Date: 6 May 2011

Agreement Number: G10AC00175

Project Title: *Enhancement of the Mississippi GIS Strategic Plan for Underserved Communities*

Report: Final

Organization: Geosystems Research Institute, Mississippi State University, 2 Research Blvd, Starkville, MS 39759, http://www.gri.msstate.edu

Principal Investigator: Dr. David Shaw, 662-325-3570, DShaw@research.msstate.edu

Collaborating Organizations: Mississippi Automated Resource Information System, Mr. Jim Steil, 3825 Ridgewood Rd, Jackson, MS 39211, http://www.maris.state.ms.gov

Fairview Industries, Inc., Nancy Von Myer and David Stage, P.O. Box 100, Pendleton, SC 29670, http://www.fairview-industries.com

Executive Summary: The project was designed to collect the information needed to develop a strategy to close the GIS technology gap between the "have" and "have not" communities by identifying the underserved communities and the assets that can be used to assist them. This effort focused specifically on underserved communities and is complementary to the Mississippi Remote Sensing and GIS Coordinating Council's 2010 GIS strategic plan.

Of the 82 Mississippi counties eighteen (22%) either have a mature GIS environment or are in the process of implementing GIS. Two-thirds (53) of the counties currently use Computer Aided Design (CAD) software for mapping. Most of these counties rely upon private consultants to develop and maintain the CAD datasets. The remaining counties 11 counties use manual drafting of maps. These counties tend to be among the most rural locations in Mississippi.

Converting CAD datasets to GIS databases would be a significant step toward the development and use of geospatial databases as well as engaging local governments in managing their respective assets spatially. While not all counties will be candidates for adopting and managing GIS at the local level (due to lack of skilled GIS personnel, financial constraints or other limiting resources) there are options to expand GIS activities at the local level. Many of the underserved communities would be best served if they could receive GIS products as well as manage their data through multi-county GIS support centers.

Project Narrative: The project was designed to collect the information needed to develop a strategy to close the GIS technology gap between the "have" and "have not" communities by identifying the underserved communities and the assets that can be used to assist them. This effort focused specifically on underserved communities and is complementary to the Mississippi Remote Sensing and GIS Coordinating Council's 2010 GIS strategic plan.

Information compiled for this study was made possible through a subcontract to Fairview Industries, Inc. Their findings are appended to this document and provide detailed descriptions of the state of GIS at the municipality and county level in Mississippi. Concurrently, the second GIS strategic plan for Mississippi was commissioned by the Mississippi Coordinating Council for Remote Sensing and Geographic Information Systems (Coordinating Council). The combined effort provides a detailed view of the current state of GIS in Mississippi as well as recommendations for continued advancement of GIS technology and applications in Mississippi.

A thorough list of contacts of people knowledgeable of the development of geospatial databases and/or the use geospatial technologies was developed through interviews with state and local government personnel. The list of points-of-contacts may be found in the documents appended to this report. The points-of-contacts assisted in providing a thorough canvassing of existing and potential users of geospatial technologies. Although the list of contacts is a static document it does provide an immediate connection between the local government GIS community and the Coordinating Council. This connection was not possible prior to the community survey.

In the process of inventorying local geospatial databases members of the local GIS community were informed of resources available to them, such as Mississippi-based GIS training and existing geospatial databases residing at the Mississippi Geospatial Clearinghouse (http://www.gis.ms.gov). For approximately 5 years the Geosystems Research Institute at Mississippi State University has provided a variety of GIS workshops as well as free registration to employees of local and state government agencies in Mississippi. This outreach effort has been identified as the most extensive of its kind in the U.S. Workshops are typically conducted in the local area of the participants. GIS implementation assistance is available as well. The point-of-contact list will greatly assist in delivering GIS training to communities yet to participate in previous workshops.

Of the 82 Mississippi counties eighteen (22%) either have a mature GIS environment or are in the process of implementing GIS. Two-thirds (53) of the counties currently use Computer Aided Design (CAD) software for mapping. Most of these counties rely upon private consultants to develop and maintain the CAD datasets. The remaining counties 11 counties use manual drafting of maps. These counties tend to be among the most rural locations in Mississippi.

Next Steps: The Coordinating Council has not held a meeting since the completion of this project as well as the state GIS strategic plan. However, the Coordinating Council has scheduled a meeting in late May (2011) and placed both the strategic plan and this project on the agenda for review and discussion (all documents relating to these two projects have been electronically delivered to all members of the Coordinating Council).

While specifics on what action the Coordinating Council takes in the near future are unknown at this time it will certainly involve funding mechanisms to support geospatial data collection and management as well as delivering education and outreach programs to local governments, especially those identified in the survey as those identified as *underserved*. The training program already identified with the MSU Geosystems Research Institute will continue through remainder of the 2011 calendar year. Continuance is dependent on securing external funding to sustain the educational and outreach efforts. The GIS strategic plan contains recommendations for funding mechanisms to support the hiring of a geographic information officer, information technology and the continuation of the education and outreach activities.

At the local government level, especially in the very rural counties, the lack of computer skills can be a limitation to a technical workforce needed to support the use of geospatial technologies. Fortunately, many of the community colleges serving the rural areas are producing graduates with sufficient technical skills to upgrade the workforce with the necessary background to support GIS. Some of the community colleges offer, or planning to offer, courses in the geospatial technologies.

Converting CAD datasets to GIS databases would be a significant step toward the development and use of geospatial databases as well as engaging local governments in managing their respective assets spatially. While not all counties will be candidates for adopting and managing GIS at the local level (due to lack of skilled GIS personnel, financial constraints or other limiting resources) there are options to expand GIS activities at the local level. Many of the underserved communities would be best served if they could receive GIS products as well as manage their data through multi-county GIS support centers.

Feedback on Cooperative Agreements Program: The CAP Program made it possible for Mississippi to compile information on the state of the adoption and use of geospatial technologies at the county level and, most importantly, identify the underserved counties. Without the support provided by the CAP Program the inventory would have taken considerably longer and may not have been available in time to integrate the findings into the recently completed state GIS strategic plan.

Underserved Communities in Mississippi Strategies for Assistance

February 2011

This document was prepared as a product for the Federal Geographic Data Committee's CAP Grant, *Enhancement of the MS GIS Strategic Plan for Underserved Communities*.

By David Stage and Nancy von Meyer

This page intentionally left blank

Table of Contents

Introduction 2

Purpose and Benefits to the State 2
- **What and where are the underserved communities in Mississippi?** 3
  - Characteristics and Criteria for Identifying Underserved Counties 3
  - Political Consideration 9

Assistance to Underserved Communities 11
- **Objectives** 11
- **Challenge and Strategy** 11
  - Benefits to Communities 11
  - Benefits to the state 11
  - Assistance 11
  - Limitations 11
- **Types of Assistance** 12
  - Points of Consideration 12
- **Projects** 12
  - Inventory of spatial data assets 12
  - Spatially enabling communities 12
  - Providing supporting data 13
  - The importance of technical services 13
  - Improving the spatial quality of CAD maps 13
  - Conversion of CAD Maps to GIS 13
  - Hardware and Software 13
  - Moving to a GIS environment 13
- **Conclusion** 14

This page intentionally left blank

Introduction

This report is one of the products of a Federal Geographic Data Committee's CAP grant *Enhancement of the MS GIS Strategic Plan for Underserved Communities.* The project was designed to collect the information needed to develop a strategy to close the geospatial technology gap between the "have" and "have not" communities by identifying the "underserved" communities in Mississippi and to develop a strategy to improve their current situation. This effort was designed is complementary to the Mississippi Remote Sensing and GIS Coordinating Council's (Council) 2010 Strategic Plan.

The term "underserved" does not imply a failure to provide services, it is more of an indication of an under utilization of geospatial technologies. The author's are uncomfortable with the terms "underserved" and "digital divide" and feel that a term such as *spatial capabilities* of an organization would be a better descriptive term. For the purposes of this report the term "underserved" will be retained for consistency with the grant description but the reader should be aware that the authors see a continuum of the use of spatial information that spans from the use of hard copy maps, through mapping technologies such as CAD to the use of geographic information systems (GIS) and that there is a proven path that can be followed to take ever increasing advantage of the use geospatial data.

The benefits to local governments of geographic information systems (GIS) technology, which uses location as a basis to organize and analyze information, are extensive, but to reap these benefits GIS technology needs to be fully utilized throughout an organization. Underserved communities may have little to some access to some GIS data sets and may even be using automated mapping for a few departments. It needs to be recognized that having access does not necessarily require that they maintain all components of the technology in-house.

A fundamental goal of any state GIS program is to minimize the duplication of effort and to maximize the use of GIS technology and data to the benefit of the state. To fully achieve this goal all communities need a ready pathway to participate in the full utilization of geospatial technologies. This document provides a description of the extent and degree of geospatial underserved communities in Mississippi and some approaches to addressing the geospatial needs of those communities to realize the full benefits of GIS technology.

Purpose and Benefits to the State

An inventory Mississippi's geospatial assets of state, local and federal agencies made it possible to characterize underserved communities in Mississippi. Criteria were developed to describe underserved communities as well as an assessment of the issues these communities face in becoming an integral part of Mississippi's geospatial infrastructure. The National States Geographic Information Council (NSGIC) GIS Inventory (RAMONA)[1], in conjunction with the Mississippi Geospatial Clearinghouse[2] and Mississippi Automated Resource Information System (MARIS)[3], were used to collect and manage the inventory of available information. Maintaining the inventory will be an essential component of

---

[1] NSGIC GIS Inventory, Internet, 2011, http://www.gisinventory.net/
[2] MS GIS Clearinghouse, Internet, 2011, http://www.gis.ms.gov/Portal/
[3] MARIS, Internet, 2011, http://www.maris.state.ms.us/ß

Mississippi's overall strategic planning effort because it provides a sustainable base line of information that can be used to monitor progress of the state's geospatial strategic plan. The inventory is an open system that can be managed by a state designated official and it allows the entire user community to provide submissions and updates for their respective organizations including the public and private sector.

One of recognized shortfalls of the Ramona system is its ability to capture metadata that follows the current FGDC standards. This is remedied by providing either an online link to existing metadata or attaching a metadata document to the county or state that contains the standardized metadata. This approach reduces duplicative data entry and resolves the access to standardized metadata issue.

To maximize the benefit of GIS technology across the state, Mississippi will need participation from local, state and federal agencies. A maintained inventory of geospatial assets will provide Mississippi with a monitoring tool to identify areas of need, to track progress toward full participation and to identify and utilize assets and reduce duplicative activities. For the State of Mississippi, having a complete understanding of the state's GIS resources that are readily accessible will improve the ability to manage future expenditures and resource allocation, identify sources of support for local agencies without GIS programs, and better deliver educational and technical support resources.

What and where are the underserved communities in Mississippi?

Underserved communities, in the context of the GIS technology and this project, are county level government entities which are not able take full advantage geospatial technology because their capabilities of supporting this technology are challenged. This is not to ignore the needs and challenges faced by municipalities but the cities and incorporated areas often work closely with the counties with the exception of the larger urban areas. As the inventory is maintained and developed over time municipalities should be added to the analysis.

The underserved counties are mostly rural with populations of less than 35,000. Some are able to address their *minimal* business requirements using a variety of mapping technologies, including manual mapping, but their information and data assets are not structured to allow these assets to be integrated and provide them with the benefits of an enterprise technology.

Typically these counties do not have staff that is trained in GIS software, do not have in-house information technology support, and do not maintain internal servers for database management. In many cases the computer hardware, software and operating systems that is used in the underserved counties is one or more generations behind the currently available platforms and they typically do not have a planned technology upgrade program. These communities often rely on hard copy products more than their counterparts and even though they may have automated mapping technology (CAD) they rely significantly on the technical support of vendors.

Characteristics and Criteria for Identifying Underserved Counties

The level to which a county was geospatially accomplished, and hence the degree to which it was considered underserved, was assessed by evaluating four business areas that included: *the geospatial capability of* ***address*** data***;*** the degree to which ***parcel mapping*** used geospatial technologies***;*** the degree to which ***GIS*** technology was utilized in an organization*; and the* ***GIS technical capability*** of the organization. There are varying degrees of implementation within each "level" providing different opportunities to the counties as well as a corresponding degree of support or assistance to take full advantage of the technology. The following provides a brief description of these business areas and what is typically found in communities that do not have enterprise systems.

Addressing is used by 911 and is associated with emergency response and has been around since the 1970's. The data are often in a digital format and consists of street names and address ranges. Sometimes automated dispatch systems are being used to assist with the visualization of call locations. In communities that would be considered *have's*, the addressing systems use or are supported by GIS technology that provide numerous advantages for routing and on-vehicle technology. This contrast sharply with the underserved communities that typically rely on vendor generated address files and do not make their own updates to the digital addresses or road centerline data. Error reporting is often a hard copy processes (see Table 1). Even when they are in a digital format they are less than compatible with GIS for a wide variety of reasons that range from technical to procedural and organization policies.

Parcel mapping tends to be the area where GIS technology first occurs in a county. It is used in the Tax Assessor's office for parcel mapping, real estate inventory management and over time it becomes a tool for integrating different business operations. There are degrees of parcel mapping capabilities that can exists in local government that provide different opportunities for taking advantage of spatial data technology. There are still counties in Mississippi that manually map their parcel data but most counties utilize CAD technology in one form or another. In the underserved communities, vendors often do the mapping and provide either hard copy or a finished digital copy to the county. Some counties have non-GIS based automated mapping in-house and outsource portions of the mapping on an as needed basis. The maps maintained in these non-GIS mapping environments, typically AutoCAD or Microstation, can be converted to a GIS format but the quality of the exported files is dependent on the spatial accuracy of the original conversion from hard copy maps to CAD and the subsequent maintenance of the digital maps. There are sometimes issues related to coordinate systems and projections as well as map sheet based systems that create a separate file for each map sheet that makes it difficult to construct a single countywide parcel database and GIS database.

GIS utilization is divided in three levels. There are nuanced differences among and within these levels that provide for subcategories. Three categories were used to identify progress towards the full utilization of GIS in Mississippi counties.

> *Developed GIS:* There are eighteen counties (18) that have or are in the process of implementing GIS. Generally these counties are also maintaining street centerline data, purchase orthophotography, and once a parcel layer has been developed, they tend to develop master address files that support 911 as well as other county business operations.
>
> *Non-GIS computer mapping or Computer Aided Design (CAD):* There are a considerable number of counties, fifty-three (53) that are using CAD technology for mapping and are working with vendors to assist them with the technology. There are approximately twenty-five (25) of these fifty-four counties that have vendors publish their digital CAD parcel data on the Internet for public query and viewing.

Manual mapping: There are ten (11) counties that were identified as having no digital mapping. These counties are among the most rural with the fewest amounts of development activities.

Table 1 GIS Utilization in Mississippi

GIS Utilization	Counties	Percent Counties	Parcels**	Percent Parcels
Developed GIS*	18	22%	761,048	41%
Non-GIS mapping (CAD)	53	65%	931,426	51%
Manual mapping	11	13%	145,434	8%
Total	82	100%	1,774,724	100%

* Three counties began their parcel conversion in 2010

** Parcel counts based on 2009 DOR annual report

Table 2 County population and technology used for parcel mapping.

Parcel Map Maintenance Technology	Average	Median	Min	Max	County Count
GIS Counties	83,386	49,980	10,755	247,631	15
GIS + Conversion	73,725	40,398	10,755	247,631	18
Converting to GIS 2011	25,423	25,732	15,291	35,245	3
CAD	26,736	21,661	7,981	81,913	53
Manual	18,901	14,422	1,612	48,175	11
				Total Counties	82

Table 2 shows the technology that is being used in counties in Mississippi and the range of population of the counties.

GIS Technical Capability is a measure of the capability of the county to develop and sustain a GIS operation. It is not possible to simply buy the technology and expect success. There needs to be available resources, organizational willingness and the necessary skill sets in the organization to support the GIS operation. The authors found that non-GIS mapping technology and GIS technology were compatible and interoperable within the same office. It was observed that several counties were successfully implementing strategies of automated mapping in CAD environments and are converting those maps into a GIS compatible format for more robust analysis. The availability of on-line parcel maps with query functionality from twenty-five CAD counties is one example of how this is happening. It is essential to recognize these mixture technologies and to work this into the strategy for addressing the needs of the underserved communities.

Table 3 Levels of GIS expertise

GIS Technical Capability	Description	Example
Viewer	View maps to address a business need	Field work: Maps provided to identify sites for data collection (address ranges), data collected and provided to data manager to update files
Reporter	View files and create reports	Able to utilize a structured application for search and query and produce reports and print maps
Analyst	Manage software to manipulated data sources	Higher level user that can combine data files in new ways for customized reporting and mapping
GIS expert	Collect and integrate data, manage data structures and data integrity	Trained GIS manager or technologist can construct new data sets and manage GIS databases.

Table 3 uses a combination of GIS utilization, parcel mapping, addressing and GIS technical capability to describe the degree to which an organization is considered underserved. Again these are not hard and fast boundaries and the levels are only used as indicators to help define the level of assistance needed as well as identifying opportunities to build to improve the technical infrastructure in these counties.

Table 4 (this is listed as Table 3 on the next page) on the following pages provides a breakout of the different levels of GIS technical capabilities that were observed at the county level. It is assumed that all communities could utilize GIS technology but the level of expertise that is needed in-house can reasonably range across the following levels: viewer, reporter, analyst and GIS expert. The degree of support provided by external sources and within an organization varies accordingly.

Table 4 Level of County Underserved Status

Level	GIS Utilization	Parcel Mapping	Addressing	GIS Technical Capability
1	Manual Mapping	Manual mapping in-house	Manual or outsourced	Limited
2	Manual Mapping	Out source digital map creation, hard copy maps provided to organization	Manual/outsourced Manual or outsourced	Limited
3	Non-GIS computer mapping	Outsource all mapping	Manual or outsourced	Viewers
4	Non-GIS computer mapping	Non-GIS mapping in house, outsource mapping during peak periods	Manual or outsourced	Reporters, analysts and non-GIS mapping experts
5	Non-GIS computer mapping	All non-GIS mapping in-house except for special projects	Partially automated	Analysts and non-GIS mapping experts
6	Developed GIS	GIS Outsourced	Partially automated	Analysts and non-GIS mapping experts
7	Developed GIS	Parcels internally managed, GIS outsourced GIS exports	Automated addressing data used, maintenance outsourced	GIS experts and analysts
8	Developed GIS	Internally managed	Digital files available	GIS experts
9	Developed GIS	Internally managed	Managed in GIS	GIS experts

The indicators for underserved communities are in the red colored row (1); the yellow colored rows (2-6) are underserved in transition and the green colored rows (7-8) are developed and not underserved.

Based on the inventory conducted for this project Mississippi's counties were classified according to their level or degree of underserved status. All nine levels were not used in the initial classification of the counties because of insufficient information for the status of the addressing systems, which will require a more detailed analysis. Figure on shows the location of the counties in the state.

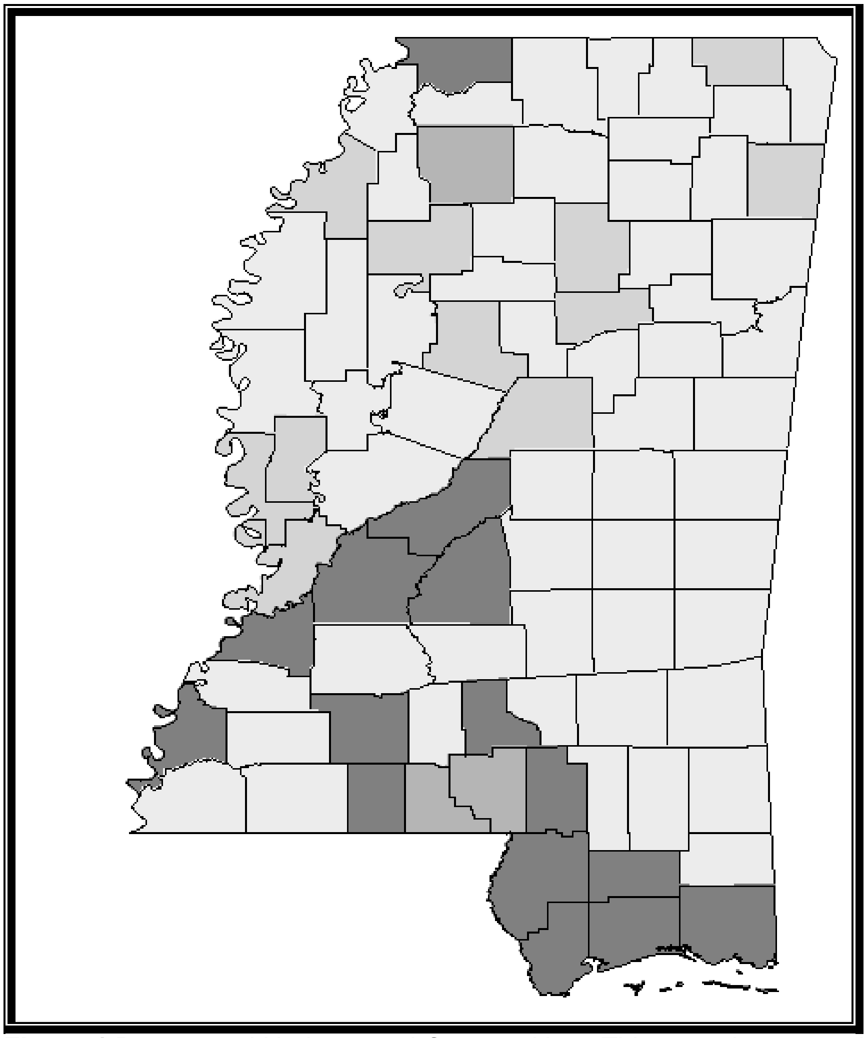

Figure 1 Parcels and Underserved Communities. This maps illustrates the distribution of counties with digital parcel data; Green – GIS mapping (15); Teal - in the process of converting to GIS (3); Yellow – using CAD to manage their parcel maps; Gray – manually maintaining their parcel maps.

Political Consideration

The cost of adopting full GIS capabilities can be significant and a full implementation of GIS requires a complete reorganization of an institutions business operations. When an office or department moves to upgrade to GIS technology there is a need for funding that is outside of the regular budget. This requires that the budget request goes to the County Commissioners. One of the first questions the Commissioners ask is “Can you meet your business needs without the GIS?” Often the answer is yes and the request for funding is no. Thought should be given to a strategy that involves smaller steps rather than requiring an organization to make a “giant leap”. Some examples of small steps for organizations to take that will allow them to more readily reap the benefits of GIS technology include creating spatially accurate CAD mapping files, structuring CAD data so they can be more easily exported into GIS format, and providing external web based services for viewing, reporting and analysis. All of these would provide direct benefits for the counties as well as Mississippi’s state GIS program.

The levels of underserved status are only used as indicators of progression. Developing pathways to successful implementation is the opportunity in Mississippi. Given the tight and limited budgets and the need for political will in local government to support a local GIS program, the strategies for development and service need to recognize these realties and expect incremental progress not wholesale conversion.

If the non-GIS counties can convert their data into shape files and link the mapped data to the attribute data are combined with the counties that have full GIS capabilities there are 68 counties that represent 92% of the parcels that have digital maps that could be published in a format that is usable in GIS. It is understood that there is considerable variation in the accuracy of the data and a qualitative assessment will need to be completed, never-the-less it is reasonable to assume that there is a considerable amount of digital data that is available in Mississippi that can be brought into a GIS environment.

This picture represents a large untapped potential for Mississippi's GIS Program. The size and need of the underserved communities should not be viewed as an overwhelming obstacle that can not be overcome, but rather as opportunity to move Mississippi into the upper tier of states that are taking advantage of GIS technology as an enterprise system and the advantages that it can provide. Bringing the underserved counties along and expanding the utilization of existing data will increase the efficiency of decision-making in Mississippi and identify opportunities that result in cost avoidance and costs savings.

Assistance to Underserved Communities

Objectives

- Assist counties with migration from non-GIS based mapping toward the use of enterprise GIS technology.
- Provide counties with access to GIS data and applications needed to support their business operations.
- Provide framework data available from Mississippi's geospatial infrastructure.

Challenge and Strategy

Benefits to Communities

- Improved efficiency
- Cost avoidance
- Staff development

Benefits to the state

- Utilization of locally collected and maintained data
- A broad based GIS community
- Increased efficiency in government
- Improved emergency response
- Expand clearinghouse data holdings

Assistance

- Technical and Educational Support
- Data collection support
- Providing data that exists to the County
- Build a statewide GIS Community
- Access to Technology
- Demonstrate benefits

Limitations

- Political will
- Institutional will
- Finances
- Coordination

Types of Assistance

The types of assistant will evolve over time. Funding is always an obvious need but there are many things that can be done with existing resources.

Points of Consideration

Before assistance is provided to any organization both the County and the providing organization should reflect on these points.

- Ideally assistance should be part of local government's strategic plan. Each county should develop a strategy for moving themselves up the ladder. Support for county strategic planning could include access to a designated state level expert and/or a template for a county strategic plan that could be completed by the county.
- As a part of any assistance the local government should sign on to the project with clearly identified roles and responsibilities. They should also have some required inputs to make sure all parties are contributing to the efforts.
- Projects will need to be customized to the capability of the local governments.
- Recognize the different capabilities of each government entity, meaning that some organizations would be best served to be *viewers* or *reporters* of the technology while others are positioned to maintain some level of *GIS expertise* in-house.
- Recognize that for some communities it will be more effective to utilize or build capability at the regional or state level or through a vendor than try to implement it at the local level.
- Improving or providing technical capability to regional organizations or a state service center may be a cost effective approach for supporting local governments.

Projects

The following are some examples of projects that could be a part of the plan to support the underserved counties.

Inventory of spatial data assets

Maintaining the GIS inventory is critical to monitoring local government activities and identifying opportunities for cooperative efforts. Using NSGIC's GIS inventory provides an inventory and management tool that is readily available. This tool includes an option to capture planned data collection activities. Although the Mississippi Department of Environmental Quality (DEQ) has built a portal to track planned projects, the NSGIC Inventory provides a tool that tracks existing and planned data activities.

Spatially enabling communities

With seventy one (71) counties having parcel data in a digital format, evaluating and exporting that data into a GIS format would allow the Planning and Development Districts as well as the other regional agencies and state agencies to have a data set that greatly helps the local governments meet business needs where they could see direct cost savings. Projects of this nature would include addressing, audits of billing services, emergency response and more. [4]

---

[4] Nancy von Meyer and David Stage, *State of Mississippi, Benefits Vignettes for Geospatial Strategic Plan*, December 2010

Providing supporting data

Parcel data provides intelligence to orthoimagery products and other data sources. Providing local governments with a package of available framework data sets would expand the utility of the parcel data layer. Currently MARIS provides a spatial data package for each county. This data could be reviewed and improved as identified by the local governments data needs in their strategic plans.

The importance of technical services

Technical services could be provided by MARIS, the Geosystems Research Institute, regional and state agencies/institutions to mentor the underserved communities. This would include providing educational opportunities as well as technical consultations to assist them through the morass of technical decisions that they will need to improve their geospatial infrastructure. This could also include developing standard hardware specifications, sample requests for proposals for data acquisition and data publishing questions or concerns.

Improving the spatial quality of CAD maps

CAD maps have the capability of being spatially accurate representations that can be exported into a format that can be incorporated into a GIS. Over fifty of the counties in Mississippi do their mapping in a CAD environment. Providing them with the knowledge and assistance to create more spatially correct maps will be a major step forward to making their existing CAD maps ready for export into a GIS format or for conversion into a GIS environment.

Conversion of CAD Maps to GIS

Most of the mapping the CAD counties or has been associated with the vendor community. It would be reasonable, both in time and costs, to have this data evaluated for utility according to spatial accuracy and if it meets the necessary quality standards it can be exported into a format that can be used in a GIS. This would provide a very valuable update for the State agencies as well as enabling local governments to have access to GIS products.

Hardware and Software

There are programs supported by GIS vendors to provide hardware and software to underserved communities. The Council should work with these companies to identify county and city governments that would profit from these grants. Having a county geospatial strategic plan is essential part of evaluating the readiness of a local government to benefit from this opportunity.

Moving to a GIS environment

Each county should be evaluated to assess what level of GIS the county should strive to implement. Should they fully implement a GIS environment, maintain staff and the software licenses or would it be better to have a scaled down operation? Can the local governments purchase or even obtain GIS licenses from Enterprise License Agreements. Several states have gone to this approach and are able to provide local governments with current versions of GIS software at no cost to the county. The county in turn provides the data sets they maintain at no cost to the state. It needs to be recognized that only the “less underserved” communities are able to benefit from this arrangement.

The state and the counties should look carefully at the options in consultation with the private sector to evaluate the most cost effective strategy. The state’s engagement in the process is important on two points, first it helps state agencies understand what needs to be done and secondly it helps the counties understand how the locally generated data is a benefit to the county and to state agencies.

Conclusion

Underserved communities, in the context of geospatial technology, refer to those organizations that are not able to take full advantage of GIS as an enterprise and integrating technology. Four business areas were identified as being indicative of the geospatial capability of a local government: the degree to which ***parcel mapping*** uses geospatial technologies***;*** the geospatial capability of ***addressing*** system***;*** the degree to which ***GIS*** technology is utilized in an organization*; and the* ***GIS technical capability*** of the organization.

The authors recognize a continuum of spatial technology that ranges from hard copy maps, linear referencing systems, CAD and GIS and that there is a progression of readiness to use each of these technologies as well as a path through these different systems to the use of GIS as an enterprise system. It is important to understand that there is more than providing hardware and software to a local government in the creation of an enterprise GIS and there are limits as to what some communities can achieve. Many of the underserved communities would be best served if they were simply the product recipients of GIS technology and the management of the technology took place at a “regional center” where managing the business operations of several small governments would be cost effective. Taking small steps to position an organization to take advantage of the assets that they have is a valid approach. The authors have found in the project as in others is that parcel mapping is typically where GIS first begins to institutionally take root at the local government level. Fifty-three of the counties in Mississippi are using CAD technology to manage their parcel mapping. In many cases these data can be exported into a format that can be used in a GIS. Currently there are eighteen of eighty-two counties in the state that use GIS that represent 42% of the parcels in the state. If the digital non-GIS mapping data from the other fifty-three counties could be exported to GIS, and the authors recognize that there are challenges here, it would represent 92% of the parcels in the state which would be above the national average of 82%. There is much that can be done to enhance the export process and product that would provide immediate GIS capability to the local governments as well as the state. A strategy of small wins by improving the readiness of counties to use GIS technology is a reasonable, cost effective and doable strategy for Mississippi.

Mississippi GIS Inventory Data Collection Report

February 2011

This document was prepared as a product for the Federal Geographic Data Committee's CAP Grant, *Enhancement of the MS GIS Strategic Plan for Underserved Communities*.

By David Stage and Nancy von Meyer

This page intentionally left blank

Data Report
MS GIS Inventory

Table of Contents

Introduction 1
Appendix A: Status of Local Government GIS 3
Appendix B: Contacts 6
Appendix C: Data Inventory 10
County 10
City 20

This page intentionally left blank

Introduction

This report is one of the products of a Federal Geographic Data Committee's CAP grant *Enhancement of the MS GIS Strategic Plan for Underserved Communities.* This portion of the project was the statewide inventory Mississippi's geospatial infrastructure (state, local and federal). The information collected was used to do two things: to provide and inventory of the states geospatial assets and to develop criteria to describe underserved communities and the assets that can be brought to bear on their issues. The NSGIC GIS Inventory (RAMONA) (http://www.gisinventory.net/) was used to collect, manage and publish that information. This effort was designed to be complimentary component of Mississippi's overall strategic planning effort by providing a sustainable base line of information that can be used to monitor progress of the state's geospatial strategic plan.

The expected benefits for the State of Mississippi is that the inventory will provide a better understanding of the state's GIS resources by making that information readily accessible in the GIS inventory. This will provide the information needed to improve the states ability to manage future expenditures and resource allocation, identify sources of support for local agencies without GIS programs, and better deliver educational and technical support services.

State and local governments were contacted for sources of geospatial data and staff were interviewed to identify their organizations spatial data assets. Web sources were identified and also reviewed for available data sources. The data was limited to authoritative data, meaning that the source was the creator of the data for a business need within their organization. The objective was to avoid duplicative entries into the system either in the form of statewide data such as the 2006 orthoimagery that was being used by many of the counties or compilations of data, known as shadow data, by third parties that were duplicative of the authoritative source. This meant that organizations such as the Planning and Development Districts (PDD) that do have GIS were not included as data sources because as the PDD's emphasize themselves, they are consumers of data created by local and state agencies and not producers.

The project report is divided into two different areas; contacts and data. A list of each is provided in the appendix. The reports are limited as to the content that is included simply because of space. To get access to all of the information it will be necessary to go to the GIS Inventory site and review the data that was collected.

A summary report of the status of GIS technology at the local government level has also been included. This is the result of the work that was done to identify the underserved communities.

Issues: The GIS Inventory has been undergoing revisions since December or 2010. Although there have been significant improvements in the site, there are still some problems that have yet be resolved and as a result we have not been able to get all of the reports that are needed. The contacts are based on late December 2010 and are not the most current. We have not been able to get a report by statewide geographic coverage because we were not able to get access to the data. That should be resolved in the by the end of March and a follow up report will be provided.

Results: Currently there are three hundred and sixteen records of state and county data are in the database. Some of the data entry was provided by local governments but most was collected as a result of the inventory and edits were made of some independent entries where needed.

Data analysis: With the information that was available it was possible to determine the use of GIS technology by local governments. Appendix A provides complete results of that analysis.

Table 3 The use of geospatial technology by county population

Parcel Map Maintenance Technology	Average	Median	Min	Max	County Count
GIS Counties	83,386	49,980	10,755	247,631	15
GIS + Conversion	73,725	40,398	10,755	247,631	18
Converting to GIS 2011	25,423	25,732	15,291	35,245	3
CAD	26,736	21,661	7,981	81,913	53
Manual	18,901	14,422	1,612	48,175	11
				Total Counties	82

Appendix A: Status of Local Government GIS

County	Spatial Data Technology	Population 2009	Parcel Count 2009
Adams	GIS	30,722	17,528
Claiborne	GIS	10,755	7,877
De Soto	GIS	158,719	69,003
Hancock	GIS	40,962	50,692
Harrison	GIS	181,191	99,986
Hinds	GIS	247,631	113,525
Jackson	GIS	132,922	82,498
Jefferson Davis	GIS	12,543	13,340
Lamar	GIS	49,980	29,905
Lincoln	GIS	34,830	23,898
Madison	GIS	93,097	47,506
Pearl River	GIS	57,860	41,758
Pike	GIS	39,834	25,122
Rankin	GIS	143,124	70,948
Stone	GIS	16,619	11,945
Marion	IP	25,732	18,823
Panola	IP	35,245	23,241
Walthall	IP	15,291	13,453
Calhoun	Manual	14,422	13,246
Carroll	Manual	10,278	10,014
Coahoma	Manual	26,936	15,922
Itawamba	Manual	23,000	15,784
Warren	Manual	48,175	25,649
Webster	Manual	9,852	9,447
Alcorn	Manual	35,822	20,847
Attala	Manual	19,755	16,191
Issaquena	Manual	1,612	2,827
Sharkey	Manual	5,420	4,728
Tallahatchie	Manual	12,638	10,779
Amite	CAD	13,038	15,165
Benton	CAD	7,981	8,274
Bolivar	CAD	36,766	23,261
Chickasaw	CAD	18,683	12,813
Choctaw	CAD	9,023	8,813
Clarke	CAD	17,207	15,813
Clay	CAD	20,722	12,568
Copiah	CAD	29,094	20,431
Covington	CAD	20,544	15,273
Forrest	CAD	81,078	39,474
Franklin	CAD	8,324	9,023
George	CAD	22,681	16,765
Greene	CAD	14,352	11,955

County	Spatial Data Technology	Population 2009	Parcel Count 2009
Grenada	CAD	23,046	15,327
Holmes	CAD	20,290	15,068
Humphreys	CAD	9,809	7,508
Jasper	CAD	17,940	18,177
Jefferson	CAD	8,928	7,950
Jones	CAD	67,776	37,518
Kemper	CAD	9,833	11,450
Lafayette	CAD	43,975	25,919
Lauderdale	CAD	79,099	44,314
Lawrence	CAD	13,308	12,301
Leake	CAD	23,132	15,388
Lee	CAD	81,913	39,732
Leflore	CAD	34,563	16,562
Lowndes	CAD	59,658	29,851
Marshall	CAD	36,900	24,226
Monroe	CAD	36,905	27,195
Montgomery	CAD	11,129	10,151
Neshoba	CAD	30,302	18,136
Newton	CAD	22,568	16,237
Noxubee	CAD	11,631	9,581
Oktibbeha	CAD	44,544	19,932
Perry	CAD	12,035	10,396
Pontotoc	CAD	29,248	18,177
Prentiss	CAD	25,709	16,634
Quitman	CAD	8,391	8,229
Scott	CAD	29,314	19,376
Simpson	CAD	27,920	19,763
Smith	CAD	15,826	15,192
Sunflower	CAD	29,610	16,071
Tate	CAD	27,337	16,077
Tippah	CAD	21,661	16,376
Tishomingo	CAD	19,034	16,107
Tunica	CAD	10,436	6,367
Union	CAD	27,263	17,749
Washington	CAD	54,616	30,718
Wayne	CAD	20,654	15,566
Wilkinson	CAD	10,143	9,915
Winston	CAD	19,309	15,125
Yalobusha	CAD	13,773	12,241
Yazoo	CAD	27,981	19,196
Total		2,951,969	1,837,908
GIS	15		
GIS Conversion In Progress	3		
CAD Mapping	53		

County	Spatial Data Technology	Population 2009	Parcel Count 2009
Manual Mapping	11		
	82		

Appendix B: Contacts

Last Name	First Name	Organization Name	Title
Adair	Pat	Lowndes County	Cadastral Contact
Allen	Jack	Sunflower County	Tax Assessor
Ambrose	Stephen	NASA	Program Manager
Andre	Lance	eGPS Solutions	Product Manager
Atkins	Reynolds	Adams County	Tax Assessor
Balam	Sarah	Flood Plus Insurance Agency	Underwriter
Baldwin	Charles	Simpson	Tax Assessor
Ball	Calvin	Humphreys County	Cadastral Contact
Barksdale	Ray	Mississippi Department of Transportation	GIS Manager
Barnes	Paul	Southern Mississippi Planning and Development District	GIS Manager
Bates	Lindell	Sanborn	Regional Sales
Bolen	Wilburn	George County	Tax Assessor
Box	Robert	Panola County	Cadastral Contact
Braidic	Brian	Sempra Global	Project Analyst
Brasell	Joyce	Northwest Mississippi Community College	Director, Workforce Planning And Development
Brinkley	Kathy	Northeast Mississippi Planning and Development District	GIS Technician
Buchanan	James	Mississippi Forestry Commission	Spatial Technology Forester
Buckley	Mike	Marion County	Cadastral Contact
Carr	Chuck	Central Mississippi Planning and Development	GIS Manager
Carr	Christopher	Metropolitan Planning Organization	GIS Specialist
Carroll	Linda	Perry County	Tax Assessor
Cecere	Thomas	USGS	Lrs Requirements Coordinator
Champlin	Steve	Mississippi Department of Environmental Quality	GIS Contact
Charmichael	Penny	Oktibbeha County	Cadastral Contact
Clark	Robin	Winston County	Cadastral Contact
Clarke	James	DCP Midstream	GIS Analyst
Coffee	Amos	Holmes County	Cadastral Contact
Cooper	Lance	Rankin County BOS	GIS Director
Cothern	David	Amite County	Cadastral Contact
Cowart	Franz	Michael Baker Jr., Inc.	Client Services/Project Manager
Cunia	George	Hybridica, inc.	Manager
Davis	Myra	Scott County	Tax Assessor
Donovan	Sean	Department of Homeland Security	GIS Manager
Eaton	Steve	Prentiss County	Tax Assessor
Estes	Cheryl	Washington County	Cadastral Contact

Last Name	First Name	Organization Name	Title
Fields	Betty	Tunica County	Tax Assessor
Fioranelli	Drew	City of Asheboro	GIS Specialist
Griffin Jr.	Quitman	Forrest County	Cadastral Contact
Haertlein	Albert	SG Interests	Geologist
Halloway	Kim	Monroe County	Cadastral Contact
Hanks	Matt	Desoto County	GIS Director
Harris	Mary	CenturyLink	Cad Designer I
Helton	Debra	Greene County	Tax Assessor
Hennington	Gary	Information Management Systems, Inc.	President, Information Management Systems, Inc.
Hennington	Gary	Mississippi Department of Environmental Quality	GIS Manager
Herrington	Hope	Clarke County	Tax Assessor
Hilburn	Peggy	Walthall County	Tax Assessor
Hillmer	Casey	Marshall County	Cadastral Contact
Holland	Ken	Gulf Regional Planning Commission	GIS Manager
Howland	Greta	Howland Services LLC	
Howse	Michael	East Central Planning and Development District	GIS Specialist
Hudspeth	Lynette	Benton County	Cadastral Contact
Hutchins	Peter	Mississippi DEQ	
Ishee	Pattie	Jasper County	Tax Assessor
Jackson	Robert	Mississippi Emergency Management Agency	GIS Coordinator
Jackson	Bob	Harrison County	GIS Manager
Jackson	Samantha	Jefferson County	Tax Assessor
James	Wevelyn	Wilkinson County	Tax Assessor
Jones	Jason	NASA DEVELOP Student Program	Intern
Jordan	Larry	Malcolm Pirnie	Geologist
Jose	Brain	Factual Data Flood	
Kuyu	Kagan	FEMA Map Mod - RMC 4	Geospatial Data Coordination Lead - Rmc 4
Ladner	Beverly	Yazoo County	Tax Assessor
Lampe	Phil	dba GIS/CAD Services	Sole Proprietor
Lehrman	Lawrence	U.S. EPA Region 5	Environmental Engineer
Lewis	Mike	Neshoba County	Tax Assessor
Lloyd	Jay	North Delta Planning and Development District	GIS Technician
Lusk	Denise	Bolivar County	Cadastral Contact
Martin	Allen	Martin Consulting	President
Martin	Becky	Smith County	Tax Assessor
Martinolich	Kathy	Radiance Technologies/NCDDC	Metadata Specialist
Mcafee	Scott	FEMA - Mitigation Division	
Mccarty	Jerry	Michael Baker Jr. Inc.	Project Manager - Fema Map

Last Name	First Name	Organization Name	Title
			Modernization
Mccullouch	Brent	MSNG	Deputy J2
Mckinnon	Warren	Mississippi StateTax Commission	GIS Contact
Mcwhirter	Van	Pontotoc County	Tax Assessor
Mcwhorter	Gerald	Mississippi Secretary of State	Assistant Secretary Of State, Public Lands Div.
Melton	David	Grenada County	Tax Assessor
Mickens	Emmett	Noxubee County	Tax Assessor
Mickey	Kevin	The Polis Center	Director, Professional Education And Outreach
Mize	Jacqueline	NCDDC	Metadata Specialist
Moody	Solomon	Pearl River County	GIS Director
Mooney	Todd	Copiah County	Tax Assessor
Mooneyham	Dale	Chickasaw County	Tax Assessor
Mooneyham	David	The University of Southern Mississippi	GIS Director
Mullins	Jeff	Franklin County	Tax Assessor
Murphy	Brian	Northrop Grumman	Business Development Rep
Nimrod	Peter	Mississippi Levee Board	Chief Engineer
Pack	Kelly	Rails-to-Trails Conservancy	Trail Development And Outreach Coordinator
Park	Kent	Fugro EarthData, Inc.	Business Development
Parrish	Wanda	Jones County	Cadastral Contact
Patterson	James	Lamar County	Tax Assessor
Perry	Leon	Lincoln County	Cadastral Contact
Perry	Gennie	Claiborne County	Cadastral Contact
Polly	Randall	Energy Management & Services Co.	GIS Manager
Prejean	Heath	MS ITS	GIS
Raphael	Dwayne	Hancock County	GIS Coordinator
Ray	Lynn	Choctaw County	Tax Assessor
Reno	Rhonda	Tippah County	Tax Assessor
Richards	Debbie	Wayne County	Tax Assessor
Robertson	Jocelyn	Kemper County	Tax Assessor
Romedy	Randall	Mississippi Forestry Commission	GIS Coordinator
Rooney	Paul	FEMA - Risk Analysis Branch	
Ryan	Kevin	VersaTrans Solutions, Inc.	Director Of Client Services
Samson	Scott	MIssissippi Coordinating Council for Remote Sensing and GIS	Extension Professor
Sanders	Mike	Clay County	Cadastral Contact
Sanford	Toby	Golden Triangle Planning and Development District	GIS Manager
Seal	Geraldine	Newton County	Tax Assessor
Sears	Lonnie	eGPS Solutions, Inc.	President
Sema	Robert	Jackson County	GIS Director

Last Name	First Name	Organization Name	Title
Shepherd	Steve	Shepherd Land Co.	Manager
Sheppard	Bill	Yazoo Mississippi Levee Delta District	GIS Manager
Shuffield	Linda	Yalabusha County	Tax Assessor
Simpson	Alice	Madison County	County Cadastral Contact
Slay	Jimmy	Lauderdale County	Tax Assessor
Smith	Shawn	Forest One, In.	Senior Analyst/Geospatial Data Manager
Smith	Bobby	Southwest Mississippi Planning and Development District	GIS Specialist
Squires	Frederic	us coast guard	GIS Analyst
Sroufe	John	BLM	
Stage	David	FGDC Cadastral Subcommittee	Eastern Cadastral Coordinator
Steil	Jim	MARIS (Mississippi Automated Resource Information System)	Director
Stiles	Mark	Yazoo Mississippi Delta Joint Water Management District	Technical Director
Stokes	Charles	Hinds County	Tax Assessor
Sullivan	Christy	Union County	Cadastral Contact
Sullivan	John	Rankin County	Tax Assessor
Taber	Rock	US Environmental Protection Agency	Environmental Scientist
Taylor	Edward	Tate County	Tax Assessor
Thames	Sherry	Lawrence County	Tax Assessor
Thomas	Lee	Environmental Protection Agency	Hydrologist
Thornton	Martha	Lafayette County	Tax Assessor
Turner	Diana	Tishomingo	Tax Assessor
Vazquez	Jose		
Von Meyer	Nancy	Fairview Industries	Vice President
Wainwright	Harriet	THE MAP DEPARTMENT	
Walker	Steve	MARIS	GISOperations Manager
Ware	Leroy	Leflore County	Tax Assessor
Weathers	Mark	Lee County	Tax Assessor
Williams Jr.	Charles	Stone County	Tax Assessor
Wise	Ty	Covington County	Cadastral Contact
Withers	Kim	Leake County	Tax Assessor
Worthy	Sue	Jefferson Davis County	Tax Assessor
Yassin	Barbara	Mississippi Department of Environmental Quality, Office of Geology	System Administrator Ii
Young	Joe	Pike County	Tax Assessor
Young	Velma	Montgomery County	Tax Assessor

Appendix C: Data Inventory

County

County	Layer	Description	Scale	Date
Adams	Digital Orthophotography/Orthoimagery	1 Foot Color	1:2400 (1in=200ft)	2005
Adams	Digital Orthophotography/Orthoimagery	1 Foot Color	1:1200 (1in=100ft)	2003
Adams	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural:400 Urban:100	1:4800 (1in=400ft)	2010
Amite	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural:400 Urban:100	1:4800 (1in=400ft)	2010
Benton	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural:400 Urban:100	1:4800 (1in=400ft)	2010
Bolivar	Digital Elevation Model (DEM)	USACE Project, Control Monument: CORS	1:600 (1in=50ft)	2009
Bolivar	Digital Orthophotography/Orthoimagery	2 Foot Color	1:2400 (1in=200ft)	2009
Bolivar	Digital Orthophotography/Orthoimagery	USGS 1 Meter CIR	1:4800 (1in=400ft)	2008
Bolivar	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural:400 Urban:100	1:4800 (1in=400ft)	2010
Carroll	Digital Elevation Model (DEM)	USACE Project, Control Monument: CORS	1:600 (1in=50ft)	2009
Carroll	Digital Orthophotography/Orthoimagery	2 Foot Color	1:2400 (1in=200ft)	2009
Carroll	Digital Orthophotography/Orthoimagery	USGS 1 Meter CIR	1:4800 (1in=400ft)	2008
Chickasaw	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural:400 Urban:100	1:4800 (1in=400ft)	2010
Choctaw	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural:400 Urban:100	1:4800 (1in=400ft)	2010
Claiborne	Digital Orthophotography/Orthoimagery	0	1:1200 (1in=100ft)	2008
Claiborne	Parcel/Cadastral/Land Ownership	0	1:1200 (1in=100ft)	2010
Clarke	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural:400 Urban:200,100	1:4800 (1in=400ft)	2010
Clay	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural:400 Urban:100	1:4800 (1in=400ft)	2010
Coahoma	Digital Elevation Model (DEM)	USACE Project, Control Monument: CORS	1:600 (1in=50ft)	2009

County	Layer	Description	Scale	Date
Coahoma	Digital Orthophotography/Orthoimagery	2 Foot Color	1:2400 (1in=200ft)	2009
Coahoma	Digital Orthophotography/Orthoimagery	USGS 1 Meter CIR	1:4800 (1in=400ft)	2008
Copiah	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural:400 Urban:100	1:4800 (1in=400ft)	2010
Covington	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural:400 Urban:200,100	1:4800 (1in=400ft)	2010
Desoto	Address Points	Program underway to collect address points to support dispatch	1:1200 (1in=100ft)	2004
Desoto	Cities/Towns/Villages	Tied to parcels	1:1200 (1in=100ft)	2009
Desoto	Contours	1 foot contours for most of the county published as 5 foot	1:1200 (1in=100ft)	2001
Desoto	Digital Elevation Model (DEM)	USACE Project, Control Monument: CORS	1:600 (1in=50ft)	2009
Desoto	Digital Orthophotography/Orthoimagery	0	1:1200 (1in=100ft)	2009
Desoto	Digital Orthophotography/Orthoimagery	3 inch - some quality issues	1:600 (1in=50ft)	2007
Desoto	Digital Orthophotography/Orthoimagery	2 Foot Color	1:2400 (1in=200ft)	2009
Desoto	Digital Orthophotography/Orthoimagery	USGS 1 Meter CIR	1:4800 (1in=400ft)	2008
Desoto	Parcel/Cadastral/Land Ownership	0	1:1200 (1in=100ft)	2010
Desoto	Roads/Street Centerlines	Updated from subdivision plats and are current	1:1200 (1in=100ft)	2010
Forrest	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural:400 Urban:200,100	1:4800 (1in=400ft)	2010
Franklin	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural:400 Urban:100	1:4800 (1in=400ft)	2010
George	Bathymetric Contours	Detailed Boundary of MS coastline at low tide	1:9600 (1in=800ft)	1994
George	Contours	2 and 5 foot contours	1:1200 (1in=100ft)	2007
George	Digital Orthophotography/Orthoimagery	0	1:1200 (1in=100ft)	2007
George	Digital Orthophotography/Orthoimagery	0	1:600 (1in=50ft)	2007
George	Digital Orthophotography/Orthoimagery	0	1:2400 (1in=200ft)	2006
George	Digital Orthophotography/Orthoimagery	0	1:1200 (1in=100ft)	2007

County	Layer	Description	Scale	Date
George	Hydrography	0	1:1200 (1in=100ft)	0
George	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural:400 Urban:100	1:4800 (1in=400ft)	2010
George	Railroad Lines	0	1:1200 (1in=100ft)	0
George	Roads/Street Centerlines	0	1:1200 (1in=100ft)	2007
Greene	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural:400 Urban:100	1:4800 (1in=400ft)	2010
Grenada	Digital Elevation Model (DEM)	USACE Project, Control Monument: CORS	1:600 (1in=50ft)	2009
Grenada	Digital Orthophotography/Orthoimagery	2 Foot Color	1:2400 (1in=200ft)	2009
Grenada	Digital Orthophotography/Orthoimagery	USGS 1 Meter CIR	1:4800 (1in=400ft)	2008
Grenada	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural:400,200 Urban:100,200	1:4800 (1in=400ft)	2010
Hancock	Bathymetric Contours	Detailed Boundary of MS coastline at low tide	1:9600 (1in=800ft)	1994
Hancock	Contours	2 and 5 foot contours	1:1200 (1in=100ft)	2007
Hancock	Digital Orthophotography/Orthoimagery	0	1:1200 (1in=100ft)	2007
Hancock	Digital Orthophotography/Orthoimagery	0	1:600 (1in=50ft)	2007
Hancock	Digital Orthophotography/Orthoimagery	0	1:2400 (1in=200ft)	2006
Hancock	Digital Orthophotography/Orthoimagery	0	1:1200 (1in=100ft)	2007
Hancock	Hydrography	0	1:1200 (1in=100ft)	0
Hancock	Parcel/Cadastral/Land Ownership	0	1:1200 (1in=100ft)	2010
Hancock	Railroad Lines	0	1:1200 (1in=100ft)	0
Hancock	Roads/Street Centerlines	0	1:1200 (1in=100ft)	2007
Harrison	Bathymetric Contours	Detailed Boundary of MS coastline at low tide	1:9600 (1in=800ft)	1994
Harrison	Contours	2 and 5 foot contours	1:1200 (1in=100ft)	2007
Harrison	Digital Orthophotography/Orthoimagery	0	1:1200 (1in=100ft)	2007
Harrison	Digital Orthophotography/Orthoimagery	0	1:600 (1in=50ft)	2007
Harrison	Digital Orthophotography/Orthoimage	0	1:2400 (1in=200ft)	2006

County	Layer	Description	Scale	Date
	ry			
Harrison	Digital Orthophotography/Orthoimagery	0	1:1200 (1in=100ft)	2007
Harrison	Hydrography	0	1:1200 (1in=100ft)	0
Harrison	Parcel/Cadastral/Land Ownership	0	1:1200 (1in=100ft)	2010
Harrison	Railroad Lines	0	1:1200 (1in=100ft)	0
Harrison	Roads/Street Centerlines	0	1:1200 (1in=100ft)	2007
Harrison	Roads/Street Centerlines	0	1:1200 (1in=100ft)	2007
Hinds	Digital Orthophotography/Orthoimagery	0.3m Color	0	2002
Hinds	Parcel/Cadastral/Land Ownership	0	1:1200 (1in=100ft)	2010
Holmes	Digital Elevation Model (DEM)	USACE Project, Control Monument: CORS	1:600 (1in=50ft)	2009
Holmes	Digital Orthophotography/Orthoimagery	2 Foot Color	1:2400 (1in=200ft)	2009
Holmes	Digital Orthophotography/Orthoimagery	USGS 1 Meter CIR	1:4800 (1in=400ft)	2008
Holmes	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural:400 Urban:100	1:4800 (1in=400ft)	2010
Humphreys	Digital Elevation Model (DEM)	USACE Project, Control Monument: CORS	1:600 (1in=50ft)	2009
Humphreys	Digital Orthophotography/Orthoimagery	2 Foot Color	1:2400 (1in=200ft)	2009
Humphreys	Digital Orthophotography/Orthoimagery	USGS 1 Meter CIR	1:4800 (1in=400ft)	2008
Humphreys	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural: 400 Urban:100	1:4800 (1in=400ft)	2010
Issaquena	Digital Elevation Model (DEM)	USACE Project, Control Monument: CORS	1:600 (1in=50ft)	2009
Issaquena	Digital Orthophotography/Orthoimagery	2 Foot Color	1:2400 (1in=200ft)	2009
Issaquena	Digital Orthophotography/Orthoimagery	USGS 1 Meter CIR	1:4800 (1in=400ft)	2008
Jackson	Address Points	0	1:1200 (1in=100ft)	2010
Jackson	Bathymetric Contours	Detailed Boundary of MS coastline at low tide	1:9600 (1in=800ft)	1994
Jackson	Contours	2 and 5 foot contours	1:1200 (1in=100ft)	2007
Jackson	Digital Orthophotography/Orthoimagery	0	1:1200 (1in=100ft)	2007

County	Layer	Description	Scale	Date
Jackson	Digital Orthophotography/Orthoimagery	0	1:600 (1in=50ft)	2007
Jackson	Digital Orthophotography/Orthoimagery	0	1:2400 (1in=200ft)	2006
Jackson	Digital Orthophotography/Orthoimagery	0	1:1200 (1in=100ft)	2007
Jackson	Hydrography	0	1:1200 (1in=100ft)	0
Jackson	Parcel/Cadastral/Land Ownership	0	1:1200 (1in=100ft)	2010
Jackson	Railroad Lines	0	1:1200 (1in=100ft)	0
Jackson	Roads/Street Centerlines	0	1:1200 (1in=100ft)	2007
Jackson	Roads/Street Centerlines	0	1:1200 (1in=100ft)	0
Jasper	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural:400 Urban:200,100	1:4800 (1in=400ft)	2010
Jefferson	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural:400 Urban:200,100	1:4800 (1in=400ft)	2010
Jefferson Davis	Digital Orthophotography/Orthoimagery	0	1:1200 (1in=100ft)	2008
Jefferson Davis	Parcel/Cadastral/Land Ownership	Conversion to GIS in progress	1:1200 (1in=100ft)	2010
Jones	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural:400 Urban:200,100	1:4800 (1in=400ft)	2010
Kemper	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural:400 Urban:200,100	1:4800 (1in=400ft)	2010
Lafayette	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural:400 Urban:100	1:4800 (1in=400ft)	2010
Lamar	Parcel/Cadastral/Land Ownership	0	1:1200 (1in=100ft)	2010
Lauderdale	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files	1:4800 (1in=400ft)	2010
Lawrence	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural:400 Urban:100	1:4800 (1in=400ft)	2010
Leake	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files	1:4800 (1in=400ft)	2010
Lee	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural:400 Urban:100	1:4800 (1in=400ft)	2010
Leflore	Digital Elevation Model (DEM)	USACE Project, Control Monument: CORS	1:600 (1in=50ft)	2009
Leflore	Digital Orthophotography/Orthoimagery	2 Foot Color	1:2400 (1in=200ft)	2009
Leflore	Digital Orthophotography/Orthoimage	USGS 1 Meter CIR	1:4800 (1in=400ft)	2008

County	Layer	Description	Scale	Date
	ry			
Leflore	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural:400 Urban:100	1:4800 (1in=400ft)	2010
Lincoln	Parcel/Cadastral/Land Ownership	0	1:1200 (1in=100ft)	2010
Lowndes	Parcel/Cadastral/Land Ownership	Maintained in CADcan be exported into shape files. Rural:400 Urban:100	1:4800 (1in=400ft)	2010
Madison	Parcel/Cadastral/Land Ownership	0	1:1200 (1in=100ft)	2010
Marion	Parcel/Cadastral/Land Ownership	0	1:1200 (1in=100ft)	2010
Marshall	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural:400 Urban:100	1:4800 (1in=400ft)	2010
Monroe	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural:400 Urban:100	1:4800 (1in=400ft)	2010
Montgomery	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural:400 Urban:100	1:4800 (1in=400ft)	2010
Neshoba	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural:400 Urban:200,100	1:4800 (1in=400ft)	2010
Newton	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural:400 Urban:200,100	1:4800 (1in=400ft)	2010
Noxubee	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural:400 Urban:100	1:4800 (1in=400ft)	2010
Oktibbeha	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural:400 Urban:100	1:4800 (1in=400ft)	2010
Panola	Digital Elevation Model (DEM)	USACE Project, Control Monument: CORS	1:600 (1in=50ft)	2009
Panola	Digital Orthophotography/Orthoimagery	2 Foot Color	1:2400 (1in=200ft)	2009
Panola	Digital Orthophotography/Orthoimagery	USGS 1 Meter CIR	1:4800 (1in=400ft)	2008
Panola	Parcel/Cadastral/Land Ownership	0	1:1200 (1in=100ft)	2010
Pearl River	Bathymetric Contours	Detailed Boundary of MS coastline at low tide	1:9600 (1in=800ft)	1994
Pearl River	Cities/Towns/Villages	Derived from parcels	1:1200 (1in=100ft)	2009
Pearl River	Contours	2 and 5 foot contours	1:1200 (1in=100ft)	2007
Pearl River	Counties/Parishes	0	1:4800 (1in=400ft)	0
Pearl River	Digital Orthophotography/Orthoimagery	0	1:1200 (1in=100ft)	2007
Pearl River	Digital Orthophotography/Orthoimagery	0	1:600 (1in=50ft)	2007

County	Layer	Description	Scale	Date
Pearl River	Digital Orthophotography/Orthoimagery	0	1:2400 (1in=200ft)	2006
Pearl River	Digital Orthophotography/Orthoimagery	0	1:1200 (1in=100ft)	2007
Pearl River	Hydrography	0	1:1200 (1in=100ft)	0
Pearl River	Parcel/Cadastral/Land Ownership	0	1:1200 (1in=100ft)	2010
Pearl River	Railroad Lines	0	1:1200 (1in=100ft)	0
Pearl River	Roads/Street Centerlines	0	1:1200 (1in=100ft)	2010
Pearl River	Roads/Street Centerlines	0	1:1200 (1in=100ft)	2007
Perry	Parcel/Cadastral/Land Ownership	Maintained in CAD can export into shape files. Rural:400 Urban:200,100	1:4800 (1in=400ft)	2010
Pike	Parcel/Cadastral/Land Ownership	0	1:1200 (1in=100ft)	2010
Pontotoc	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural:400 Urban:100	1:4800 (1in=400ft)	2010
Prentiss	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural:400 Urban:100	1:4800 (1in=400ft)	2010
Quitman	Digital Elevation Model (DEM)	USACE Project, Control Monument: CORS	1:600 (1in=50ft)	2009
Quitman	Digital Orthophotography/Orthoimagery	2 Foot Color	1:2400 (1in=200ft)	2009
Quitman	Digital Orthophotography/Orthoimagery	USGS 1 Meter CIR	1:4800 (1in=400ft)	2008
Quitman	Parcel/Cadastral/Land Ownership	CAD data, can be converted to GIS	1:4800 (1in=400ft)	2010
Rankin	Cadastral Surveys	Land Ownership	0	2006
Rankin	Cities/Towns/Villages	City Boundaries	0	2006
Rankin	Digital Orthophotography/Orthoimagery	0	0	1999
Rankin	Election Districts and Precincts	Supervisor Districts, Judicial Districts, School Board Districts	0	2006
Rankin	Emergency Service Districts	0	0	2005
Rankin	Fire Districts	0	0	2005
Rankin	Incorporated Place	City Boundaries	0	2006
Rankin	Parcel/Cadastral/Land Ownership	Property Ownership 400 rural, 100 urban	1:1200 (1in=100ft)	2010
Rankin	Parcel/Cadastral/Land Ownership	0	1:1200 (1in=100ft)	2010
Rankin	Roads/Street Centerlines	0	1:600 (1in=50ft)	2006
Rankin	School Districts	School Districts	0	2005
Rankin	Special Taxing Districts	0	0	2005
Rankin	Uncorrected Aerial Photography/Imagery	0	0	1999

County	Layer	Description	Scale	Date
Rankin	Voting Districts/Precincts	0	0	2004
Scott	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural:400 Urban:200,100	1:4800 (1in=400ft)	2010
Sharkey	Digital Elevation Model (DEM)	USACE Project, Control Monument: CORS	1:600 (1in=50ft)	2009
Sharkey	Digital Orthophotography/Orthoimagery	2 Foot Color	1:2400 (1in=200ft)	2009
Sharkey	Digital Orthophotography/Orthoimagery	USGS 1 Meter CIR	1:4800 (1in=400ft)	2008
Simpson	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural:400 Urban:100	1:4800 (1in=400ft)	2010
Smith	Parcel/Cadastral/Land Ownership	Maintained in CAD can be converted to shape files. Rural:400 Urban:200,100	1:4800 (1in=400ft)	2010
Stone	Bathymetric Contours	Detailed Boundary of MS coastline at low tide	1:9600 (1in=800ft)	1994
Stone	Contours	2 and 5 foot contours	1:1200 (1in=100ft)	2007
Stone	Digital Orthophotography/Orthoimagery	0	1:1200 (1in=100ft)	2007
Stone	Digital Orthophotography/Orthoimagery	0	1:600 (1in=50ft)	2007
Stone	Digital Orthophotography/Orthoimagery	0	1:2400 (1in=200ft)	2006
Stone	Digital Orthophotography/Orthoimagery	0	1:1200 (1in=100ft)	2007
Stone	Hydrography	0	1:1200 (1in=100ft)	0
Stone	Parcel/Cadastral/Land Ownership	0	1:1200 (1in=100ft)	2010
Stone	Railroad Lines	0	1:1200 (1in=100ft)	0
Stone	Roads/Street Centerlines	In planning and permitting	1:4800 (1in=400ft)	2009
Stone	Roads/Street Centerlines	0	1:1200 (1in=100ft)	2007
Sunflower	Digital Elevation Model (DEM)	USACE Project, Control Monument: CORS	1:600 (1in=50ft)	2009
Sunflower	Digital Orthophotography/Orthoimagery	2 Foot Color	1:2400 (1in=200ft)	2009
Sunflower	Digital Orthophotography/Orthoimagery	USGS 1 Meter CIR	1:4800 (1in=400ft)	2008
Sunflower	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files.Rural:400 Urban:100	1:4800 (1in=400ft)	2010
Tallahatchie	Digital Elevation Model (DEM)	USACE Project, Control Monument: CORS	1:600 (1in=50ft)	2009
Tallahatchie	Digital Elevation Model (DEM)	USACE Project, Control Monument: CORS	0	2010

County	Layer	Description	Scale	Date
Tallahatchie	Digital Orthophotography/Orthoimagery	2 Foot Color	1:2400 (1in=200ft)	2009
Tallahatchie	Digital Orthophotography/Orthoimagery	USGS 1 Meter CIR	1:4800 (1in=400ft)	2008
Tate	Digital Elevation Model (DEM)	USACE Project, Control Monument: CORS	1:600 (1in=50ft)	2009
Tate	Digital Orthophotography/Orthoimagery	2 Foot Color	1:2400 (1in=200ft)	2009
Tate	Digital Orthophotography/Orthoimagery	USGS 1 Meter CIR	1:4800 (1in=400ft)	2008
Tate	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural:400 Urban:100	1:4800 (1in=400ft)	2010
Tippah	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural:400 Urban:100	1:4800 (1in=400ft)	2010
Tishomingo	American Indian Reservation	Maintained in CAD can be exported into shape files	1:4800 (1in=400ft)	2009
Tishomingo	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural:400 Urban:100	1:4800 (1in=400ft)	2010
Tunica	Digital Elevation Model (DEM)	USACE Project, Control Monument: CORS	1:600 (1in=50ft)	2009
Tunica	Digital Orthophotography/Orthoimagery	2 Foot Color	1:2400 (1in=200ft)	2009
Tunica	Digital Orthophotography/Orthoimagery	USGS 1 Meter CIR	1:4800 (1in=400ft)	2008
Tunica	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural:400 Urban:100	1:4800 (1in=400ft)	2010
Union	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural:400 Urban:100	1:4800 (1in=400ft)	2010
Walthall	Parcel/Cadastral/Land Ownership	Converting to GIS 2010	1:1200 (1in=100ft)	2010
Warren	Digital Elevation Model (DEM)	USACE Project, Control Monument: CORS	1:600 (1in=50ft)	2009
Warren	Digital Orthophotography/Orthoimagery	2 Foot Color	1:2400 (1in=200ft)	2009
Warren	Digital Orthophotography/Orthoimagery	USGS 1 Meter CIR	1:4800 (1in=400ft)	2008
Washington	Digital Elevation Model (DEM)	USACE Project, Control Monument: CORS	1:600 (1in=50ft)	2009
Washington	Digital Orthophotography/Orthoimagery	2 Foot Color	1:2400 (1in=200ft)	2009
Washington	Digital Orthophotography/Orthoimagery	USGS 1 Meter CIR	1:4800 (1in=400ft)	2008
Washington	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files.	1:4800 (1in=400ft)	2010

County	Layer	Description	Scale	Date
		Rural:400 Urban:100		
Wayne	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural:400 Urban:200,100	1:4800 (1in=400ft)	2010
Wilkinson	Parcel/Cadastral/Land Ownership	Maintained in CAD can export into shape files. Rural:400 Urban:100	1:4800 (1in=400ft)	2010
Winston	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural:400 Urban:100	1:4800 (1in=400ft)	2010
Yalobusha	Digital Elevation Model (DEM)	USACE Project, Control Monument: CORS	1:600 (1in=50ft)	2009
Yalobusha	Digital Elevation Model (DEM)	USACE Project, Control Monument: CORS	0	2010
Yalobusha	Digital Orthophotography/Orthoimagery	2 Foot Color	1:2400 (1in=200ft)	2009
Yalobusha	Digital Orthophotography/Orthoimagery	USGS 1 Meter CIR	1:4800 (1in=400ft)	2008
Yalobusha	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural:400 Urban:100	1:4800 (1in=400ft)	2010
Yazoo	Digital Elevation Model (DEM)	USACE Project, Control Monument: CORS	1:600 (1in=50ft)	2009
Yazoo	Digital Orthophotography/Orthoimagery	2 Foot Color	1:2400 (1in=200ft)	2009
Yazoo	Digital Orthophotography/Orthoimagery	USGS 1 Meter CIR	1:4800 (1in=400ft)	2008
Yazoo	Parcel/Cadastral/Land Ownership	Maintained in CAD can be exported into shape files. Rural:400 Urban:100	1:4800 (1in=400ft)	2010

City

City	Layer Name	Description	Scale	Date
Brandon	Fire Districts	0		2005
Brandon	Emergency Service Districts	0		2005
Brandon	Election Districts and Precincts	Supervisor Districts, Judicial Districts, School Board Districts		2006
Brandon	Digital Orthophotography/Orthoimagery	0		1999
Brandon	Roads/Street Centerlines	0	1:600 (1in=50ft)	2006
Brandon	Incorporated Place	City Boundaries		2006
Brandon	Uncorrected Aerial Photography/Imagery	0		1999
Brandon	School Districts	School Districts		2005
Brandon	Special Taxing Districts	0		2005
Brandon	Voting Districts/Precincts	0		2004
Brandon	Cadastral Surveys	Land Ownership		2006
Brandon	Cities/Towns/Villages	City Boundaries		2006
Brandon	Parcel/Cadastral/Land Ownership	Property Ownership 400 rural, 100 urban	1:1200 (1in=100ft)	2010
Florence	Fire Districts	0		2005
Florence	Emergency Service Districts	0		2005
Florence	Election Districts and Precincts	Supervisor Districts, Judicial Districts, School Board Districts		2006
Florence	Digital Orthophotography/Orthoimagery	0		1999
Florence	Roads/Street Centerlines	0	1:600 (1in=50ft)	2006
Florence	Incorporated Place	City Boundaries		2006
Florence	Uncorrected Aerial Photography/Imagery	0		1999
Florence	School Districts	School Districts		2005
Florence	Special Taxing Districts	0		2005
Florence	Voting Districts/Precincts	0		2004
Florence	Cadastral Surveys	Land Ownership		2006
Florence	Cities/Towns/Villages	City Boundaries		2006
Florence	Parcel/Cadastral/Land Ownership	Property Ownership 400 rural, 100 urban	1:1200 (1in=100ft)	2010
Flowood	Fire Districts	0		2005
Flowood	Emergency Service Districts	0		2005
Flowood	Election Districts and Precincts	Supervisor Districts, Judicial Districts, School Board Districts		2006
Flowood	Digital Orthophotography/Orthoimagery	0		1999
Flowood	Roads/Street Centerlines	0	1:600 (1in=50ft)	2006
Flowood	Incorporated Place	City Boundaries		2006
Flowood	Uncorrected Aerial Photography/Imagery	0		1999

Flowood	School Districts	School Districts		2005
Flowood	Special Taxing Districts	0		2005
Flowood	Voting Districts/Precincts	0		2004
Flowood	Cadastral Surveys	Land Ownership		2006
Flowood	Cities/Towns/Villages	City Boundaries		2006
Flowood	Parcel/Cadastral/Land Ownership	Property Ownership 400 rural, 100 urban	1:1200 (1in=100ft)	2010
Hattiesburg	Digital Elevation Model (DEM)	0		2007
Jackson	Digital Orthophotography/Orthoimagery	0.3m Color		2002
Natchez	Digital Orthophotography/Orthoimagery	1 Foot Color	1:2400 (1in=200ft)	2005
Natchez	Digital Orthophotography/Orthoimagery	1 Foot Color	1:1200 (1in=100ft)	2003
Pearl	Fire Districts	0		2005
Pearl	Emergency Service Districts	0		2005
Pearl	Election Districts and Precincts	Supervisor Districts, Judicial Districts, School Board Districts		2006
Pearl	Digital Orthophotography/Orthoimagery	0		1999
Pearl	Roads/Street Centerlines	0	1:600 (1in=50ft)	2006
Pearl	Incorporated Place	City Boundaries		2006
Pearl	Uncorrected Aerial Photography/Imagery	0		1999
Pearl	School Districts	School Districts		2005
Pearl	Special Taxing Districts	0		2005
Pearl	Voting Districts/Precincts	0		2004
Pearl	Cadastral Surveys	Land Ownership		2006
Pearl	Cities/Towns/Villages	City Boundaries		2006
Pearl	Parcel/Cadastral/Land Ownership	Property Ownership 400 rural, 100 urban	1:1200 (1in=100ft)	2010
Pelahatchie	Fire Districts	0		2005
Pelahatchie	Emergency Service Districts	0		2005
Pelahatchie	Election Districts and Precincts	Supervisor Districts, Judicial Districts, School Board Districts		2006
Pelahatchie	Digital Orthophotography/Orthoimagery	0		1999
Pelahatchie	Roads/Street Centerlines	0	1:600 (1in=50ft)	2006
Pelahatchie	Incorporated Place	City Boundaries		2006
Pelahatchie	Uncorrected Aerial Photography/Imagery	0		1999
Pelahatchie	School Districts	School Districts		2005
Pelahatchie	Special Taxing Districts	0		2005
Pelahatchie	Voting Districts/Precincts	0		2004
Pelahatchie	Cadastral Surveys	Land Ownership		2006

Pelahatchie	Cities/Towns/Villages	City Boundaries		2006
Pelahatchie	Parcel/Cadastral/Land Ownership	Property Ownership 400 rural, 100 urban	1:1200 (1in=100ft)	2010
Puckett	Fire Districts	0		2005
Puckett	Emergency Service Districts	0		2005
Puckett	Election Districts and Precincts	Supervisor Districts, Judicial Districts, School Board Districts		2006
Puckett	Digital Orthophotography/Orthoimagery	0		1999
Puckett	Roads/Street Centerlines	0	1:600 (1in=50ft)	2006
Puckett	Incorporated Place	City Boundaries		2006
Puckett	Uncorrected Aerial Photography/Imagery	0		1999
Puckett	School Districts	School Districts		2005
Puckett	Special Taxing Districts	0		2005
Puckett	Voting Districts/Precincts	0		2004
Puckett	Cadastral Surveys	Land Ownership		2006
Puckett	Cities/Towns/Villages	City Boundaries		2006
Puckett	Parcel/Cadastral/Land Ownership	Property Ownership 400 rural, 100 urban	1:1200 (1in=100ft)	2010
Richland	Fire Districts	0		2005
Richland	Emergency Service Districts	0		2005
Richland	Election Districts and Precincts	Supervisor Districts, Judicial Districts, School Board Districts		2006
Richland	Digital Orthophotography/Orthoimagery	0		1999
Richland	Roads/Street Centerlines	0	1:600 (1in=50ft)	2006
Richland	Incorporated Place	City Boundaries		2006
Richland	Uncorrected Aerial Photography/Imagery	0		1999
Richland	School Districts	School Districts		2005
Richland	Special Taxing Districts	0		2005
Richland	Voting Districts/Precincts	0		2004
Richland	Cadastral Surveys	Land Ownership		2006
Richland	Cities/Towns/Villages	City Boundaries		2006
Richland	Parcel/Cadastral/Land Ownership	Property Ownership 400 rural, 100 urban	1:1200 (1in=100ft)	2010