the administration of the streamlined sales tax program which funds their positions. The state's Geographic Information Officer, Shelby Johnson, directs the AGIO. Key activities and initiatives of the AGIO include:

- Management, maintenance and expansion of the statewide GeoStor database and clearinghouse. The GeoStor is widely used and the AGIO has formally trademarked the name to help build its brand.
- Administration of the Arkansas Centerline File (ACF) program. For the past 8 years the ACF program has been constructing a statewide road centerline file from the contributions of Arkansas's 75 counties. This database will be completed during the summer of 2010.
- Administration of the County Assessors Map Program (CAMP) that has been supporting county-based parcel development for the past decade. Initially, the AGIO has provided equipment, software and technical support to counties, but increasingly it's looking for means of providing financial support. This financial support included a "county parcel grant program" during the first half of 2010. As with ACF, AGIO staff members spend considerable time on-site providing direct technical support to county personnel to help build local capacity.
- Absent a recurring orthoimagery program, the AGIO has played point on organizing and orchestrating the three statewide flyovers that took place 2001 and 2006. AGIO work involved coordinating funding, performing contracting and quality control and publishing the final results through GeoStor. In addition, the AGIO publishes the 1994-1996 orthoimagery that was created before the agency was formed.

- The AGIO also plays a key role in ensuring that GIS technology and data are available and effectively used in supporting the governor’s priorities. Key issues where GIS has been deployed include economic development, public safety and emergency response and environmental protection and natural resource management. The AGIO’s role has included both supporting state agencies and working directly for the governor’s office, for example, in responding to emergency situations such as floods or tornados.

Perhaps the most beneficial aspect about Arkansas is that the AGIO has helped to build and foster an extremely strong “data sharing culture.” All public agencies and local governments freely share their data and recognize the value of doing so. Unlike some other states, the AGIO has not had to fight “data holdouts” and has been freed to continue promoting the free flow of data across the state.

2.2.2 Project Overview

The AGIO’s strategic planning project was squarely focused on their key challenge which is ensuring that there is an adequate and sustainable funding stream for framework data development and maintenance. In spite of the AGIO’s strong track record, they do not have *any funding* that is directed towards data development, maintenance and improvement. Rather, office operations and staff are funded and any data efforts are provided via staff labor (e.g., road data improvements come via AGIO staff working with counties). There are no funds available for updating orthoimagery or tackling new initiatives such as improving elevation data.

The overarching strategic goal of the Geospatial Strategic Plan was simple, direct, and focused on the funding challenge: To provide recurring funding for continual investment in, and improvement of the Arkansas Spatial Data Infrastructure.

Arkansas performed two distinct and complementary “stakeholder outreach” activities as part of their strategic planning process. First, there was directed outreach to inform

“key leaders” that were identified by the AGIO on the geospatial strategic planning process. Key leaders included the heads of industry trade organizations (e.g., the Arkansas Chamber of Commerce, the Arkansas Association of Counties, etc.), the heads of important state agencies (e.g. Arkansas Economic Development Commission, Arkansas Assessment Coordination Department, State Budget Director, etc.) and public officials such as legislators and county judges. In all, 17 key leaders were interviewed and informed of the strategic planning effort. Critically, the AGIO was thinking ahead to the support they would need to carry out the recommendations in the report. The key leader interviews were an investment in building that support.

Second, the AGIO performed a series of five, traditional “stakeholder information gathering” sessions around the state. In all, 165 people participated in these sessions and had an opportunity to hear about the strategic planning effort and offer their perspective, ideas and input to the effort.

Other project activities included writing the plan, building cost models for elements of the plan and then vetting the plan with the State GIS Board and other project participants. A key milestone was an hour long presentation at the Arkansas GIS Forum’s Bi-annual Conference held during the fall of 2009 in Eureka Springs. At that meeting the recommendations of the plan were presented to the full GIS stakeholder community and it was determined that there was broad consensus that this was an appropriate slate of recommendations and a reasonable approach.

The plan highlights that the State GIS Board and AGIO’s mission, as chartered in their enabling legislation, is explicitly to: “...coordinate *completion* and *maintenance* of shareable statewide framework data...” The plan then identifies that existing funding is not adequate to complete this mission. The plan goes on to identify the four *priority* framework themes identified by the GIS stakeholder community as needing the most

improvement. These are: orthophotography, parcels, road centerlines and political/administrative boundaries.

The plan finishes with a “mini-business plan” for each of these four layers. The mini business plan contains information on:

- Data set background
- What improvements to the data set are required
- The approach to make those improvements
- The costs to make the improvements
- The benefits that the state will realize from investing in the improvements

Overall, the plan proposes creating three new positions within the AGIO that are dedicated to framework data maintenance and calls for an annual funding increase of approximately \$1.5 million, with \$1.15 million of that being devoted to a recurring orthoimagery program. The plan proposes a one-time \$7.5 million investment to complete statewide parcels. This program is envisioned to be carried out over a 5-year term with the state providing 70% of the funding to counties that agree to pay the 30% balance. Thus, the Arkansas approach was to lay out the real costs of building and sustaining high quality framework data. While these funding levels are ambitious by state government “GIS standards,” they are well supported by the expected benefits that are outlined in the plan.

2.2.3 Project Outcomes

The AGIO has remained extremely proactive in putting the proposed plan of action in place and in early June, 2010 a series of high-level advocacy activities was initiated.

These included:

- Briefing the “key leaders” who were interviewed as part of the planning process on the findings and “next steps” during a luncheon meeting on June 8, 2010 sponsored by the GIS Users Forum.

- Briefing Governor Beebe’s Chief of Staff, Morril Harriman, on the plan contents and “next steps” during a one-on-one meeting on June 8, 2010. During the meeting Mr. Harriman relayed that the Governor supported the recommendations of the plan and instructed the AGIO to include the recommended funding as part of their “budget request” (without promising that the request could be funded).
- Providing a briefing on the plan and testimony before the Legislative Joint Advanced Communications and Information Technology sub-committee on June 9, 2010.
- Interestingly, in early June, 2010 the Geospatial Strategic Business Plan appeared in the popular press and associated blogs as part of a heated campaign for the statewide Land Commissioner’s office. Both candidate recognized the plan and sparred over elements of how it might be implemented, and what its true costs were. In spite of the controversy, the plan itself was never critiqued and one would conclude that both candidates supported the recommendations within the plan.

Arkansas presented the following at the 2010 NSGIC Midyear Conference as “things that worked well”:

- Stakeholder outreach and input were highly successful. Arkansans were engaged and participatory and the AGIO was successful in engaging senior leaders from the outset.
- The project was conducted in partnership with a contractor hired to help conduct the planning process with the AGIO being highly engaged. Ultimately, the combination of the AGIO’s sincere involvement tempered by the consultant’s “outside perspective”, were key to delivering an effective and objective plan.

- The AGIO had a game plan for what would be done with the plan *after* it was completed. This allowed advocacy to carry out the plan's recommendations to begin immediately following the publication of the plan. In addition, senior leaders were aware that the plan was coming and were expecting it.

No major problems were encountered in executing the planning process except, perhaps, the *timing of this initiative* on the heels of the significant economic downturn facing the country. Ultimately, the main recommendations were for further funding support and this came at a time when money was tighter than ever – in spite of Arkansas's prudent fiscal management which has dampened the overall impact of the economic situation on state government. In the event that full funding is not obtained in FY2011, Arkansas conducts an annual budgeting process, and if necessary the AGIO will seek to fully fund the recommendations in a future fiscal year (e.g., FY2012).

The ultimate outcome and the net results of this effort will become apparent with the completion of the state's FY2011 budgeting process. The hope is that there will be some level of increased funding for framework data within the AGIO budget. Although the project was only formally completed in May, 2010 it is considered a strong success by the AGIO, the State GIS Board and Arkansas GIS Users Forum. The plan was formally adopted by the State GIS Board in March of 2010, and subsequently, the plan was also endorsed by the Arkansas Society of Professional Surveyors in June, 2010 and an endorsement from the County Assessors Association is pending. The AGIO is also actively seeking plan endorsements from the State Forestry Association and the State Realtors Association.

2.3 California

California Geographic Information Association

2.3.1 Prior to Project

Prior to the FGDC 2007 Fifty States CAP grant award, and continuing today, there are two statewide geospatial entities that meet on a regular basis: 1) the California GIS

Council, and 2) California Geographic Information Association. There are also sixteen Regional Collaboratives across this expansive state, and these are at various stages of maturity and local/regional coordination activity.

The California GIS Council (<http://gis.ca.gov/council>) formed in 2003 is comprised of representatives from local, tribal, state and federal government agencies and the private sector, and was formed to collaborate on the planning, implementation and maintenance of a California GIS infrastructure. The Council meets twice yearly.

California Geographic Information Association (CGIA) (<http://www.cgia.org>) is a non-profit, statewide association formed in 1994 to facilitate coordination, collaboration, and advocacy for California's Geographic Information System (GIS) community. CGIA promotes the creation and maintenance of the best practices in the governance and application of geographic information within the State of California. The CGIA Board meets quarterly.

Both entities share some common meeting participants, thereby facilitating knowledge transfer; and, they collaborate on geospatial-related initiatives. This collaboration was essential as the CGIA, as a non-profit, was able to apply for, and administer, the Fifty States CAP grant funds.

2.3.2 Project Overview

Five recent collaboration projects, two of which were funded from CAP resources, are considered significant events since 2006.

1. California Geospatial Framework Draft Data Plan (Published September 2006)

The CGIA partnered with the US Geological Survey, the California Resources Agency and the California GIS Council (with 2005 CAP grant funding from the Federal Geographic Data Committee) to develop a Draft Geospatial Framework Data Plan for California. The seven core framework data sets and eleven California supplemental framework data

sets were identified and prioritized in the document (the plan can be found at:
<http://www.cgia.org/geospatial-draftplan.htm>)

2. California Strategic Plan Phase 1 (Published September 2006)

The California GIS Council convened a volunteer (un-funded) strategic planning work group in April, 2006, to develop a strategic plan for the comprehensive development of a spatial data infrastructure in California, making liberal use of the Fifty States Initiative strategic plan templates. This group developed a draft plan which was presented to the California GIS Council in September, 2006.

3. Formation of the California Office of the Chief Information Officer (January 2007)

The California GIS Council has one seat on the Council for the State Chief Information Office. The State CIO became an official office of the Governor of the State of California in January, 2007. The State CIO has developed a State Information Technology Strategic Plan which calls for a formal geospatial coordination effort.

4. California Strategic Plan Phase 2: Regional Participation (Published May 2008)

California received an FGDC 2007 Fifty States CAP grant to fund a series of workshops for regional geospatial collaboratives. The workshops provided critical input from California's sixteen Regional Collaboratives on the strategic goals, priorities, and implementation elements of the draft Strategic Plan, and develop reiterative mechanisms for their continued participation. The project furthers California's Spatial Data Infrastructure (CA-SDI) Strategic Plan, facilitating the coordination of programs, policies, technologies, and resources enabling the coordination, collection, documentation, discovery, distribution, exchange, and maintenance of geospatial information in California. The Phase 2 Plan made five Governance, eight Data, five Finance, and seven Marketing recommendations. (The plan can be found at:
<http://www.cgia.org/strategic-gisplanning.htm>)

5. California Imagery Business Plan and Best Practices Project; A Review of Regional Multi-Jurisdictional Collaborations (Published April 2008)

CGIA partnered with the US Geological Survey, the California Resources Agency, and the California GIS Council to identify best practice options for cooperatively acquiring and procuring digital imagery, as guidance for regional and other multi-participant digital imagery projects that may be conducted within California. (The plan can be found at: <http://www.cgia.org/imagery-project.htm>)

Without FGDC CAP grant funding, along with USGS funding, the initiatives noted above may never have occurred, and certainly would never have happened in the last three years.

2.3.3 Project Outcomes

In 2008, the **Office of the Geographic Information Officer** was created under the Office of the Chief Information Officer. This event achieved an objective that had been envisioned for many years by the California geospatial community and marked an important and substantive result from the planning efforts described above. Plans are in place to build up and expand the Office of the GIO with two deputies: one for operations and one for planning. Operations will be further divided into two parts: (1) services (web applications, library/catalog, imagery, grants & procurement) and (2) data (divided by layer categories such as environmental, parcels, and transportation).

The vision for the Office is built around two of the major documents produced by the California GIS council, and described above (i.e. the California GIS Council Strategic Plan and the GIS Council Framework Data Plan). The Strategic Plan is built around the vision statement: "California and its citizens' values and are empowered by geographic resources." This vision statement is supported by four major roles: policy role (data sharing, technical) operational role (central services, e.g. geocoding), consolidation roles (Governor's Reorganization Plan), and an enterprise role (services for the collective).

In the last three years geospatial coordination within the state has increased dramatically, particularly through the establishment of the GIO. The GIO has begun collaborative efforts along the following data paths; 1) Imagery, 2) Transportation, 3) Landmarks, 4) address geocoding and 5) parcels. In addition, there has been significant increased coordination in the Homeland Security business areas and involving the California Emergency Management Agency (CalEMA). Now, regular working group meetings for emergency response happen with key players discussing homeland security GIS needs.

The priority for California has been to improve State coordination and expand Federal coordination. California has not focused on coordination with adjacent states. However, through the appointment of the GIO and the increased activity around the Western Governors Association (WGA) GIS Working Group, some increased interstate coordination has taken place. In particular, California helped the effort for the WGA reauthorization of its Geospatial Policy Statement.

Functionally in California, federal government coordination has also improved in the last three years. The largest improvement has come with the addition of a USGS Liaison position for the state. California now has one position each in northern California and southern California. The addition of these positions greatly increases the amount of partnership opportunities, in particular for local imagery collection to the state.

Federal CAP funding has been an important contributor to GIS planning in California. Now that the state has a GIO whose job it is to functionally coordinate geospatial activity in the state, there is likely to be continued coordination progress. The state anticipates that specific measures will likely be developed around the GIO work plan and the GIO/CIO strategic plan.

2.4 Connecticut

Connecticut GIS Council Geospatial Strategic and Business Plan

2.4.1 Prior to Project

Prior to the year 2006 the State of Connecticut's state-level GIS efforts were led by a small group of state agencies and the champions within these groups that were responsible for their respective GIS activities. State, regional and local geospatial activities were not coordinated by any official state agency or council, and there was often competition for resources, or duplication of effort because of a lack of communication or knowledge of what was going on in the state. There was no official State office of GIS, no department designated to coordinate statewide efforts, and there was no official coordinating council within the state. Users communicated on a project-by-project basis and coordinated their efforts through the necessity of trying to pool funds for the common good.

The GIS Council was formed in January 2006 with the appointment of members from municipalities, state agencies, and higher education and in February of 2006, a website, www.ct.gov/gis, was established and the Council held its first meeting. The Council adopted bylaws on March 22, 2006. Four working groups were formed to spread out the workload and each work group began working on the major issues that were initially identified. These working groups are:

- Data and Inventory Assessment
- Education and Training
- Legal and Security
- Finance

2.4.2 Project Overview

In March 2006, the GIS Council received a \$50,000 Fifty States CAP grant to fund the development of Strategic and Business Plans for the GIS Council. To ensure interaction and collaboration from regional and local municipal organizations on strategic and business planning, GIS Council representatives met with representatives of the state's 15 Regional Planning Organizations (RPO's), and the Connecticut Conference of Municipalities, starting in July 2006. These efforts resulted in the formation of a new GIS user group representing the state's fifteen RPOs and opened up a formal avenue of communication and collaboration on GIS issues.

From July of 2006 through July of 2007 five regional stakeholder sessions were held and over 48 meetings were held by the various active Working Groups of the GIS Council showing the significant commitment by Connecticut's GIS practitioners to improving coordination and planning. In September of 2007 the Strategic and Business Plans developed as part of this process were formally approved by the GIS Council and contained the following strategic goals:

- Organize GIS efforts across state and local government agencies.
- Develop a core set of data layers that are kept up-to-date and made broadly accessible in a state-managed data repository.
- Communicate and educate potential users and decision makers about the benefits and capabilities achieved by GIS investments.

Programmatic goals were also established that included the following:

- Improve coordination and organize GIS efforts across all levels of government (federal, state, regional, and local).
- Develop a core set of framework data layers that can be shared across state agencies and with local government.

- Communicate the benefits of and educate decision makers on the use of geospatial technology to increase adoption and provide sustainable funding.

2.4.3 Project Outcomes

As a result of these plans much has changed in the State with respect to coordination of geospatial activities:

Improved Communication: Since the planning process started in 2006, thirty-one Geospatial Council meetings have been held at which federal, state, regional, and local governments as well as academic institutions and the private sector actively participated.

Data Improvements: The data holding for the State have been divided into fourteen geospatial categories to provide a structured framework for the assessment of thousands of potential geospatial datasets that exist that can be used to create statewide layers. Twelve of these data layers have been identified as high priority for the state and a subcommittee has been established for each.

Development of Cooperative Data Sharing Agreements: Cooperative data sharing agreements with three bordering states are being finalized to enable each State to acquire needed GIS data in the event of an emergency.

Improvements to Education and Outreach:

- Developed Outreach and Educational Materials
- Organized GIS Day at State Capitol
- Initiated Quarterly Newsletter, “*Connecticut Geo-Focus*”

Staffing: In concert with the recommendations of the plans the State designated an IT Manager to manage, review, coordinate and approve geospatial related projects

conducted by State agencies, and also hired the first full-time GIS Analyst within the Department of Information Technology to support the Council's initiatives.

Funding and Projects: In the three years since the plans were adopted the State GIS community was able to continue as well as initiate several projects which were funded in whole or partially through several federal grant programs that resulted from efforts identified in the Strategic and Business Plans.

- Geospatial Emergency Management System - DEMHS GIS Project, created an Emergency Response and Planning tool for use by state, regional and local government entities.
- Oblique Imagery Project – Through cooperative funding the State purchase oblique photographic imagery for the central third of Connecticut's land area.
- Road Network Environment – Developed a pilot to test long term road data framework creation. This is now under full statewide development.
- Regional Performance Incentive Grants
- The State of Connecticut provided over 8 million dollars in competitive grants for projects where improved efficiency could be gained by providing services or performing functions on a regional basis. Over 2.5 million dollars of these grant funds went to geo-spatial projects including regional imagery and cadastral data development, regional shared services, and regional web application development projects.

In summary the State of Connecticut has had significant success with improving its geospatial coordination in the areas of education and outreach, data inventory, assessment, and development, staffing, and funding since receiving its Fifty States CAP grant and completing its strategic and business plans. Much work is left to be done to achieve the vision and goals laid on in these plans, but the plans themselves have had a significant effect on improving the situation in the State.

2.5 Hawaii

Geographic Information System Strategic Plan: Hawaii Geographic Information Coordinating Council (HIGICC)

2.5.1 Prior to Project

Geospatial technology has been in use throughout the State of Hawaii for many years. In 1999 the Hawaii Geographic Information Coordinating Council was formed as a 501.c.3 not-for-profit organization to provide coordination of geospatial activities among the wide range of GIS users in the state. According to the HIGICC website, “HIGICC is a private non-profit organization of professionals and students from the federal, state, county, education, and private sectors of Hawaii’s GIS community. Our goal is to provide coordination of GIS activities among a wide range of GIS users in order to avoid duplication of effort, promote data sharing, and maintain data standards throughout the state”.

Numerous state and all four major County government agencies use the technology and generate a rich collection of geospatial data which is used in a variety of map making, analysis and web viewing applications. One of the biggest challenges for HIGICC, in part due to the disparate geography of the islands and the unofficial nature of the Council, has been coordination and communication about geospatial activities.

2.5.2 Project Overview

In 2008, HIGICC was successful in receiving a grant from FGDC CAP grant program to develop the future goals and objectives of the community in the form of a Strategic Plan. The effort was overseen by a Steering Committee comprised of members of the HIGICC board and the process was facilitated and documented by Applied Geographics, Inc, of Boston, Massachusetts. In 2010, the Council was successful in obtaining a second CAP grant from the FGDC to support the development of a statewide geospatial business plan.

The project vision was to assess this mission statement and the performance of HIGICC over the past decade and make recommendations for improvements.

Key project goals were to:

- Develop actionable and achievable plans that could focus the energies of the Hawaii's geospatial stakeholders and members
- Obtain "buy in" from stakeholders
- Raise awareness of HIGICC
- Reach additional sectors of the community throughout the state

HIGICC Mission Statement. HIGICC strives to bring together and continue to build the geographic community into a cohesive, recognized coordinating body that facilitates the use, development, sharing, and management of geographic data and communicates the value of geographic information to citizens and decision-makers. In the State of Hawaii, GIS is recognized and effectively used as an invaluable tool by the government, business and the citizens for understanding and managing our *aina* (environment). The Hawaii GICC is a shared mechanism for the diverse community to identify, explore, and solve problems using geospatial technology and information.

Geospatial Council Steering Committee Meetings. Six conference calls/meetings were held with the steering committee throughout the project duration. Participants included members of the council representing all of the major stakeholder groups in Hawaii. These sessions also worked to further define the key strategic goals, vision and to identify the programmatic goals outlined in this document.

Stakeholder Sessions. Five informational gathering sessions were held around the state as group visioning sessions to identify and clarify goals and to define the needs of all of the stakeholder groups in Hawaii. One session was held in each of the three counties of Kauai, Maui, and Hawaii, and two sessions were held on Oahu County. Invitations were sent out to nearly four hundred individuals that were envisioned as potential

stakeholders of the effort. These groups included federal, state, and county government staff, utility companies, non-profit entities, the University and K-12 educational sector, and private companies.

Individual Interviews. In addition to the stakeholder workshops individual/small group interviews were also held with a number of people and agencies to gather additional input. These interviews included meetings with the USGS Hawaii and Pacific Basin Islands NSDI Partnership Office, State of Hawaii, Office of Planning, Counties of Maui, Kauai, Oahu, the City and County of Hawaii, Pacific Disaster Center, and the University of Hawaii.

Online Web Survey & Questionnaire. An on-line questionnaire was developed to reach out to people who did not attend the sessions and to ask more detailed questions of those who did attend the sessions. Over 110 individuals responded to the survey. The survey results are incorporated into the requirements section of this document, but it is important to note that the survey was not a scientific survey. The survey was a voluntary effort that provided a data point for decisions made, was considered representative, but may not be statistically accurate.

2.5.3 Project Outcomes

The following project successes were presented at the 2010 NSGIC Midyear Conference:

- The project achieved great stakeholder participation. The information sessions held in each county were well attended and provided a valuable forum for sharing ideas and gathering feedback. The online survey collected responses from over 100 members of the stakeholder community. Drafts of the plan were posted on a Wiki site where individuals were free to provide detailed input and changes directly to the documents.

- HIGICC listened well during the planning process and stakeholder input was considered carefully and shaped the implementation priorities.
- HIGICC acted on the plans almost immediately following completion of the documents.

Some of the main problems that the project encountered included:

- It was difficult to maintain project momentum after the information gathering phase was completed.
- The volunteer council had many other demands on their time which ultimately impacted the ability to comply with the project schedule and intensive writing demands.
- With diverse group of stakeholders, it was difficult to prioritize the focus and direction of the business plan.
- The State CIO was not involved in the planning process; in hindsight, it would have been valuable to gain support from this office early on.

Overall, the project was successful. Completion of the Strategic Plan and subsequent business plan components was a major success for the Council. In the first 10 years of the HIGICC there has never been an explicit public agenda for action. Agendas for action have anecdotally been based on: (1) the interests of the incoming officers, particularly the President; (2) any urgent issues that arose (3) GIS Day activities; or (4) conference planning and implementation, in those years in which a conference (GISMAP or PacGeo) was held. This plan set forth the primary agenda of action and activities for the Council for the next three to five years.

According to the June 2010 online survey of Fifty States grant recipients, the Strategic Plan and Business Plan are allowing HIGICC to be more effective, engaging stakeholders

in activities and discussions relevant to the Council's mission. As a result of the 2008 grant:

- The Council recruited more non-Board members to take active roles in the governance of the council and to help organize and manage activities
- Membership increased across all sectors, including education (both K-12 and higher education), one of the identified underserved sectors
- Recognition of HIGICC's role in the geospatial community was evidenced by an almost doubling of attendance at its annual meeting compared to last year

2.6 Idaho

Eastern Idaho Regional Resource Center Business Plan

2.6.1 Prior to Project

For decades, Geographic Information Systems in east Idaho has been developing at a steady rate due, in large part to the efforts of numerous individuals within the GIS community. As a result, pockets of GIS infrastructure exist throughout the region. More recently, Idaho's GIS business plan identified an organizational component known as a Regional Resource Center (RRC), which was intended to anchor state spatial data infrastructure objectives regionally. However, the exact mix of services and capabilities of each RRC was left for interested groups to define.

In September 2009, several regional groups were identified in response to a call for proposals by the Geospatial Information Office. These proposals identified geographic regions, overviews of GIS resources, and GIS practitioners within their respective regions that were associated with each proposed RRC. In February 2010, the east Idaho GIS community was awarded a CAP grant to support the development of a regional resource center business plan.

2.6.2 Project Overview

The project scope included the development of a Business Plan specifically for the East Idaho Regional Resource Center, as well as the creation of a Business Plan guideline for use by other Regional Resource Centers, both in Idaho and in other parts of the country. GIS Regional Resource Centers (RRCs) are organizational components of Idaho's statewide GIS program --The Idaho Map (TIM) -- and have the primary mission of supporting and coordinating GIS activities and users in specific geographic regions of the state, in coordination with the Idaho Geospatial Council (IGC) and Idaho Geospatial Office (IGO).

The business plan and guideline project was managed by the Idaho State University GIS Training and Research Center (ISU GIS TRc) and was funded by a Category 4 NSDI CAP Grant. The preparation of the plan was carried out with a project team that included personnel from the ISU GIS TRc, Eastern Idaho Regional GIS (EIRGIS) and Southeast Idaho GIS Users' Group (SEIGUG). In addition to this core project team RRC business planning has included input from GIS stakeholders throughout Idaho. The intention of the guidelines is to provide a foundation and support for RRC development throughout the state. While the primary focus is on Idaho, it has applicability for any statewide GIS program for which improved regional participation and coordination is needed.

The project successfully garnered tremendous participation from stakeholders across the state using e-mail, the list serve, in-person and teleconference meetings, and a dedicated web forum. As geography presented significant challenges to travel, technology was key in gathering input from this broad spectrum of stakeholders.

The following research, information gathering and deliverable review activities were conducted as part of this project beginning in May 2010:

- **June 2010:** RRC Business Planning kick-off meeting
- **June 2010:** RRC discussion at the North Idaho GIS User Group meeting
- **Summer 2010:** Comments posted to the "RRC Forum", a publicly accessible web

forum

- **Summer 2010:** Results of a Web-based survey deployed and managed by the RRC project team
- **Summer 2010:** Preparation followed by a review and comment on a companion document, “Notes on Investigations about Potential Host Organizations and Outside Support”
- **August 2010:** RRC planning meeting
- **August 2010:** RRC discussion (EIRGIS meeting)

2.6.3 Project Outcomes

As a result of the business plan, the East Idaho Regional Resource Center developed the following Mission Statement:

The East Idaho Regional Resource Center will be a vital component of The Idaho Map and enhance geospatial capabilities in the region by:

- *Sharing scarce resources*
- *Avoiding duplication of effort*
- *Bridging local and state activities*

The East Idaho RRC empowers local people to participate in The Idaho Map without leaving the office. Even better, governments in the region benefit from ready-to-go trans-boundary information assembled by people they know and trust. Anchored to Idaho State University's GIS Training and Research Center for stability and maximum leverage, the EIRRC can rapidly facilitate regional mapping and geospatial data needs.

Organizationally connected to Idaho's GIS coordinating body, linked with other RRCs, and the Idaho Geospatial Office and guided by a steering committee, the EIRRC will accelerate The Idaho Map and unleash latent potential in the region.

Harnessing personal relationships and economic engines, like INL, provide an additional catalyst and opportunity to create enduring benefits for all sectors and citizens.

The plan also identified key partners and resources and made specific recommendations for the development and operation of regional resource centers including:

- A balance of services and capabilities
- An organizational structure
- A physical location and operation strategy
- A communication and coordination approach with the Idaho Geospatial Council and The Idaho Map
- Staffing strategies
- Technical architecture
- Interaction with other RRCs
- Potential funding sources

These recommendations and the comprehensive guidelines document now available to other regions serve as a valuable template and set of tools for establishing the next regional resource center.

The East Idaho Regional Resource Center (EIRCC) was officially formed through recognition by the Idaho Geospatial Council. EIRCC management is located at Idaho State University's GIS Training and Research Center. The EIRCC, as well as other RRCs, will help connect local activities and coordination with statewide coordination and facilitate interaction among regional efforts that are currently operating independently.

The following key project successes were presented at the 2011 NSGIC Midyear Conference:

- Communication was effective and key to the success of the project. Tremendous stakeholder participation was sought and received.
- Project momentum was maintained through active project management and communication. As a result the project team adhered to the original project timeline.
- The project sought to achieve more than the “minimum” required components of a business plan.

Some problems encountered during the project included:

- Originally two Regional Resource Centers were involved (East Idaho and Southeast Idaho) but these merged nearly half-way through the process which required significant adjustment. Fortunately, no serious project set-back was experienced.
- Geography presented a significant challenge to stakeholder participation. This was overcome by leveraging telecommunications and web-based collaboration tools.
- In the search for a consultant to support the project, many requests were sent out but only two proposals were received. Fortunately, both proposals were strong and a selection was made.
- Legislative and decision maker input was sought but very little interest was expressed.
- The length of the final business plan was deemed to be too long according to some (43 pages). The executive summary was written to communicate the key components in an accessible format.

Successful results of the project included the following:

- An important step in the overall Idaho SDI strategic plan has been achieved.
- A useful guideline is now available to other Regional Resource Centers.

2.7 Maine

An Integrated Land Records Information System (ILRIS) for the State of Maine Maine GeoLibrary, Maine Office of GIS

2.7.1 Prior to Project

Maine was not starting from scratch when they received their Fifty States Strategic and Business Planning (CAP Category 3) grant from FGDC in 2007. They were building on a foundation going back at least 20 years. The state has a legislatively established GIS council, known as the Maine Library of Geographic Information Board (a.k.a. GeoLibrary). In advance of the grant application, the GeoLibrary had identified the need to provide access to information about property parcels and their context with adjoining lands, and had started on the conceptualization process. In addition, the GeoLibrary and the Maine Office of GIS (MEGIS) contributed their own resources to get the process underway.

The State GIS Manager, Michael Smith, directs the Maine Office of GIS (MEGIS), which is within the Office of Information Technology. In the context of NSDI, a number of milestones are recognized by Mr. Smith as being valuable to statewide coordination and infrastructure-building efforts, including:

- Data Catalog deployment in 1998, making it easier to get data, statewide.
- USGS digital base layers statewide availability in 1998, providing consistent base map data.
- USGS Black & White Digital Ortho Quads (DOQs) statewide availability in 1999, providing consistent orthoimagery for multiple purposes.
- Enterprise GIS database deployment in 1999, providing easier access to Maine-specific data.

- USGS Digital Raster Graphics (DRGs) statewide availability in 2000, providing widespread access to digital topographic maps.
- Maine Library of Geographic Information (GeoLibrary) created by law in 2002, promoting data custodianship and common access to public geographic information to all levels of government and to the public.
- Enterprise License Agreement (ELA) with ESRI in 2008, providing access to a GIS software pool across state agencies.

2.7.2 Project Overview

For this grant-supported project, Maine’s emphasis was distinctly weighted toward a GIS-based integrated land records information system (ILRIS), focused on developing an accessible statewide repository of property parcel data. A specific outcome of the project was a multi-part plan for “An Integrated Land records Information System for the State of Maine.” This plan comprises content that spans both strategic and business planning elements, focusing in on specific requirements for a statewide property parcel data collection.

Project Vision/Mission Statement. In the Maine context, the vision and mission statement is referred to as the “Conceptual Core” of the intended strategic direction and desired outcome. From the plan document:

The Maine GeoLibrary seeks to develop a system of unified property records across the state. The basic principles of this initiative can be summarized in three key assumptions about what a final system should include and about how these records should be aggregated and maintained. These include:

- *Creation of a statewide parcel composite*
- *Development of a perpetual maintenance system and network to ensure these records are kept current*

- *Adding value to these data through technical association of individual records with other data sources through extended attribute sets.*

Stakeholder Participation. In Maine, there is a split responsibility for land records at the local level, with tax records and parcel geometry managed by towns, while deeds and transfers are managed by the counties. For the state to achieve its goals for statewide property parcel data, outreach to local government was essential as part of this process. Forums, surveys, and written correspondence were used for outreach to stakeholders, statewide. Participation included local, county, and state governments, private sector, private citizens, and universities.

The Maine ILRIS multi-part plan document was *“developed as the result of input from multiple forums, meetings, and discussions with geographic users and potential stakeholders from all levels of government and the private sector, both within and outside Maine.”* MEGIS hired a contractor to organize six (6) forums, to utilize both online and paper surveys to collect input from stakeholders, and to draft the plan document.

The forums were held in far-reaching locations around the state, and were attended by a wide array of stakeholders. To ensure broad participation, the forums were advertised in theme-specific media not typically dedicated to GIS, such as the publications of municipal professional societies.

Interaction with FGDC during the course of the project was minimal. This was a nice thing in the opinion of the state, because federal oversight did not dictate the direction of the project. Nonetheless, the effort remained true to FGDC objectives to reach out to diverse stakeholders and approach the project from a statewide perspective.

2.7.3 Project Outcomes

The project was considered successful by the State GIS Manager and GeoLibrary, and has moved on to implementation of the goals established during the planning process. It directly enabled Maine to line-up support for a pilot project in Hancock County, which includes Bar Harbor, a world renowned tourist destination. These implementation efforts will contribute to national objectives related to the cadastral data layer of the NSDI.

Statewide coordination has already changed as a result of this project. For example, Maine has adopted plan recommendations for theme-specific workgroups for coordination (i.e. Parcels/Cadastral Data, LiDAR and Ortho Imagery), and generated successful grant proposals to help implement the ILRIS specification.

The following project successes were presented at the 2010 NSGIC Midyear Conference:

- MEGIS held wide-ranging public forums throughout the state, and some targeted forums just to certain business sectors.
- Public feedback periods were provided by posting draft plans on the web and allowing public review.
- The contractor was guided by an active representative stakeholder group.
- Most importantly – the plan will not just be a report filed on a shelf, as evidenced by current implementation efforts.

The following problems were encountered during the project:

- There was a change of state GIS coordinators right at the beginning of the planning project, with a learning curve for the new person.
- Maintaining focus over long periods of time with volunteer steering group was difficult.

- There was a long period between drafts to review, and a feeling of starting over at different junctures along the way.

Successful project results included the following:

- An updated strategic and business plan for Maine was produced, aligned with Fifty States objectives, finished in May 2009 and available at www.maine.gov/geolib.
- The strategic plan content and business plan content were combined into the multi-part document titled, *“An Integrated Land Records Information System (ILRIS) for the State of Maine,”* including four main parts, as follows:
 - Conceptual Framework
 - Functional Specification
 - Promotional Plan
 - Research and Findings
- Workgroups were realigned for theme-specific coordination to meet strategic plan needs (i.e. Parcels/Cadastral Data, LiDAR and Ortho Imagery).
- MEGIS successfully lined-up support for a pilot project to implement the ILRIS plan with a prototype integration model.
- In 2010, MEGIS received a substantial grant (\$200k) to expand the pilot ILRIS cadastral efforts into other counties.

2.8 Minnesota

Minnesota Office of Geospatial Information (MnGeo)

2.8.1 Prior to Project

In June of 2009 Minnesota celebrated the creation of the new Minnesota Office of Geospatial Information (MnGeo) and the Commissioner of Administration announced

the appointment of the state's first Geospatial Information Officer. This event culminated a focused and sustained planning effort begun in 2004. The state's receipt of a 2006 Fifty States CAP grant is considered instrumental in achieving this milestone.

Although Minnesota was an early pioneer in state GIS efforts, by the early 2000s there was a feeling that the state's leadership was waning. The Land Management Information Center (LMIC), the state's leading statewide GIS coordination organization, was hampered by inadequate funds and the lack of an explicit mission to carry out statewide coordination. In spite of rapidly growing GIS utilization across the state, almost all of LMIC's coordination efforts were pursued on an informal basis.

Recognizing this, in 2004 the state developed a strategic plan aimed at improving geospatial coordination and pursuing the development of a Minnesota Spatial Data Infrastructure (MSDI). This plan, titled *Foundations for Coordinated GIS*, was adopted by the Governor's Council on Geographic Information (GCGI) in June 2004. The plan recommended formally authorizing a state executive branch agency to coordinate GIS as a strategically essential element. Despite the strong case made by the plan, the Governor proposed budget reductions for LMIC in 2005 and 2007 and little was done to implement its recommendations.

2.8.2 Project Overview

The 2006 CAP grant offered a much needed opportunity for LMIC to pursue the agenda set forth in the *Foundations* plan. A statement in Minnesota's final report to the FGDC states that "the grant provided critical funding needed to supplement long-term efforts devoted to achieving the goals of the 2004 plan and developing a second-generation strategic plan that focused on *organizational* and *operational* issues."

Activities pursued by Minnesota and supported by the Fifty States CAP grant funding included:

- Hiring a part-time staff person dedicated to working on issues of statewide coordination and MSDI development
- Conducting a GIS stakeholder planning retreat to gain consensus on a new “vision statement” and priorities for coordination
- Development of a closer relationship with the state CIO, the leader of a newly reformed Office of Enterprise Technology

The project was completed by November, 2007 and was considered a strong success that helped to elevate the visibility of GIS and the need for progress to key government executives. The final report to the FGDC observed that “work will continue towards establishing a formally recognized State GIS coordinating entity with its roles, responsibilities, relationships, resources, authorities and governance defined, understood, and supported by the community.”

2.8.3 Project Outcomes

An immediate result of the 2006 – 2007 Fifty States CAP supported planning efforts was Governor Pawlenty identifying GIS as a “Drive to Excellence” initiative. Drive to Excellence was a gubernatorial led government effectiveness effort that aimed to create efficiency through the pursuit of state government-wide enterprise initiatives. Being identified as a “Drive” project meant that geospatial coordination and enterprise development had both priority and visibility at the highest levels of government. To pursue the Drive GIS project the state identified over \$150,000 of funding – contributed from multiple state agencies - to pursue detailed planning and to continue the part-time staff that was focused on geospatial coordination. Indeed, the state stepped in and was able to build on the key seed funding that the FGDC had provided.

During 2008 the state hired a consultant to pursue a formal and detailed planning study titled *A Program for Transformed GIS in the State of Minnesota: Program Design &*

Implementation Plan. This plan built on the earlier *Foundations* strategic plan and the CAP supported report. The *Transformation* study focused on the development of a business case for geospatial coordination and the development of an operational plan for implementation. The *Transformation* report identified specific roles and responsibilities for a geospatial coordination office and staff and was coordinated with the Governor's Council on Geographic Information's (GCGI) parallel effort to develop a governance model for overseeing the new office. This project was a strong success and the three commissioners who participated in the process spearheaded efforts to see the plan's recommendations carried out.

As a result of this senior executive support and hard staff work, during the spring of 2009 many of the *Transformation* study's recommendations were embodied in new legislation that dissolved the Land Management Information Center (LMIC) and replaced it with the new Minnesota Geospatial Information Office, MnGeo. The legislation also provided a clear and specific mission to carry out statewide geospatial coordination. This legislation was passed into law in May, 2009. Although the *Transformation* study recommended significant new funding, no new operational resources were provided to the new office beyond LMIC's previous funding. However, during the same legislative session, \$5.6M was authorized for the Minnesota Department of Natural Resources to pursue statewide elevation data through Light Detection and Ranging (LiDAR) collection, with 2.5 percent set aside for MnGeo's coordination function.

Minnesota now embarks on a new chapter in its long history in GIS deployment. The Fifty States CAP grant played an important role in the state's efforts to advance its internal coordination and to build its statewide SDI. MnGeo, with a stakeholder-oriented governance structure and an explicit mandate to foster coordination, make Minnesota a stronger partner that is better able to coordinate with federal agencies and more prepared to fully build-out and maintain framework data sets. Three years later, it is clear that FGDC's investment in Minnesota has paid dividends.

2.9 Oregon

Oregon Geographic Information Council - Strategic and Plan for Geographic Information Management

2.9.1 Prior to Project

Oregon has a long history of investments in digital mapping starting in 1969 with the effort by the Department of Forestry to capture map information on keypunch cards to be processed on a mainframe computer and sent to a plotter. In the 1970s, Oregon counties began to move toward digital parcel mapping, often through contracts with the Department of Revenue. In the 1980s, a few local and state agencies began testing a new type of mapping system that directly linked with a database, which allowed them to begin comparing and analyzing spatial data. Since these early endeavors, GIS has evolved technologically and has integrated with key government agencies and programs putting the tools into the hands of the problem solvers and decision makers. In September 1994, Executive Order EO-94-16, the Oregon State Map Advisory Council (SMAC) was reorganized and renamed the Oregon Geographic Information Council (OGIC). Today, the Council's scope includes local, state and Federal agencies and establishes a relationship between the policies and guidelines of OGIC and the State's Enterprise Information Technology Strategy.

Oregon's first geospatial strategic plan was created in 2001, prior to the Fifty States Initiative. While that plan was for development of Oregon's spatial data infrastructure, a refreshed plan was needed to align with the NSDI. In 2008, a detailed business plan was developed for the Oregon NavigatOR program, which was based on strategic discussions with the Council and their understanding of the Fifty States Initiative but no documentation of the strategy behind that business plan was produced.

The 2009 project was aimed at producing a refreshed strategic plan for geographic information management and coordination for Oregon. In addition to involving as many local, regional, tribal, academic, business, state, and federal partners as possible, the plans proposal called for a group of approximately ten GIS and accounting professionals

from around the country to develop an accounting mechanism to track the accrual of benefits from coordinated development of GIS. This tool was intended to serve government agencies, at any level, in justifying the continued investment in coordinated GIS development.

2.9.2 Project Overview

The scope of the project was to refine the state's existing strategic plan and update the goals based on progress and events that took place since the completion of the original strategic plan in 2001. The Oregon Geographic Information Council (OGIC) was focused on several key goals with this project:

- More inclusive government model
- Expanded data sharing
- Improved Communication
- Formalized data stewardship

OGIC applied for funding assistance through the Federal Geographic Data Committee (FGDC), as part of the Fifty States Initiative to advance the National Spatial Data Infrastructure (NSDI). In 2009, Oregon was selected as a grant recipient, specifically to support Strategic and Business Planning for Geographic Information Systems (GIS). The Oregon plan was completed in September 2010.

The Council's steering committee included representative members from state, regional and local government. Outreach was conducted and input was collected from the diverse community of geospatial stakeholders including private, tribal, academic, and federal (in addition to local, regional, and state). The steering committee was integral in providing guidance and feedback on the strategies drafted by the council.

The ultimate project vision was to "Support the business of Oregon government by enabling efficient and effective use and sharing of geospatial information."

The following activities were conducted in support of the project:

- A series of facilitated group discussions was conducted focusing on open communication and frank dialog to elicit information about navigatOR, how it's working, what needs to change and where it needs to go. Meeting locations were dispersed around the State and included GIS in Action (ORURISA, WA URISA), Portland Metro area, Pendleton, Ontario, Lakeview, Bend, Portland, Salem and Roseburg.
- Meeting results were summarized and distributed back to those individuals that attended each meeting to allow for edits or additional comments to be captured. These comments were added to the results and used as direct input to the Plan.
- Oregon project staff met with Gail Ewart, GIO, State of Idaho and Danielle Ayan, Georgia GIS Clearinghouse Manager, State of Georgia to discuss their respective 50 States GIS Strategic Planning efforts.
- A Strategic Plan Steering Committee composed of representatives from State, Regional and Local Government and the University System was convened. This group discussed information gathered to date and provided strategic guidance. Metro's Data Resource Center (the GIS business group in Oregon's largest regional government) was simultaneously refreshing their strategic plan. Coordination with Metro was initiated to align planning activities.
- A nationally attended WebEx/teleconference focused on benefit accrual tracking was held and volunteers were solicited for additional working teleconferences. One additional WebEx/teleconference with a smaller workgroup was conducted.
- The Strategic Plan draft was widely reviewed by the GIS community and revisions were made prior to OGIC endorsement.

2.9.3 Project Outcomes

The project resulted in the development of a strategic plan that provides a long-term strategic direction and foundation for geographic information management in Oregon. Other key outcomes of the plan included:

- The definition of an organizational environment for accomplishing geographic information management goals.
- Promotion of geographic information management programs and initiatives, within the context of the overall government information resources enterprise.
- Provision of programmatic objectives for more detailed tactical plans and programs.
- Vision and overarching strategy within which all geographic information stakeholders can develop strategies and tactics for improved collaboration, coordination, and geographic information management
- The next steps are to achieve support for the proposed data sharing legislation, formalize the data stewardship model and process, and revise the Council governance model to be more inclusive and equitable.

Oregon presented the following at the 2011 NSGIC Midyear Conference as “things that worked well”:

- The Council achieved excellent stakeholder participation through the outreach sessions and Steering Committee participation.
- The planning initiative was aligned with the goals of the Metro regional government.
- An ROI study was initiated that will ultimately inform the goal to modify the Council’s funding model.

The main problems that were encountered included:

- It was difficult to stay focused on the strategic planning initiative thus it was not completed as quickly as desired.
- The ROI study was not completed during the planning period thus could not inform the strategic plan to the degree desired.

- Local governments were reluctant to take ownership for the plan's success
- The plan was not completely aligned with the new Governor and Legislature.
- The results should have been more widely broadcast.

Successful results included the following:

- There was nearly unanimous support for continuing in the current direction
- Support for additional business planning efforts was garnered. The Council was enthusiastic about refreshing business plans even before the strategic plan was completed.
- GIS strategy is now leading enterprise IT planning and providing direction

2.10 South Carolina

South Carolina Geographic Information Systems (SCGIS) State Outreach and Strategic Plan, South Carolina Geographic Information Council (SCGIC)

2.10.1 Prior to Project

South Carolina's history in the development and use of Geographic Information Systems (GIS) spans a period of more than 30 years. There is a well-developed GIS community of stakeholders that includes distinguished public and private sector participants, and leading academicians.

Key GIS milestones in South Carolina that preceded this project include the following selected items:

- 1976: GIS taught at University of South Carolina
- 1978: State Mapping Advisory Committee (SMAC) established
- 1983: City of Greenville implemented GIS
- 1997: SC Department of Natural Resources (DNR) established a Data Clearinghouse

- 1997: Standing Committee on Geographic Information (SCGI) formed
- 1999: Needs Assessment on statewide GIS undertaken
- 2001: Strategic Plan for Statewide GIS Technology Coordination in South Carolina developed
- 2006: South Carolina Geographic Information Council (SCGIC) formed
- 2007: State GIS Coordinator hired
- 2008: FGDC Cooperative Agreements Program (CAP) assistance received to support a new strategic plan and statewide outreach

2.10.2 Project Overview

A key project goal was to proactively overcome any perception that the planning process was insular to state agencies. Emphasis was placed on statewide outreach, especially to local government, to help determine shared priorities across the entire state for GIS programs and initiatives. The project was seen as a consensus-building exercise to help coordinate and prioritize data building efforts across jurisdictional boundaries, and to support decision-making. It was also seen as an opportunity to improve communications with leaders across the state, by developing talking points that would resonate with non-GIS people.

Project Vision/Mission Statement. The general consensus amongst the GIS stakeholders who participated in the planning process was that the mission statement from the 2001 plan, while generally relevant, was too generic to rally action-oriented support. A new mission statement was developed and adopted as follows:

Lead the nation in collaboration and utilization of geospatial resources which achieve statewide goals to positively impact the lives of South Carolinians.

Stakeholder Participation. In South Carolina, the planning effort was led by the State GIS Coordinator, but a conscientious effort was made to reach out to diverse GIS

stakeholders across the state. There were 96 people from 26 counties that attended the five Regional Stakeholder Outreach Workshops in the autumn of 2008.

Demographically, over 50% came from local government, with the remainder coming from the private sector, academia, and other levels of government (state and federal).

In addition to workshop outreach, 38 people from 11 counties responded to an online survey that was conducted during November 2008. A report on the survey results was produced during late January – early February 2009. The demographic breakdown of survey respondents was very much like the workshop attendees. While not a huge number of respondents, the participating counties represent 64% of the state's land area, and 71% of its population.

The planning process took place during the second half of 2008 and the first half of 2009. Activities included meetings, research, presentations, regional workshops, on-line survey, one-on-one interviews, public comment on preliminary findings and recommendations, and iterations on draft versions of the plan document. Some specific examples include the following activities:

- Kick-off Teleconference
- SCGIC Meeting in Columbia
- Regional Stakeholder Outreach Workshops (5)
- Interviews (8)
- Report on Preliminary Findings
- Public Review and Comment on Preliminary Findings
- Online Survey Questionnaire
- Background Research and Document Review
- Attendance and Strategic Planning Discussion at SCARC Conference in Columbia
- Public Review of Goals and Vision
- Review of Goals and Vision by SCGIS Council

- Final Draft of Strategic Plan reviewed by SCGIS Tech Committee
- Presentation to SCGIS Council

2.10.3 Project Outcomes

According to Tim De Troye, the South Carolina State GIS Coordinator, “This grant was crucial to help build relationships with local government, which in turn has led to higher degrees of data sharing – government-to-government. Without it we might be perhaps 20% along the way of where we are now.” (From 2010 Fifty States Survey of State GIS Coordinators)

South Carolina presented the following at the 2010 NSGIC Midyear Conference as “things that worked well”:

- The Regional Workshops and the input and discussion from these outreach sessions were very successful.
- A seasoned contractor was hired to help conduct the planning process and facilitate the workshops.
- The one-on-one interviews provided in-depth insights to what was working in the state, what might be done better, and what issues existed.

Project problems that were encountered included:

- Variations in policies at the local level in relation to data sharing and/or selling practices have bearing on cross-jurisdictional initiatives to build regional or statewide datasets.
- At the local level, some areas have GIS capabilities, and some do not.
- Poor financial conditions across the state tempered expectations of what could realistically be achieved.

Successful project results included the following:

- The strategic planning process enhanced and augmented ongoing communication and outreach efforts led by the State GIS Coordinator with the support of SCGIC. It spurred follow-on activities by interested parties, including a local university that undertook an effort to gather GIS success stories from around the state. Most importantly, based on input from the planning process and the specific recommendations of the State Outreach and Strategic Plan, five pilot projects were launched, as follows:
 - Multi-county pilot project to make street centerlines fully routable for all roads, to serve as a model for statewide implementation; this is a collaborative effort between SC Department of Transportation (SCDOT) and local counties.
 - Multi-county property parcel data pilot, to aggregate and integrate property parcel data across several adjoining counties, as a model for regional and statewide aggregation.
 - Statewide orthoimagery Web service, to provide access to existing aerial ortho-image data, which is being collected at the local level with state and federal support; this effort is led by the SC Budget and Control Board.
 - Address points pilot project, to develop a statewide address points layer with voluntary participation from local government organizations and value-added by SC Department of Health and Environmental Control (DHEC); an Information Flyer on Address Points was produced by the State GIS Coordinator.
 - Statewide geocoding service, also in collaboration with DHEC, to leverage shared address points with accurate locations by providing a geocoding

service to state and local data partners; this provides value-added by the state back to local government and other data partners.

2.11 US Virgin Islands

United States Virgin Islands Geospatial Strategic Plan

2.11.1 Prior to Project

In many ways the Territory, with its approximately 108,000 people spread across 133 square miles functions as *both* a state and a medium sized city or county. Since both states and counties have traditionally been major consumers and users of GIS technology the Territorial Government has a tremendous variety of potential uses. At the same time, the USVI is only in the beginning stages of GIS development and the extent of GIS penetration is currently modest.

Currently, the Lieutenant Governor's Office of the Tax Assessor and the Department of Planning and Natural Resources (DPNR) are the longest standing and most functional users. In addition to governmental departments other significant geospatial technology users include the University of the Virgin Islands and private non- profits that operate in the USVI (e.g. The Nature Conservancy). Finally, a variety of federal agencies are involved in mapping the territory whether or not they have permanent operations on-island.

The Virgin Islands Geographic Information Council (VIGIC) was formally recognized as the geospatial coordinating entity in 2006 via Executive Order. VIGIC provides a forum and authority for geospatial coordination and has helped coordinate key investments such as the territory-wide orthophotography, LiDAR-based elevation, and parcels.

2.11.2 Project Overview

In 2008, the territory was awarded a Fifty States Initiative category 3 CAP grant to support geospatial strategic planning and strengthen both the USVI SDI and the National

Spatial Data Infrastructure. The project commenced in May 2009 and was completed in June 2010.

The plan's overall strategic goal was documented as the following:

To develop a territory-wide spatial data infrastructure that can be shared by all units of the government and makes the territory's geospatial data assets readily available to the territory's partners and the general public. The U.S. Virgin Islands spatial data infrastructure (USVI-SDI) will be a key asset that serves the residents and visitors daily and makes the Territory resilient in times of natural or manmade disasters. The USVI-SDI will assist in the efficient and effective delivery of government services and functions that include, but are not limited to:

- *Economic development*
- *Protection of the environment and natural resources*
- *Providing public safety*
- *Supporting tourism*
- *Delivering government services*

An enterprise GIS approach, spanning the entire territory will be pursued for establishing the USVI spatial data infrastructure.

The plan also identified seven programmatic goals that represent the activities that are necessary to create an enterprise GIS approach for the territory. These goals included:

1. A full-time paid territorial geospatial information office/coordinator
2. Finding sustainable funding that can span administrations
3. Territory-wide street naming/addressing initiative
4. Finalization of parcels
5. Develop digital polling district layer
6. Develop a geospatial data clearinghouse

7. Develop an enterprise GIS technological infrastructure

Strategic planning project activities included the following:

- **November 2009:** Kick-off and project planning meeting
- **November 2009:** Stakeholder Workshop (in association with the 5th Annual GIS Conference held on St. Croix)
 - Participation from over 120 conference attendees including participation by the following sectors:
 - Territorial government
 - Neighboring territories and nations
 - Federal government
 - Non-governmental organizations
 - Private sector
 - Academia
- **January 2010:** Development of a prototype web viewer to expose existing USVI data.
 - Existing data sets included including parcels, orthophotos and elevation were published via a prototype GIS web viewer deployed by AppGeo. This web-site serves as a proof-of-concept for making USVI geospatial data more readily available.
- **January 2010:** Department head briefing sponsored by the Lieutenant Governor
 - Attended by 33 individuals representing 28 territorial departments/agencies
- **February – May 2010:** Report Authoring
 - Drafted by project consultant (AppGeo)

- Editing by the VIGIC Executive Committee
- **June 2010:** Formal release of plan
 - Educational meetings to describe the plan including one-on-one briefings with key territorial government officials
 - Initial advocacy for carrying out the recommendations

2.11.3 Project Outcomes

The strategic planning project resulted in a plan that outlines the comprehensive uses and applications of Geospatial Information Systems (GIS) data and makes several recommendations for advancing the territory's GIS program. The primary goal identified in the plan is to develop a territory-wide spatial data infrastructure that can be shared by all units of the government and makes the territory's geospatial data assets readily available to the territory's partners. The next steps for VIGIC include:

- Pursue funding to create a GIO position
- Implement Territory-wide street addressing project
- Pursue Enterprise GIS implementation for the U.S. Virgin Islands

The US Virgin Islands presented the following at the 2011 NSGIC Midyear Conference as “things that worked well”:

- The integration of the workshops with the Territorial GIS conference contributed to substantive stakeholder participation
- One-on-one interviews with present and past leadership contributed significantly to the output
- The project team established a good working relationship with Governor's cabinet
- The project obtained legislative support and initial funding for the street addressing project

Problems encountered during the project included:

- Procurement process was painstakingly slow;
- Individuals were more interested in their political agendas than actually contributing to the plan;
- It was difficult to obtain comments and feedback on-line early in the process;
- More budgetary detail should have been prepared for inclusion in the FY 2011 project.

Successful results included the following:

- Completion of the Territory's first plan for launching GIS throughout the Territory
- The prototype on-line GIS viewer provided an exemplar of how GIS data can be consumed and made accessible to Territory GIS users

2.12 Commonwealth of Virginia

GIS Strategic Plan: 2010-2015, Virginia Geographic Information Network (VGIN)

2.12.1 Prior to Project

For over a decade, the Commonwealth of Virginia has promoted the development of geographic information to support a variety of applications including environmental protection, healthcare, land use, economic development, transportation, natural and historic resources, public safety and emergency management. To better coordinate these activities and promote sharing of geographic information, the Virginia Geographic Information Network (VGIN) was established in 1997. VGIN is part of the Integrated Services Program (ISP) within the state's IT agency, the "Virginia Information Technologies Agency".

VGIN operates in tandem with the Public Safety Communications group and is closely aligned with the states information technology and 911 business needs. VGIN's activities are primarily funded by the Wireless Services Board (WSB) which supports the Commonwealth's orthophotography and road centerline data programs.

VGIN provides application services including geospatial project management, geospatial application hosting, geospatial needs assessment, and consulting. VGIN also provides data services to the Commonwealth including orthophotography and road centerline basemapping, enterprise metadata services, web map services, and other enterprise data coordination.

VGIN's **services** are approximately divided as such:

- Application Services: Geospatial Application Services (5% of current work)
- Data Services: Geospatial Data Management (60% of current work)
- Geospatial Coordination: Enterprise Geospatial Coordination (30% of current work)
- Policy: Enterprise Geospatial Policy such as model and standards development (5% of current work).

VGIN's **resources** include:

- Orthophotography: Since 2002, VGIN has provided high resolution statewide aerial photography to promote economies of scale and data sharing
- Road Centerline: VGIN provides a consistent and seamless statewide digital dataset of all roads, sourced from 911/local data and the state DOT. Coordination of this effort with the DOT is progressing and is a high priority for VGIN.

- Metadata Portal: Online portal for discovering and sharing geospatial data and metadata for the Commonwealth. This application is open to government and public users.
- Statewide Coordinator: The presence of a statewide coordinating office allows Virginia to coordinate activities amongst the diverse agencies and stakeholders.
- VGIN Staff: VGIN has full-time geospatial professionals who provide outstanding services to the Commonwealth.

2.12.2 Project Overview

In 2009, the Commonwealth received a Fifty States CAP Grant to support, along with funding from VGIN, the development of a statewide geospatial strategic plan. Touchstone Consulting Group assisted with the strategic planning process and the creation of the Strategic Plan.

During the strategic planning process, six strategic initiatives were identified with three overarching organizational goals. The broader goals will guide VGIN toward its vision of “Using geographic knowledge to create a better Virginia.”

Mission Statement. “Using Geographic Knowledge to Create a Better Virginia.”

Key Goals:

GOAL 1: Coordination and Collaboration - Provide greater coordination and facilitate collaboration within the geospatial community.

Initiative 1: Develop and maintain geospatial standards.

Initiative 2: Oversee the development of a Commonwealth-wide geospatial clearinghouse that connects all levels of government and other VGIN stakeholders.

GOAL 2: Communication - Increase communication and outreach to the general public, decision makers, and the geospatial community.

Initiative 3: Facilitate geospatial educational opportunities.

Initiative 4: Provide marketing advocacy and outreach by acting as the primary champion of GIS in Virginia.

GOAL 3: Creative Services - Continue to create a platform for spatial solutions in the Commonwealth.

Initiative 5: Provide framework basemap data layers to augment the current orthophotography and road centerline data layers.

Initiative 6: Identify and develop innovative technical solutions.

The strategic planning process in Virginia was a joint effort of VGIN and its diverse stakeholder community. GIS stakeholders include the VGIN Advisory Board, VGIN staff, local government, state government, federal government, planning district commissions (PDCs), non-governmental organizations (NGOs), public safety, academia, the private sector, and the general public.

Planning Methods. VGIN collected and analyzed information from this diverse community through a variety of methods including:

- Meetings with VGIN staff
- One-on-one stakeholder interviews
- Online stakeholder surveys
- Regional town hall meetings and webinars around the Commonwealth

This approach provided the following key components of to the strategic plan:

- A big-picture view of the current state of VGIN's work and GIS in the Commonwealth, including its strengths and weaknesses
- A future vision for VGIN, one that aligns its day-to-day work, its mandate, and the many expectations from stakeholders
- A clear list of goals and initiatives for VGIN to focus on in the coming five years.

Meetings with VGIN Staff. VGIN staff supported the strategic planning process by validating the themes voiced by the geospatial community.

One-On-One Stakeholder Interviews. In general, stakeholders expressed a high level of satisfaction with the geospatial resources in the Commonwealth. Suggestions for improvements focused on better coordination of often disparate groups to avoid duplication of effort.

The Online Survey. To help identify priorities for the Commonwealth and direct tasks for VGIN, the stakeholder community was invited to participate in a 16-question online survey focused on attendance, GIS use in the Commonwealth, geospatial needs, and feedback to VGIN on how to improve services to the Commonwealth. In total, 167 individuals participated in the survey from local, state, and federal agencies, Planning District Commissions, NGOs, academia, the private sector, utility companies, and others. A majority of respondents were from local and state government.

Town Hall Meetings. These meetings were held at four locations (Culpeper, Richmond, Roanoke, Tidewater) across the Commonwealth and were the most valued component of the planning process. The meetings aimed to validate the themes and patterns voiced during the survey, articulate a long-term geospatial vision for the Commonwealth, and align VGIN's day-to-day work, mandate, and stakeholder expectations.

2.12.3 Project Outcomes

The Commonwealth of Virginia presented the following at the 2010 NSGIC Midyear Conference as “things that worked well”:

- According to the state coordinator, the Town Hall meetings were the most valued component to the process. In the Town Hall forum, stakeholders

discussed topics freely and provided the feedback necessary to help focus the plan.

Problems encountered during the project included:

- Just before the project commenced, the Commonwealth lost two champions for statewide geospatial coordination, the CIO and Secretary of Technology.
- The process for getting the contract approved took much longer than anticipated and slowed down the momentum set in place by the grant award.
- There was almost no project participation by the general public.

Implementation Plan. The strategic planning process and stakeholder feedback helped VGIN to prioritize the strategic initiatives. While all of the initiatives would provide value to the geospatial community in the Commonwealth, the following initiatives were deemed the highest priority and the plan recommended taking action in these areas first:

1. Provide Framework Basemap Data Layers to augment the current orthophotography and road centerline data layers.
2. Develop and maintain geospatial standards and best practices.
3. Oversee the development of a Commonwealth-wide geospatial clearinghouse that connects all levels of government and other VGIN stakeholders.

Although the project was just completed early this year (endorsed by the VGIN Advisory Board on January 6, 2010), the plan is considered a success by the community and the Commonwealth's geospatial coordinator. Part of this success may be attributed to the fact that the Fifty States CAP program had been in place for several years and the Commonwealth was able to learn from prior "classes" and take into account some of the key "lessons learned" during other strategic planning projects. For example, during the planning process the Commonwealth made stakeholder involvement a high priority

to ensure that the plan represented the diverse needs the entire community. This required that the stakeholder community be made aware of the plan and the need for their contribution long before the project was ever initiated.

The completion of the strategic plan has helped to focus and formalize efforts toward statewide “Coordination, Communication and Creative Services” among stakeholders and will provide valuable input to the Commonwealth’s business plan update.

2.13 West Virginia

West Virginia Association of Geospatial Professionals (WVAGP)

2.13.1 Prior to Project

Before the 2006 CAP grant, West Virginia statewide coordination had been hampered with too frequent changeover in formal state GIS Coordinators and significant gaps when no coordinator was in place. With that resolved as a result of the 2006 CAP grant, broader statewide coordination can be entertained. A 2008 survey indicated that 88% of the respondents indicated that government agencies starting, or wanting to start a GIS program do not have access to the knowledge or resources required to successfully implement one. The new GIS Coordinator is coordinating within the state to assist counties who in the past released GIS-related RFPs without sufficient GIS knowledge. Within the state, the GIS Coordinator is also working with the Tax Department and the Statewide Address and Mapping Board to prepare for Broadband Mapping stimulus funds. *“Without the formal coordinating body our state coordination stalls.”*

Formation of WVAGP was driven by what were identified as deficiencies in an August 2006 GIS Coordination Report. In 1992 the State developed a GIS Strategic Plan, and in 1993 recommendations in the plan were used by the Governor’s Office to issue an Executive Order to establish West Virginia’s statewide GIS program. The program was later funded in 1995 through provisions of House Bill 2222, that created the Mineral

Lands Mapping Program, and subsequently through other state and federal sources. The Executive Order established a GIS Coordinator, State Data Clearinghouse, and three coordinating bodies: a Policy Council consisting of cabinet secretaries to implement the State's GIS plan; a Steering Committee comprised mostly of geospatial leaders from state government and academia; and a GIS Users Group to serve as the vehicle for education, training, and information exchange among GIS users. Of these three coordinating entities, the Steering Committee has been the primary mechanism for advancing statewide spatial data infrastructure in West Virginia during the past decade. Political and technological changes over the previous decade have rendered many aspects of the 1993 Executive Order obsolete. In 2005, the statewide GIS community, after experiencing 10 years of rapid growth in the number of GIS professionals and services employed, collectively recognized that a new GIS coordination program was needed to more adequately serve the State.

2.13.2 Project Overview

In support of the Future Directions Fifty States Initiative, the State of West Virginia received 2006 funding from the Federal Geographic Data Committee's Fifty States CAP grant program to organize a new statewide coordinating structure and for developing strategic and business plans.

Receipt of the 2006 CAP grant positively impacted West Virginia geospatial coordination progress in two ways. First, the grant deadline caused the geospatial community to take action on planning and coordination tasks that would not otherwise have happened. Secondly the new WVAGP association would not have formed without the financial assistance to pay for expenses such as meetings, parliamentary fees for drafting bylaws, legal fees to attain nonprofit status, and website development.

There was healthy discussion on how to apply for and utilize the 2006 CAP grant funds. Ultimately West Virginia chose to form WVAGP so that coordination could be dramatically enhanced. The secondary benefit is that the association is now in place to

seek future funding and have a solid team to focus on re-authoring a now outdated 1993 GIS Strategic Plan.

2.13.3 Project Outcomes

The most visible direct outcome of the 2006 CAP grant is the formation of the West Virginia Association of Geospatial Professionals (WVAGP). WVAGP presents itself as a growing nonprofit organization for geospatial professionals involved in digital cartography, geographic information systems (GIS), Global Positioning Systems (GPS), land information systems, remote sensing, and other related geospatial technologies. Members of WVAGP include representatives from local, state and federal agencies, educational and research institutions, the private sector, and other professional organizations. The Charter Meeting was held in March 2007 where bylaws were approved, officers elected, and new member enrollment opened. In August 2007, WVAGP was designated a 501(c)(3) nonprofit by the IRS.

State geospatial coordination with the federal government over the last three years has had mixed results. The state works closely with its new USGS Liaison and this relationship has yielded positive results. FEMA and USDA coordination has improved, and USFS and State Park interaction has stayed consistent. Federal coordination with the USGS at the local level was identified to have dropped significantly. This was attributed to the loss of technical staff at the local USGS technical center offices due, perhaps to consolidation of the Mapping Centers. This has negatively impacted the state and their ability to enhance the National Hydrography Dataset and other core and supplemental framework data sets. Federal coordination is also hampered by the fact that West Virginia is not consistently classified by federal agencies. In some cases the state is designated as being in the Northeast and in some cases as being in the South. This was identified as a barrier to maintaining consistent coordination with a constant set of regional states.

In practical terms, West Virginia believes that most effective indicators of geospatial coordination progress are milestone projects. These are projects that have set outcomes, hard delivery dates, and when coordinating with Federal agencies, progress and deliverables are mandated.

The 2006 Fifty States CAP grant award to West Virginia was instrumental in forming the WV Association of Geospatial Professionals (WVAGP). On 3 February 2009, the WVAGP board adopted a resolution in support of legislation recognizing WVAGP. Overall, three years later, statewide and federal coordination has improved.