

2013



# MCCRSGIS Annual Report

Annual Report of the activities of the Mississippi Coordinating Council for Remote Sensing and Geographic Information Systems for the year





March 20, 2014

Members of the Mississippi Legislature:

On behalf of the Mississippi Coordinating Council for Remote Sensing and Geographic Information Systems (MCCRSGIS), please consider this letter a report on the progress of MCCRSGIS and the status of remote sensing and geographic information systems in Mississippi.

As you are aware, the MCCRSGIS was established by the 2003 Legislature to ensure coordination of the development, purchase, storing, and sharing of remote sensing and geographic information system data by state and local governmental entities; House Bill 861 established a clear purpose for the Council, as well as a specific list of responsibilities. The Council is directed to set and assure enforcement of policies and standards to make it easier for remote sensing and geographic information system users around the state to share information and to facilitate cost-sharing arrangements to reduce the costs of acquiring remote sensing and geographic information system data.

The Council's responsibilities include, but are not limited to:

- (a) Coordination of remote sensing and geographic information system activities within Mississippi;
- (b) Establishing policies and standards to guide Mississippi Department of Information Technology Services (MDITS) in the review and approval of state and local government procurement of both hardware and software development related to remote sensing and geographic information systems;
- (c) Oversight of MDITS' implementation of these responsibilities;
- (d) Preparing a plan, with proposed state funding priorities, for Mississippi's remote sensing and geographic information system activities, including development, operation and maintenance of the Mississippi Digital Earth Model;
- (e) Oversight of the Mississippi Department of Environmental Quality's development and maintenance of the Mississippi Digital Earth Model, including establishing policies and standards for the procurement of remote sensing and geographic information system data by state and local governmental entities and establishing the order in which the seven (7) core data layers shall be developed;
- (f) Designating Mississippi's official representative to the National States Geographic Information Council and to any other national or regional remote sensing or geographic information system organizations on which Mississippi has an official seat;

- (g) Establishing and designating the members of an advisory committee made up of policy level officials from major state, local, regional and federal agencies, as well as members of the private sector;
- (h) Creating a staff level technical users committee; and
- (i) Coordinating with the Mississippi Department of Revenue to assure that state and local governmental entities do not have to comply with two (2) sets of requirements imposed by different organizations.

The law also directed MDITS to work closely with the Council to bring about effective coordination of policies, standards and procedures relating to procurement of remote sensing and geographic information systems (GIS) resources. In addition, MDITS is responsible for development, operation and maintenance of a delivery system infrastructure for geographic information systems data and is charged with providing a warehouse for Mississippi's geographic information systems data.

Additionally, the Mississippi Department of Environmental Quality (MDEQ), Office of Geology and Energy Resources, is given the responsibility for program management, procurement, development and maintenance of the Mississippi Digital EarthModel, which includes the following seven (7) core data layers of a digital land base computer model of the State of Mississippi:

- (a) Geodetic control;
- (b) Elevation and bathymetry;
- (c) Orthoimagery;
- (d) Hydrography;
- (e) Transportation;
- (f) Government boundaries; and
- (g) Cadastral.

For all seven (7) of the original framework layers, the Mississippi Department of Environmental Quality, Office of Geology and Energy Resources, is designated as the integrator of data from all sources and the guarantor of data completeness and consistency and shall administer the Council's policies and standards for the procurement of remote sensing and geographic information system data by state and local governmental entities.

With collaboration and cooperation firmly set as its number one priority, the Coordinating Council established seven key elements necessary to achieve metadata standards that will apply to the seven framework layers:

- (1) The Council developed and adopted an initial set of standards for the Mississippi Digital Earth Model (MDEM) that allows easy transfer of digital map information between state agencies, local government, and the private sector. MDEM is a three-dimensional representation of natural and man-made features in Mississippi comprised of these layers: geodetic control, digital orthoimagery, digital elevation model and contours, property ownership, hydrography, transportation, and governmental boundaries. The Council continues to monitor federal data standards and will update state standards as necessary.
- (2) The Council developed an express products list that allows state agencies and local governments to easily obtain geographic information systems (GIS) hardware and software at the best prices. That dynamic list continues to be expanded and updated.
- (3) The Council led an effort to coordinate data acquisition, a key element in achieving cost savings through economy of scale. Collaboration by state agencies, local government, and even federal agencies has produced better and cheaper products for everyone to utilize. In early 2012, the Council was involved in assisting with coordinating a project which collected and developed 1-foot and six-inch orthoimagery covering the six coastal counties. Additionally, in late 2012, the Council assisted in the initial coordination of a similar project in central Mississippi to collect and develop 1-foot and six-inch orthoimagery covering multiple central Mississippi counties in early 2013.
- (4) The Council developed a warehouse/clearinghouse for GIS data - the Mississippi Geospatial Clearinghouse. The clearinghouse continues distribution of digital GIS data and adding new MDEM data for storage and distribution.
- (5) Despite the lack of direct state funding, development of the seven layers of MDEM continues through the cooperative efforts of state, local, and federal governmental entities. During 2012, MDEQ and its contractor continued working closely with MDOT in developing the statewide transportation layer data. Highly accurate elevation data (Lidar) developed by the U. S. Geological Survey covering approximately 3,500 square miles in Northeast Mississippi was made available to the State and added to MDEM, to be distributed through the Mississippi Geospatial Clearinghouse. Council members and staff continue to pursue new and creative funding sources to allow for continued MDEM development.
- (6) In early 2011, the Council took delivery of an updated Geospatial Strategic and Business Plan prepared for the Council by Fairview Industries. Discussions by members of the Council concerning the plan continued during 2012. The Council continues the work on development of a business model for funding and maintenance of the data development and delivery system.
- (7) Education and outreach continue to be a critical part of the overall plan for the Coordinating Council. The educational component serves to train, through formal and continuing education, the current and next generation of GIS professionals, as well as educating the various stakeholder groups on the value and power of GIS. Outreach utilizes the network of knowledgeable and experienced professionals. A coordinated outreach effort also leverages the Council's authority and effectiveness.

The Mississippi Geospatial Clearinghouse (MGC) was placed in production in September 2007 and serves as the state's premier portal for the Geographic Information System (GIS) community to search, discover, share, and use a comprehensive warehouse of Mississippi's geospatial resources. The goal of the MGC is to make the application of spatial information GIS technologies within the state of Mississippi more efficient by eliminating the duplication of spatial data production and distribution through cooperation, standardization, communication, and coordination. Moreover, the MGC is the primary location for the Mississippi Digital Earth Model (MDEM). The MGC is housed in the State Data Center at the Mississippi Department of Information Technology Services (ITS). State agencies, county government, city government and the public can download data that is stored in the MGC. This data provides the foundation for applications to be developed using GIS technology to meet business needs of the governmental agencies and/or public interest.

Since its inception over ten (10) years ago, MCCGRIS has successfully improved and continues to maintain each of the MDEM layers as its mission by and through MDEM and MGC, which involves non-MDEM data gathering and integration into MGC so as to make non-MDEM data readily accessible and easy to use, specifically address data for all counties and gazetteer and administrative boundary data sets. In order to succeed in its overall mission to provide all Mississippi individuals, organizations, schools, governments and businesses a system to map, model, query and analyze large quantities of data within a single database and to give users the power to create maps, integrate information, visualize scenarios, present problem-solving ideas, and develop effective solutions related to transportation networks, hydrography, population characteristics, economic activity and political jurisdictions, MCCGRIS needs direct state funding. Funding is needed to sustain remote sensing and geographic information systems personnel costs, data sharing, and hardware and backup, none of which have been appropriated to date.

Please let me know if you have any questions or need any additional information. Thank you for your continued support of statewide remote sensing and geographic information systems.

Sincerely,

Robert R. Latham, Jr.  
Chairman, MCCRSGIS

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## I. Introduction

The Mississippi Coordinating Council for Remote Sensing and Geographic Information Systems (MCCRSGIS) was established by the 2003 Legislature to ensure coordination of the development, purchase, storing, and sharing of remote sensing and geographic information system data by state and local governmental entities. House Bill 861 established a clear purpose for the Council, as well as a specific list of responsibilities. The Council is directed to set and assure enforcement of policies and standards to make it easier for remote sensing and geographic information system users around the state to share information and to facilitate cost-sharing arrangements to reduce the costs of acquiring remote sensing and geographic information system data. The Council's responsibilities include, but are not limited to:

- (a) Coordination of remote sensing and geographic information system activities within Mississippi;
- (b) Establishing policies and standards to guide Mississippi Department of Information Technology Services (MDITS) in the review and approval of state and local government procurement of both hardware and software development related to remote sensing and geographic information systems;
- (c) Oversight of MDITS' implementation of these responsibilities;
- (d) Preparing a plan, with proposed state funding priorities, for Mississippi's remote sensing and geographic information system activities, including development, operation and maintenance of the Mississippi Digital Earth Model;
- (e) Oversight of the Mississippi Department of Environmental Quality's development and maintenance of the Mississippi Digital Earth Model, including establishing policies and standards for the procurement of remote sensing and geographic information system data by state and local governmental entities and establishing the order in which the seven (7) core data layers shall be developed;
- (f) Designating Mississippi's official representative to the National States Geographic Information Council and to any other national or regional remote sensing or geographic information system organizations on which Mississippi has an official seat;
- (g) Establishing and designating the members of an advisory committee made up of policy level officials from major state, local, regional and federal agencies, as well as members of the private sector;

(h) Creating a staff level technical users committee; and

(i) Coordinating with the Mississippi Department of Revenue to assure that state and local governmental entities do not have to comply with two (2) sets of requirements imposed by different organizations.

The law also directed the Mississippi Department of Information Technology Services to work closely with the Council to bring about effective coordination of policies, standards and procedures relating to procurement of remote sensing and geographic information systems (GIS) resources. In addition, MDITS is responsible for development, operation and maintenance of a delivery system infrastructure for geographic information systems data and is charged with providing a warehouse for Mississippi's geographic information systems data.

Additionally, the Mississippi Department of Environmental Quality (MDEQ), Office of Geology and Energy Resources, is given the responsibility for program management, procurement, development and maintenance of the Mississippi Digital Earth Model, which includes the following seven (7) core data layers of a digital land base computer model of the State of Mississippi:

- (a) Geodetic control;
- (b) Elevation and bathymetry;
- (c) Orthoimagery;
- (d) Hydrography;
- (e) Transportation;
- (f) Government boundaries; and
- (g) Cadastral

For all seven (7) of the original framework layers, the Mississippi Department of Environmental Quality, Office of Geology and Energy Resources, is designated as the integrator of data from all sources and the guarantor of data completeness and consistency and shall administer the Council's policies and standards for the procurement of remote sensing and geographic information system data by state and local governmental entities. Additionally, the Council will establish metadata standards that will apply to the seven framework layers.

## **II. Council Members**

**Robert Latham, Jr., Chairman**

*Executive Director, Mississippi Emergency Management Agency*

**Craig Orgeron, Vice-Chairman**

*Executive Director, Mississippi Department of Information Technology Services*

**Melinda McGrath**

*Executive Director, Mississippi Department of Transportation*

**Trudy Fisher**

*Executive Director, Mississippi Department of Environmental Quality*

**Charlie W. Morgan**

*State Forester, Mississippi Forestry Commission*

**Brent Christensen**

*Executive Director, Mississippi Development Authority*

**Delbert Hosemann**

*Mississippi Secretary of State*

**Rick Ericksen**

*Executive Director, Mississippi State Board of Registered Professional Geologists*

**Chuck Carr**

*GIS Manager, Central Mississippi Planning and Development District;  
Mississippi Association of Planning and Development Districts*

**Jim Steil**

*Director, Mississippi Automated Resource Information System; Institutions of Higher Learning*

**Richard Tolbert**

*Surveyor, Madison County; Mississippi Association of Professional Surveyors*

**Gene McGee**

*Mayor, City of Ridgeland*

**Shari T. Veazey**

*Executive Director, Mississippi Municipal League*

**Tony Fleming**

*Supervisor, Clarke County Board of Supervisors*

**Derrick Surrence**

*Executive Director, Mississippi Association of Supervisors*

**T.J. “Jeff” Mullins**

*Mississippi Tax Assessors/Collectors Association*

## **Non-Voting Members**

**Senator Vacant**

*Mississippi State Senate*

**Representative Scott DeLano**

*Mississippi House of Representatives; District 117*

**J. Ed Morgan**

*Chairman, Mississippi Department of Revenue*

**Albert Santa Cruz**

*Commissioner, Mississippi Department of Public Safety*

**Talbot Brooks**

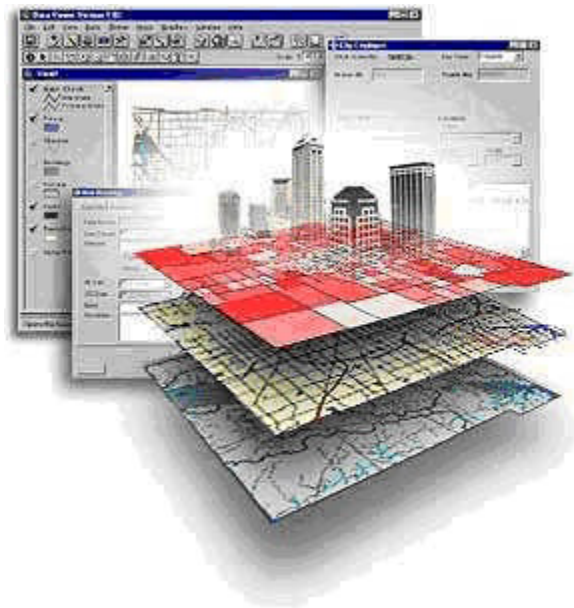
*Director, Center for Interdisciplinary Geospatial Information Technologies, Delta State University; Chair MCCRSGIS Technical Users Group*

### III. Mississippi Geospatial Clearinghouse

The Mississippi Geospatial Clearinghouse (MGC) was placed in production in September 2007 and serves as the state's premier portal for the Geographic Information System (GIS) community to search, discover, share, and use a comprehensive warehouse of Mississippi's geospatial resources. The goal of the MGC is to make the application of spatial information GIS technologies within the state of Mississippi more efficient by eliminating the duplication of spatial data production and distribution through cooperation, standardization, communication, and coordination. Moreover, the MGC is the primary location for the Mississippi Digital Earth Model (MDEM). The MGC is housed in the State Data Center at the Mississippi Department of Information Technology Services (ITS) and was designed and created by The Geospatial Group, a Mississippi based geospatial company.

State agencies, county government, city government and the public can download data that is stored in the MGC. This data provides the foundation for applications to be developed using GIS technology to meet business needs of the governmental agencies and/or public interest.

The requirement to provide operational storage and dissemination of high-resolution digital contour maps from MDEM data collection activities and the development of new technologies prompted the need for a major software and design update for the MGC. The update, completed in April 2011, reflects a new information delivery interface that utilizes up-to-date software, which also lays the groundwork for future upgrades if needed. The design provides the user with simple and easy routes to the three delivery mechanisms: visualization, information search, and data download. The visualization utilizes a custom JavaScript viewer. This easy to navigate and responsive viewer accesses ESRI map services and ITS-hosted map and image services. The viewer retains or improves on available user tools which allows for locating, drawing graphics, measuring, printing, and exporting maps as seen by the user. The information search mechanism is more user-friendly by differentiating between MDEM and Non-MDEM datasets allowing for a natural flow to data download. GIS data is available in "Quick Download" packages or through custom online requests.



This data, primarily the MDEM, provides the foundation for applications to be developed using GIS technology to meet the business needs of the governmental agencies and/or public interest. ITS is continually focused on the development and enhancement of the MGC, as well as maintenance of GIS hardware and software procurement instruments for state agencies and local governing authorities.

## IV. Geospatial Data

### 2013 Central Mississippi High Resolution Imagery Project

In late summer 2012, in response to a United States Geologic Survey (USGS) proposal to contribute funding to a Jackson, Mississippi Urban Area High Resolution Imagery project, the Council's GIS coordinator began assisting in the coordination and organization of a multi-county central Mississippi high resolution imagery acquisition project. Imagery resolutions would be 6 inch for urban and 1 foot for rural areas.

Mr. Blake Wallace, Executive Director of the Hinds County Economic Development Authority, agreed to work with the Council's GIS Coordinator and act as administrator for the 14-county project. By the end of 2012 bids were received and a contract was awarded. In early 2013 the contractor began collecting 6-inch resolution imagery over urbanized areas and 1-foot resolution imagery over rural areas. 3-inch resolution imagery was collected over the Jackson Metropolitan Area. The finished data was delivered to the counties and city in late summer and fall 2013, with final delivery of reports to MDEQ in early November, 2012. The data set was delivered to the Mississippi Geospatial Clearinghouse for distribution as MDEM imagery.

Funding partners include the participating counties, MDOT, MDEQ, ITS and USGS participated as funding partners.

### 2014 Northeast Mississippi Orthophotography Project

In early summer 2013, the Council's GIS Coordinator, in partnership with the Mississippi Department of Revenue (MDOR) surveyed counties in the northeast area of the state to determine their interest in participating in a coordinated effort to secure high resolution imagery. Nineteen counties agreed to participate and Blake Wallace again agreed to work with the Council's GIS Coordinator to administer the project. By the end of 2013 bids were received and a contract was awarded. In early 2014 the contractor began collecting 6-inch resolution imagery over urbanized areas and 1-foot resolution imagery over rural areas. Several counties selected to collect 6-inch county-wide. By the time of this report all data has been collected and the contractor has begun processing the data.

Funding partners include the participating counties, MDOT, MDEQ and ITS.

Summary: As envisioned in the 2011 plan, these coordinated projects have demonstrated how various agencies from all levels of government can work together for the common good. More important, these coordinated projects have proven to be a real cost savings to participating agencies. However, the real winners from these coordinated activities are the taxpayers that ultimately fund the acquisition of this needed data.

## Mississippi Digital Earth Model

The Mississippi Department of Environmental Quality, Office of Geology, is charged under state law to develop the seven key base layers of geographic information for the state. These seven layers are referred to as the Mississippi Digital Earth Model (MDEM). MDEM is a seamless, statewide, geospatially-referenced information management and mapping system. The seven key component layers include digital orthoimagery, transportation, hydrography (rivers, streams, lakes, and other water bodies), geodetic control, geo-political boundaries, a three-dimensional topographic model of the ground surface, and the cadastral layer (tax parcels). In the long term, the program will be largely self-sufficient through coordination of state and local government funding by the Mississippi Coordinating Council for Remote Sensing and Geographic Information Systems. In the near term, however, federal grant funding will help transition into an operational implementation of MDEM.

### Project Status:

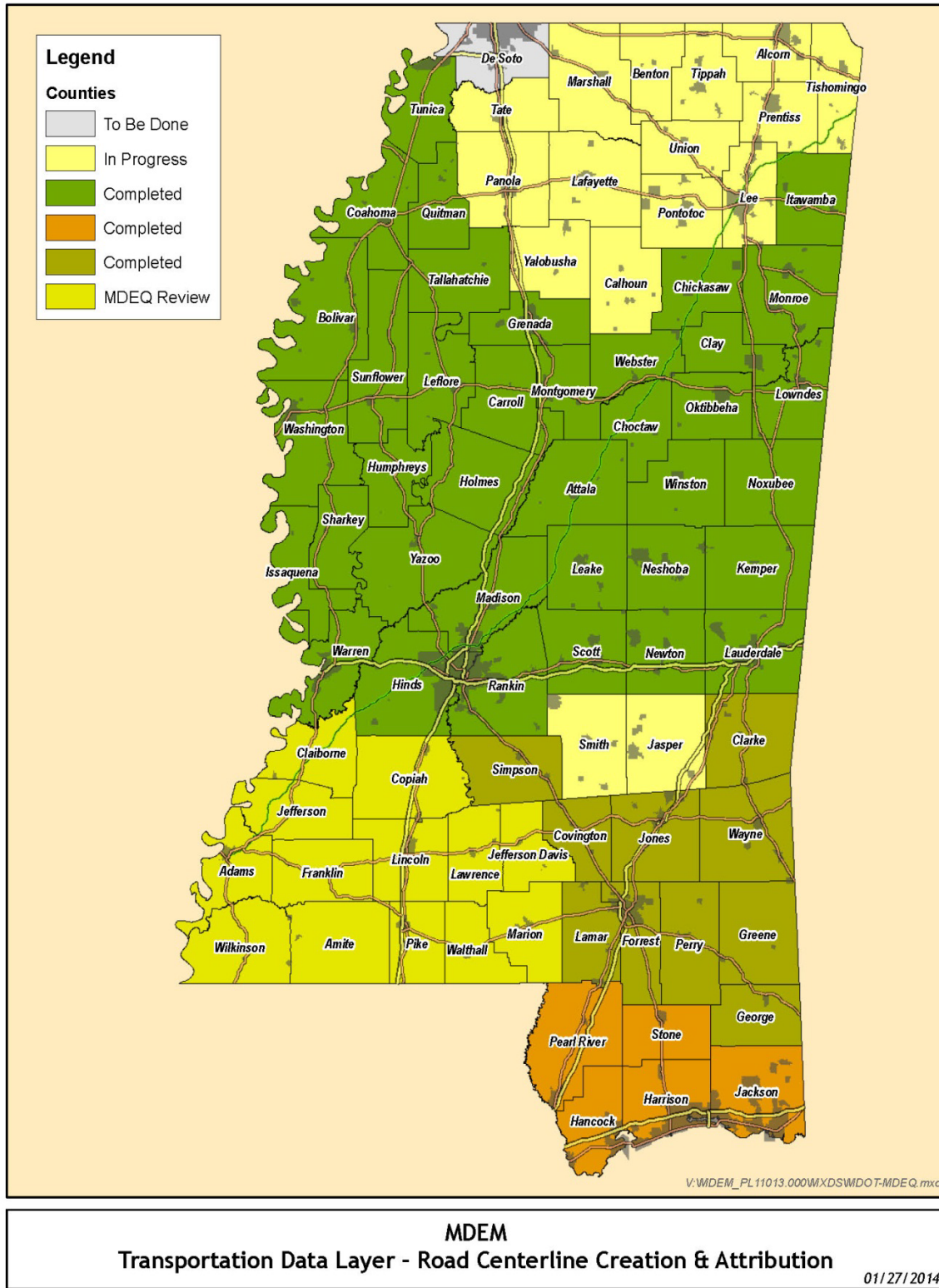
- Orthoimagery Data Collection:
  1. State-wide collection of seamless 2-foot pixel orthoimagery conducted by MDEQ during the 2005 - 2006 flying season with funding supplied by MDOT and NOAA.
  2. Collection of seamless 1-foot and 6-inch pixel imagery collected by MDEQ in five Gulf Region counties (Hancock, Harrison, Jackson, Pearl River, and Stone) was completed during the 2007 flying season using post-Katrina CDBG funding.
  3. Collection of seamless 2-foot pixel imagery was collected by the US Army Corps of Engineers (USACE) covering the entire Delta region during the 2010 flying season. That data has been provided by the USACE for use in the MDEM clearinghouse.
  4. The explosion and sinking of the Deepwater Horizon drilling rig and subsequent massive oil spill in the Gulf of Mexico challenged the State of Mississippi to develop a pre-disaster resource baseline, including high-resolution multi-spectral datasets in the potential impact areas. Complete datasets were collected on the barrier islands and the Mississippi coastline from the Louisiana state line to the Alabama state line. Additional data was collected in estuary areas of St. Louis Bay, Back Bay of Biloxi, and the mouth of the Pascagoula River, from the land/water interface to 200 feet inland. Datasets will be distributed through the GIS Clearinghouse upon completion of the Natural Resource Damage Assessment process.
  5. In late 2013 MDEQ began taking final delivery of county imagery collected as part of the Metro-2-Metro 2012-13 Digital Orthoimagery Project which involved 14 Mississippi counties and was coordinated by the MCCRSGIS Council.
  
- Transportation Data Collection:
  1. Collection of annotated road data for the five Gulf Region counties (Hancock, Harrison, Jackson, Pearl River, and Stone) was developed by MDEQ using post-Katrina

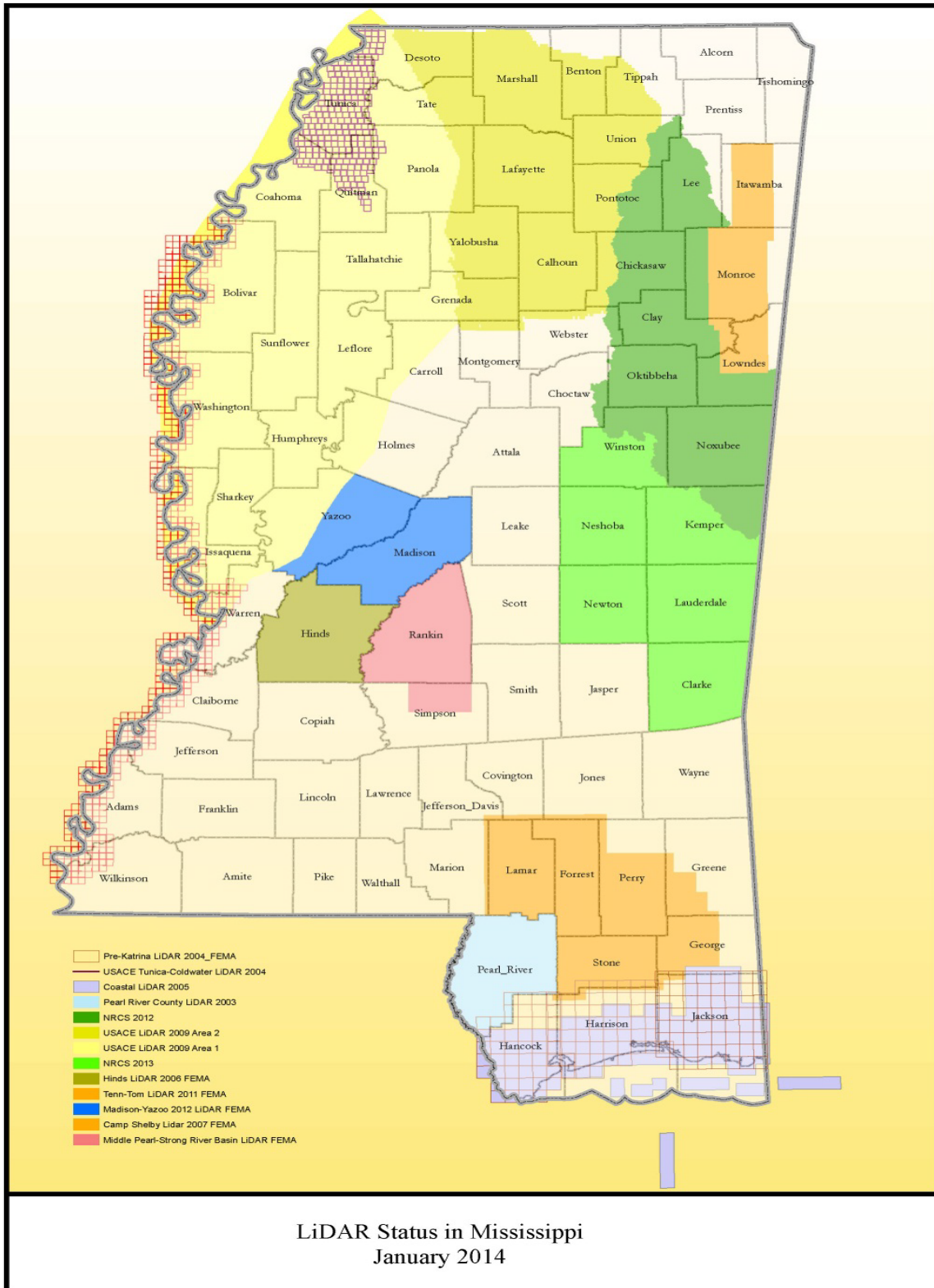
2. Community Development Block Grant (CDBG) funding in 2007 – 2008. The individual counties provided QA/QC support.
  3. Collection of annotated road data for 15 Delta counties was developed by MDEQ during 2010 with funding supplied by NOAA. MDOT and the individual counties provided QA/QC support.
  4. Collection of annotated road data for 22 central and northeast Mississippi counties was developed by MDEQ during 2011 with funding supplied by NOAA. MDOT and the individual counties provided QA/QC support.
  5. Collection of annotated road data for 10 central and southeast Mississippi counties was developed by MDEQ during 2012 with funding supplied by NOAA. MDOT and the individual counties provided QA/QC support.
  6. Collection of annotated road data for 13 southwest Mississippi counties was developed by MDEQ during 2013 with funding supplied by NOAA. MDOT and the individual counties provided QA/QC support.
- Geodetic Control Data Collection:
    1. Control points consisting of unambiguous targets easily viewable from existing digital orthoimagery were collected by MDEQ during 2010 in 17 southwest Mississippi counties with funding supplied by NOAA.
  - Hydrography Data Collection:
    1. Collection of detailed digital surface waters files were completed for the Coldwater Basin, the Upper Pearl Basin, the Upper Big Black Basin, and the Lower Mississippi Basin by MDEQ during 2010 with funding supplied by NOAA. The total coverage area for these up-dated areas is 5,148 square miles. The new datasets are being loaded into the MDEM Clearinghouse and into the USGS National Hydrography Dataset (NHD).
  - Elevation and Bathymetry Data Collection:
    1. One of the most pressing needs as far as MDEM framework data layer development is concerned is high resolution digital terrain and contour maps for the state that are aligned and compatible with the state-wide orthoimagery base layer of MDEM. Digital terrain models and contours have been developed for the entire state, with the final seventeen counties in the southwest part of the state being completed in 2010.
    2. LiDAR (light detection and ranging) is an optical remote sensing technology that can provide an extremely accurate rendition of the ground surface. Although expensive to collect, it has numerous applications in agriculture, archaeology, biology and environmental sciences, geology, surveying, and transportation. LiDAR data covering Camp Shelby and surrounding areas was collected in 2008 by MDEQ utilizing National Guard funding.
    3. LiDAR data was developed by MEMA/MDEQ as part of their work with FEMA's flood mapping program for the following areas:
      - A) Hinds County
      - B) Tenn-Tom Waterway (947 square miles)
      - C) Madison County and a portion of Yazoo County adjoining the tile areas

collected by the USACE during the 2010 flying season.

D) Rankin County and a portion of Simpson County were collected during the 2013 flying season.

4. The collection and processing of LiDAR data was conducted by the US Army Corps of Engineers (USACE) covering the entire Delta region and headwaters during the 2010 flying season. That data has been provided by the USACE for use in the MDEM clearinghouse.
- Through funding provided by the U. S. Department of Housing and Urban Development *Recovery Action Plan*, a number of datasets were developed in support of the Gulf Coast Regional Infrastructure Program in the five Gulf Region counties. This work supports implementation of the water and wastewater infrastructure improvements, including developments that will ensue for years to come. The elements of this work included:
    - Public Land Survey System Improvement – the framework on which property ownership data and jurisdictional boundary data are based. This element will create an integrated, regional PLSS that will support accurate, georeferenced locations of the water and wastewater infrastructure improvements.
    - Parcel Publication – the element that creates the publication standard for parcel data and provides the resulting data sets for the State for distribution through the MS Geospatial Clearinghouse to those end users within the Gulf Region who most need the data.
    - Parcel Improvement and Address Plan – resulting in data that will constitute a seamless, regional property ownership data set that can be used by the State in the infrastructure program, by Federal agencies, and by various units of local governments in their continuing recovery efforts.
    - Building Footprint and Address Point Collection – complementing the contents of the county parcel record databases.
    - Jurisdictional Boundaries – resulting in a standard, uniform municipal and county boundary for each of the Gulf Regional counties, including the county utility authorities responsible for implementation of the infrastructure program.





## Mississippi Flood Map Modernization Initiative

The Mississippi Flood Map Modernization Initiative (MFMMI) is a partnership between the State of Mississippi and the Federal Emergency Management Agency which is in the process of modernizing and updating the nation's Flood Insurance Rate Maps used by FEMA to support the National Flood Insurance Program (NFIP) and all local government Floodplain Management Programs. State agencies involved in the program are MEMA, which handles the State NFIP and Floodplain Management Program, and MDEQ with its contractor MGI, LLC, which handles the engineering and mapping activities for the program.

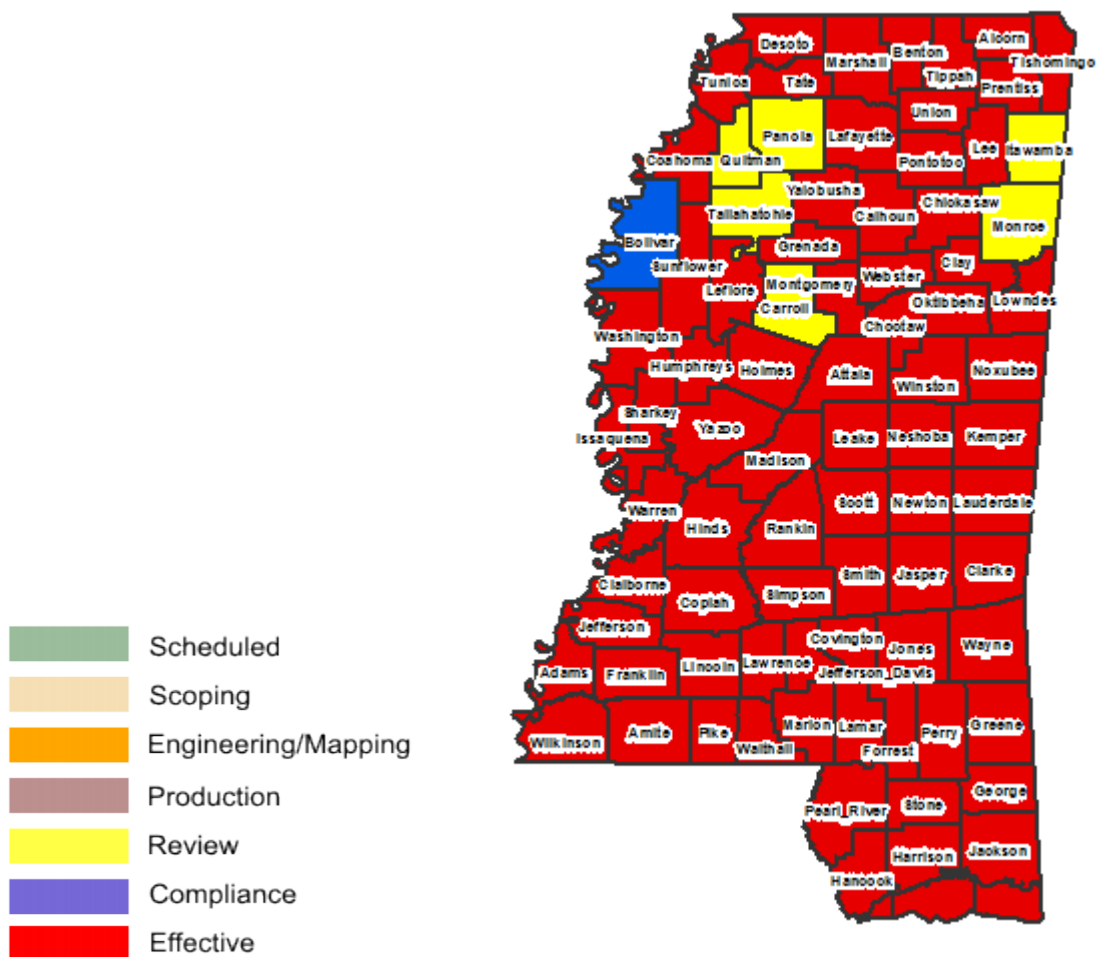
MAP MOD (Map Modernization) was the first multi-year (FY2003-FY2008) FEMA flood mapping program. FY2009 FEMA funded map work is considered transitional to the new program called Risk MAP, which began with FEMA FY2010 funding and will continue so long as funding is made available. This program's primary goals will be DFIRM map maintenance, the addressing of unmet mapping needs not covered during the MAP MOD program, and remapping areas with levee accreditation issues. Additionally, all mapping projects are based on HUC\_8 basins rather than the countywide basis in MAP MOD. New activities added may include new elevation data development (Lidar), other non-regulatory mapping, or data development which may be used in flood mitigation, flood risk assessment, flood planning and floodplain management activities of local city and county governments.

### **Project Status:**

- MAP MOD Status: As of the end of 2012, seventy-five (75) of Mississippi's 82 counties have new countywide effective Digital Flood Insurance Rate Maps (DFIRMs) and seven (7) additional Mississippi counties have had Preliminary DFIRMs delivered to the local officials for review. One (1) of those counties was in the compliance period at the end of 2013. The remaining six (6) counties are currently on hold because of levee certification issues.

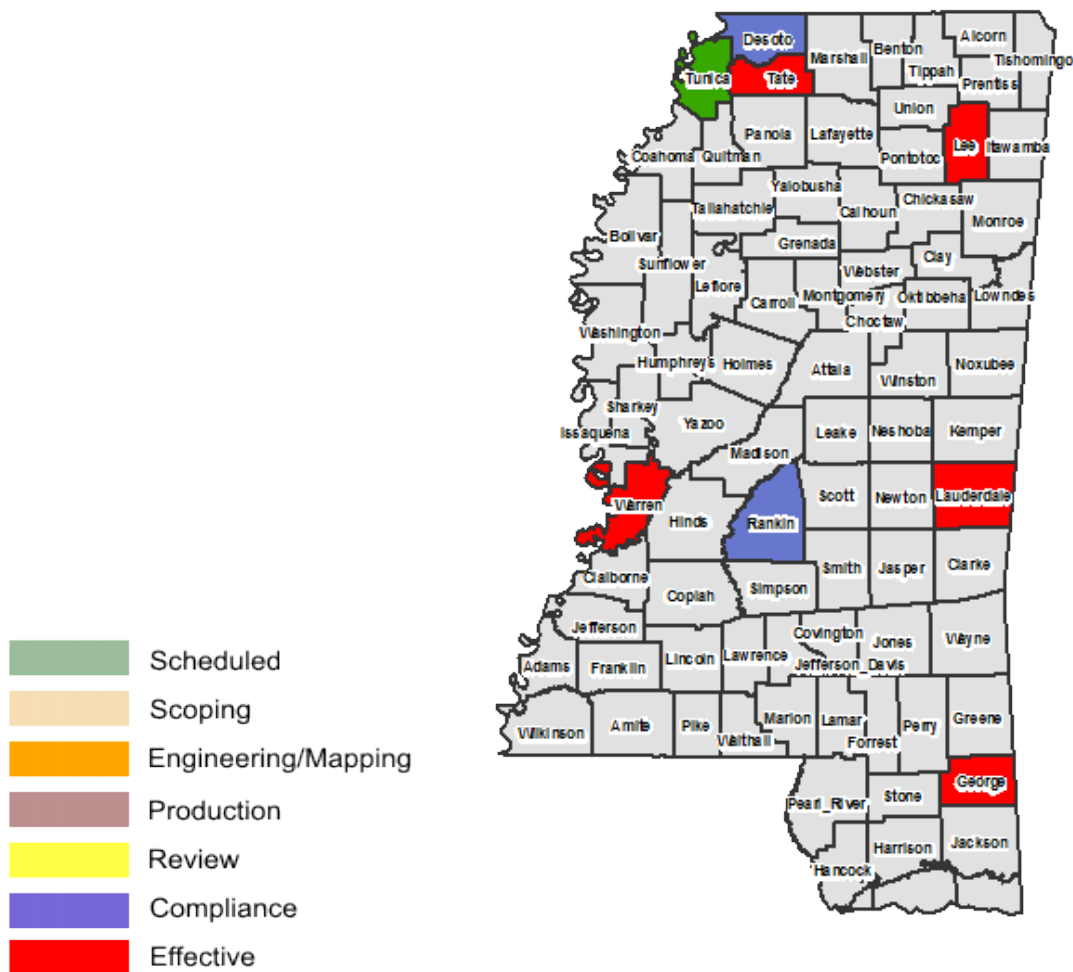
FEMA MAP MOD Funding Year	# of County Projects Funded	# of County Preliminary DFIRMs Delivered	# of County DFIRMs Effective
FY03 Map Mod	5	5	5
FY04 Map Mod	6	6	6
FY05 Map Mod	8	8	8
FY06 Map Mod	20	20	19
FY07 Map Mod	21	21	20
FY08 Map Mod	20	20	15
<b>Totals</b>	<b>80 + 2*</b>	<b>80 + 2*</b>	<b>73 + 2*</b>

\*Rankin and Pearl River Counties separate funding



Mississippi County MAP MOD Flood Mapping Status.

- FY2009:** As of the end of 2013, seven (7) of the eight (8) counties funded with FY2009 FEMA funds had preliminary DFIRMs completed and submitted to local county and community officials, one county (Tunica Co.) was on-hold because of levee certification issues, five (5) counties' DFIRMs had gone effective, and two (2) counties (Rankin and Desoto counties) will go effective in mid-2014. The **FY2009** mapping year is considered a transition year in funding between FEMA's MAP MOD program and the Risk MAP program which will begin with FY2010 funding and run through FY2014.



**Mississippi FY2009 County Flood Mapping Status.**

**RiskMAP FY2010-2014:** With the new FEMA RiskMAP program, all RiskMAP and new DFIRM studies will be based on HUC\_8 sub-basin basis. As of the end of 2013, scheduling and work had begun on ten (10) HUC\_8 sub-basins. Three (3) sub-basins are scheduled under FY2010 FEMA funding, six (6) under FY2011 FEMA funding and one (1) sub-basin under FY2012 FEMA funding. The three FY2010 funded basins have been through Discovery and currently in the engineering phase. Three of the FY2010 funded basins have gone through Discovery and the remaining basins are scheduled for Discovery work in early 2014.

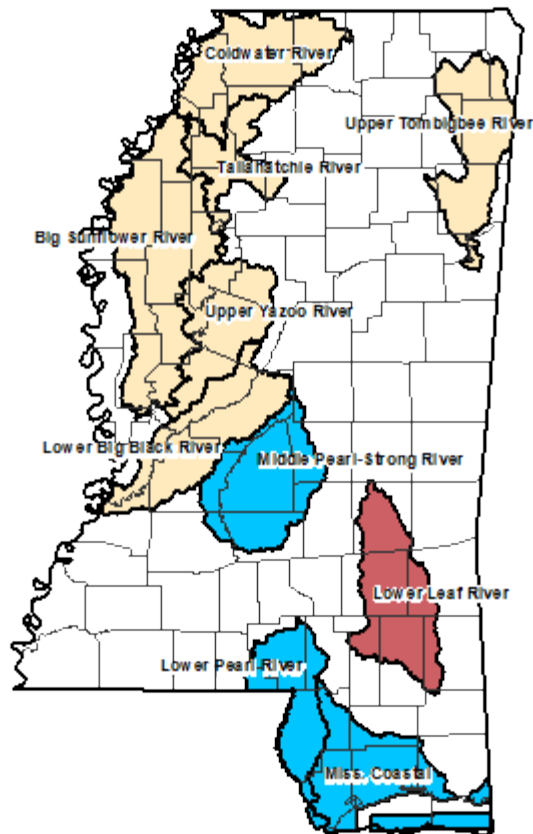
## Risk MAP Basin Funding

### FY2010 FEMA Funding Year

- Middle Pearl-Strong (Engineering/Mapping)
- Lower Pearl (Engineering/Mapping)
- Mississippi Coastal (Engineering/Mapping)

### FY2011 FEMA Funding Year

- Lower Big Black (Discovery 2013)
- Big Sunflower (Discovery 2013)
- Upper Yazoo (Discovery 2013)
- Coldwater (Discovery 2014)
- Tallahatchie (Discovery 2014)
- Lower Leaf (Discovery 2014)
- Upper Tombigbee (Levee Mapping, Discovery 2014)



## Mississippi FY2010-FY2012 RiskMAP Flood Studies.

## V. Applications

### Architectural and Historic Structures

The State Historic Preservation Office (SHPO) of the Mississippi Department of Archives and History (MDAH) is tasked with developing and maintaining a GIS based system that will map archaeological sites, National Register properties, and above ground historic resources that are situated within the disaster areas defined by Presidential Declaration FEMA-1604-DR and its amendments. This system improves the public's knowledge about the range and extent of historic and prehistoric sites within the Mississippi Gulf Coast Region and provides the SHPO with a new tool to better evaluate and manage these cultural resources.

The Architecture and Archaeology divisions of MDAH previously managed information about historic places in a couple of slightly different ways. The level of completeness with regard to this information was different for each division. The opportunity existed to bring the information in both divisions to the same completion level and to provide management of this information through a common interface. The daily maintenance of these combined records management systems is housed at the State Data Center. The electronic data is supported and accessible twenty-four hours a day, seven-days a week. In addition, all upgrades and maintenance to the combined records management systems is performed by ITS staff which frees resources at MDAH.

This core system, completed mid-year 2011, provides a tool for the staff of MDAH to add and maintain records, create reports, perform research, perform cross-divisional regulation tasks, and provides easy review of historic building surveys.

New functionality for this system was completed in 2013. Improved items include a new JavaScript cross-platform viewer. The viewer allows the user to examine multiple architectural and archaeological layers in combination on virtually any device. Also included in the new release is the ability for outside architectural consultants to submit surveys for easy assimilation into the HSMT.

### Archaeology and Historic Sites

The State Historic Preservation Office (SHPO) of the Mississippi Department of Archives and History (MDAH) was tasked with developing a website to publish the rich, but not well-known archaeological history of Mississippi. The completed application educates the citizens of Mississippi about their archaeological heritage through an interactive website that includes virtual tours of archaeological sites. The website reaches citizens as well as teachers, students, and professionals. The website includes key sites in the Mississippi coastal area but was designed to include information statewide as it becomes available. The virtual tours guide users to experience historic sites that are now non-existent or inaccessible. The site also guides users, through the use of podcasts and downloadable content to visit actual sites.

## Small Community Assets

The Asset Development Group of the Mississippi Development Authority was tasked with developing a GIS based system to highlight the resources of small communities in Mississippi. MDA created the Asset Development Group to focus on non-traditional economic development opportunities unique to Mississippi. Such opportunities often require longer term development, guidance, vision and support. This system showcases resources of small communities to the public. The site provides tools to tourists, the film industry, and businesses. A tourism-focused application foundation was created with expandable functionality and the ability to include program areas as data sources become available. The foundation is an application that has all of the basic functionality that is necessary in any web-based mapping program. This includes multiple base maps, keyword search, address search, zoom/pan, multimedia pop-ups, a trip planner, and other basic functions.

## BioMass in Mississippi

In 2011, the Mississippi Development Authority contracted with a consulting group, Tetra Tech, to provide a detailed study of potential sources of biomass in Mississippi. As defined by The Mississippi Biomass and Renewable Energy Council, biomass is any non-fossil, energy containing a form of organic carbon which includes all land and water-based vegetation such as trees, aquatic and marine plants, crops, organic components of municipal solid waste, forestry and agricultural residues, animal wastes, and industrial wastes derived from any combination of those substances. Mississippi has many naturally occurring substances as well as substances that can be easily farmed that are natural biomass sources.

The data was collected in report format with an accompanied geographic dataset. This project made the data and geographic information available via the Internet to a target audience of potential biomass investors and to the general public. It includes an interactive map with available biomass layers provided by the consultant group. The project leverages new open standards for software development and can run on many different platforms including tablet devices.

## Building Management

The Mississippi Department of Finance and Administration Bureau of Building tracks the assets and attributes of each of the properties owned by the State of Mississippi. These properties include buildings, furniture, vehicles and other related items. The attributes for each of these properties include location responsible personnel, age, replacement cost, etc. An application called Protégé has been used to collect and maintain the list of properties as well as their corresponding attributes.

In 2013, Bureau of Building required a data entry and mapping system to augment the existing Protégé application in order to provide much needed reporting and planning information, as well as to produce the Inventory of Buildings Report for the legislature.

Now in production, the new data entry system provides a mapping interface to each of the agencies. This is used to assist the agencies in locating their building assets geographically. By combining locations of buildings with collected attributes, like roof age, a map can quickly be displayed to determine, for example, distribution of needed resources. Quick and accurate emergency response is also a concern of

the Bureau of Building; therefore, the application was expanded to show emergency exits for buildings. A simple building search tool and emergency exit display application was created that can be used on virtually any device.

## **MDOT Coordination Activities**

- MDOT participated in the Central Mississippi Imagery Project with funding support. 14 different counties participated in this imagery acquisition project.
- In late 2013, MDOT initiated the process of drafting a MOU for the purpose of participating in the Northeast Mississippi Imagery Project. It is anticipated that 20 counties will participate in this acquisition project.
- Transportation Data Collection
- MDOT provided QA/QC support for annotated road data being developed by MDEQ.
- Published a new road network feature. This feature references Mississippi's road network using the County, Route, and Log-Mile Linear Referencing Method (LRM). This dataset contains the state road system comprised of Interstate, US, MS, Federal, local routes and ramps.

## **Other Activities**

- Continued collection of roadway asset data
- Continued development on a system to electronically capture storm water inspections in the field.

## VI. Education & Outreach

### The Mississippi State University Geospatial and Education Outreach Project

The Geospatial and Education (GEO) Project began in mid-2006 to assist employees of Mississippi state and local governments to learn and utilize geospatial technologies in a way to better the quality of life for Mississippians. Since the founding of the GEO Project more than 3,000 people have participated in over 300 workshops on geographic information systems (GIS). Workshop content ranges from introductory concepts of GIS to advanced database management systems. The GEO Project also provides technical assistance to state and local government agencies using GIS or other geospatial technologies, such as remote sensing and GPS. The GEO Project is a Mississippi State University Extension Service project in the Geosystems Research Institute on the Mississippi State University campus in Starkville.

In 2013, twenty-nine workshops were offered to 253 participants at various locations across Mississippi. Content of the workshops ranged from an introduction to GIS to geospatial database development and management. Participants received a certificate of course completion as well as the option to obtain CEU credit. The GEO Project offers post-training assistance to implement classroom concepts into the workplace.

The GEO Project began development of new courses to be offered during 2014. Participants in past workshops expressed an interest in "open source" GIS software. Open source software permits use of software without commercial licensing and without cost to the user. A two-day workshop on the internationally recognized open source GIS software, *QGIS*, will be presented in the Spring of 2014. Also in development, and to be released in the Spring, will be a two-day course on ArcGIS Online, a popular web-based GIS environment and a one-day course on low-cost multiuser geospatial database system. The schedule of upcoming courses may be viewed on the GEO Project website (<http://www.geospatial.msstate.edu>).

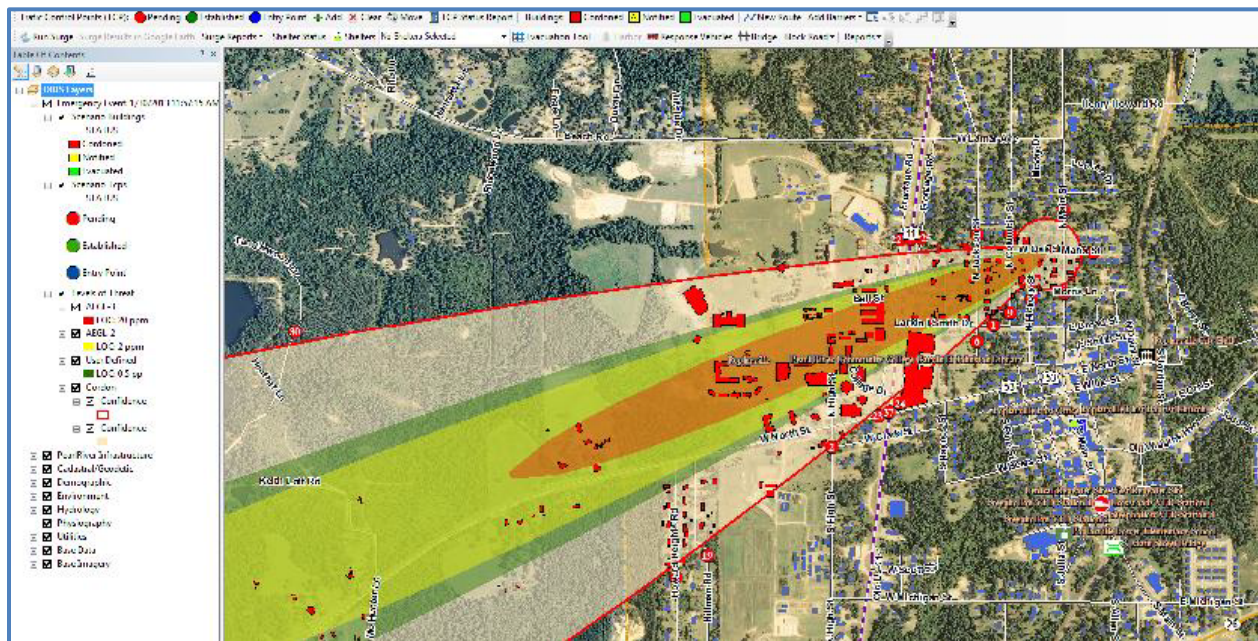
The GEO Project expanded its activities beyond training during 2013 with application development. A mobile GIS application was developed for the city of Gulfport to assist city employees working on code enforcement issues in the field. The software is supported by several operating systems and communicates directly with the city's geospatial database management system via a data connection on the field cell phones and computers. Another GIS application was developed for cell phones to view local maps of real estate listings using the integrated GPS in the cell phone. A GEO Project application is also in development for guidance control for spraying farm fields and pastures. The controller will minimize overlap and gaps when making parallel passes through the field. The software and hardware for the sprayer controller will be protected under open source licensing and will be available to the public on the GEO Project's website. This application will be field tested during 2014.

For more information on the GEO Project contact: Dr. Scott A. Samson, Geosystems Research Institute, Mississippi State University, 2 Research Blvd, Starkville, MS 39759, telephone: 662-325-9491, email: [ssamson@gri.msstate.edu](mailto:ssamson@gri.msstate.edu).

## Jackson State University Center for Defense Integrated Data (CDID)

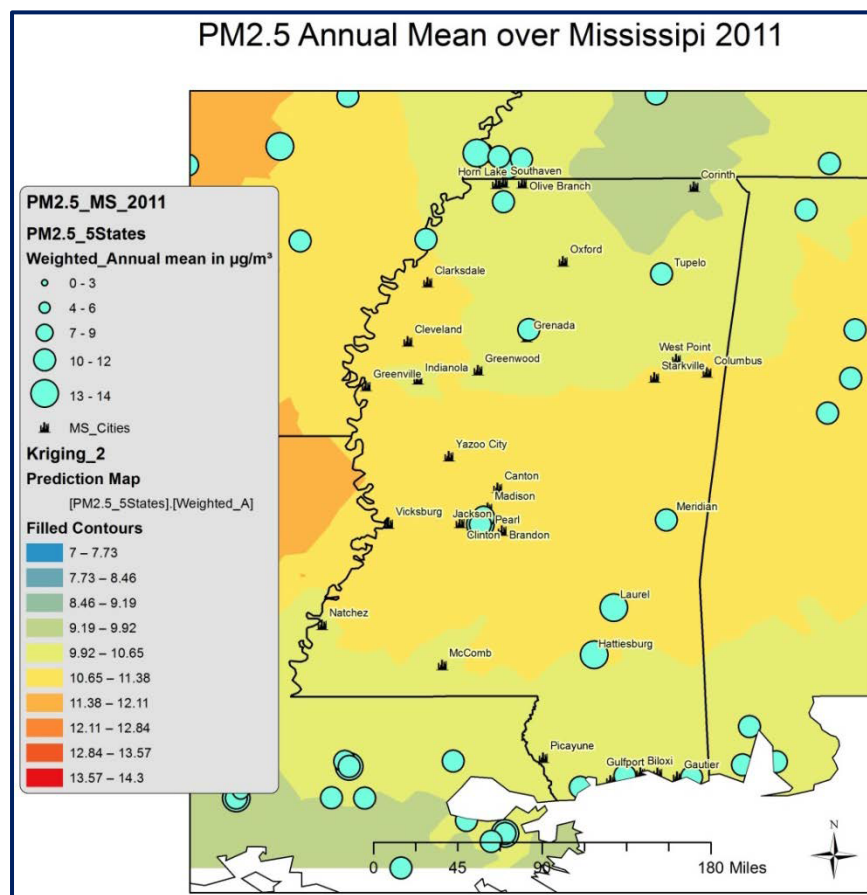
Jackson State University's (JSU) Center for Defense Integrated Data (CDID) and the Center of Excellence (COE) have developed a GIS-based application designed to support emergency operation centers (EOCs) by providing rapid spatial modeling and fused data analysis in response to man-made or natural disasters. The datasets used in the application range from cadastral to environmental and are fused with hazard models, analysis tools, aerial imagery, and GIS vector layers to provide a single mapping framework. The system was designed to assist first responders with managing complex incidents in a seamless and dynamic way. It gives immediate situational awareness by displaying those conditions that help first responders and emergency managers understand what is occurring in disaster areas. DRIS not only displays critical data to provide a common operational picture, but the application also makes it possible to analyze data and to support decisions accordingly.

In an effort to provide assistance to county Emergency Management Agencies during emergency planning and/or response, Jackson State University has developed a customized version of the Disaster Response Intelligent System (DRIS). This system combines a Storm Surge Prediction Module, a Chemical Spill Module, an Evacuation Calculator Tool, an Evacuation Route Analysis Tool, and a Shelter Management System.



## Jackson State University Environmental Science Ph.D. Graduate Student Swatantra Kethireddy

Current observations indicate that asthma population is growing every year in the United States but specific reasons for this are not well understood. This study stems from an ongoing research effort to investigate the spatiotemporal behavior of asthma and its relationship to air pollution. The association between environmental variables such as air quality and asthma related health issues over Mississippi State are investigated using Geographic Information Systems (GIS) tools and applications. Health data concerning asthma were obtained from Mississippi State Department of Health (MSDH) for 9-year period from 2003-2011, and data of air pollutant concentrations (Ozone and PM<sub>2.5</sub>) collected from USEPA web resources. Both data were analyzed geospatially to establish the impacts of air quality on human health specifically related to asthma. Disease mapping using geospatial techniques provides valuable insights into the spatial nature, variability, and association of asthma to air pollution. Asthma patient hospitalization data of Mississippi has been analyzed and mapped using quantitative Choropleth techniques in ArcGIS. Patients have been geocoded to their respective zip codes. Potential air pollutant sources of interstate highways, industries, and other land use data have been integrated in common geospatial platform to understand their adverse contribution on human health.



## **University of Mississippi**

### **Geospatial Information and Science and Technology (GIS&T)**

### **Accomplishments**

The GIS&T research and education at the University of Mississippi is a cooperative effort between the Mississippi Mineral Resources Institute (MMRI) and the Department of Geology and Geological Engineering (G&GE). These two organizations partnered on the Flood Hazard Assessment of the Mississippi Delta Region, funded by the Mississippi Emergency Management Agency (MEMA). This project created a comprehensive geospatial database of critical facilities in the Delta Region for use by MEMA and the counties in determining priorities for flood mitigation. In addition to the critical facilities database, Dr. Lou Zachos of the G&GE department processed and analyzed a complete high resolution elevation dataset for the Delta. These data were collected with a LiDAR system and provides the high resolution elevation data needed to more accurately assess flood vulnerability in the region. The project also used flood modeling scenarios, provided by the National Center for Computational Hydro science and Engineering, to illustrate the effects of a catastrophic failure of mainline levees at different locations in the Delta. The flood modeling used GIS-derived data as an information layer to evaluate such parameters as potential flood depth, duration and speed of the flood waters. The project is scheduled for completion March 30, 2014.

The MMRI conducts state-wide evaluations of mineral resources. For projects of this scale; the management of data is a major issue. The use of GIS has been essential in constructing sampling programs to ensure adequate coverage of outcrop patterns. As mineral content data is determined, it is also used to identify areas of mineral concentrations that may warrant additional sampling. The MMRI has also used the GIS format as an analysis tool for evaluation of hydrocarbon fields. The GIS is ideal to manage data such as well location, production zones, well owner, well status and an ideal platform for distributing data.

The MMRI recently completed a GIS-based data set containing information useful to economic development centered on the Toyota Motors of Mississippi manufacturing plant in Blue Springs, Mississippi. These data were designed to make geological, geotechnical and infrastructure data easily available to government as well as the public. Three Rivers Planning and Development District (PDD) partnered with the MMRI to include data sets needed by the PDD to promote development that is sensitive to fiscal, environmental, and natural hazard issues. This data set is in presently used by the PPD.

Education in GIS&T includes classes in remote sensing, GIS and geospatial analysis. These classes continue to have increased enrollment and include students from a wide range of disciplines across campus. The demand for the Introduction to GIS class has resulted in this class being offered in both the summer and fall semesters.

## VII. Collaboration

### Technical User's Group (TUG)

The Technical User's Group (TUG) was re-engaged by Chairman Latham during the April 2013 meeting, seating Mr. Talbot Brooks from Delta State University as its Chairperson. Initial instructions to the TUG were to assemble a body of technical experts willing to provide coordinated advice to the Council for FY2013. While many volunteers from industry and academia stepped forward, precious few were identified from within agencies and organization comprising the Council. This relative lack of participation was leveraged to help define the agenda for the year's activities which included an informal study about how to better engage stakeholders from state government, dialogue with potential geospatial technologies users to identify pressing technical and data needs, and a review of standards supported by the Council.

The challenges associated with staffing the TUG were found to be similar to those facing all volunteer organizations. The most prominent responses shared regarding this lack of participations included:

1. Inability of potential participants to identify with the mission of the TUG
2. Lack of release time and fiscal support
3. Distance and affiliated challenges associated with face-to-face meetings
4. Unclear roles and expectations with respect to potential participation
5. Lack of confidence that TUG outcomes or recommendations are of value to the Council
6. Possibility of reprisal or backlash when offering constructive criticism

Potential modifications to the way the Council and TUG function were explored in partnership with national and international leaders in geospatial technologies. Some suggestions were quite specific, other were more general and require further study:

1. A technical representative should be assigned by every voting member of the Council.
2. The chosen representative should be allotted 1-2 hours per week of release time (average) to work with the TUG.
3. TUG meeting attendance by all organizations represented on the Council must should be compulsory and an evaluated competency for the assigned employee.
4. A larger meeting membership combined with secret ballot or anonymous polling substantially reduces the potential for backlash.
5. The TUG should explore virtual meeting software and support.

The most difficult challenge posed was that created by “Unclear roles and expectations with respect to potential participation”. An exploration of trends in geospatial coordination at the Federal level and within other states suggests that, in addition to adoption of items such as a business and work plan, that a shift in management approach might be warranted. The Federal Geographic Data Committee adopted a portfolio management approach which might be worth further consideration by the Executive Committee and the Policy Advisory Group. The following is an excerpt from FGDC guidance.

#### What is Portfolio Management?

The Office of Management and Budget (OMB) Circular A-16 Supplemental Guidance was endorsed by OMB in November 2010. Since OMB endorsement, briefings, trainings, and information sessions have been conducted with FGDC partner agencies. In addition, the A-16 Supplemental Guidance Implementation Strategy was developed.

Portfolio Management, according to OMB Circular A-16 Supplemental Guidance, is the coordination of Federal geospatial data assets and investments to most efficiently support national priorities and government missions.

Portfolio Management applies consistent management approaches that help increase the quality of data through best practices and documentation in a manner that:

- Reduces duplication and cost
- Provides greater accessibility
- Supports shared services across the Federal Government
- Offers an accurate and accountable inventory of Federal Geospatial Portfolio assets
- Improves government accountability and transparency
- Improves data quality through lifecycle evaluations for content quality and fitness for use
- Ensures national data are high quality, dependable, consistent, and available to agencies
- Increases return on existing geospatial investments by promoting the reuse of data, applications, and tools.

#### How does Portfolio Management work?

Datasets are organized into management units called Themes, which are managed by Theme Leads. Dataset Managers and Theme Leads use industry-accepted practices to improve management of Themes leading to better outcomes. Data within Themes are made available through the Geospatial Platform.

Expansion of MDEM layers into more broadly managed themes assigned to appropriate Council members with stakeholder interest might serve to increase participation while improving the management of common data. Distributed responsibility for thematic domains would empower TUG membership with a sense of ownership in the greater state-level geospatial enterprise.

### Addressing

With respect to technical work, TUG members have been repeatedly asked about addressing and possible sources for address data. The TUG met at MARIS' offices in the later summer of 2013 to discuss some of the challenges. Initial challenges encountered were:

1. Lack of an authoritative data source for addresses
2. Lack of a standard for address data, though both Gulfport and the FGDC have standards in place which merit further consideration
3. Lack of a definition about precisely an address is geographically located
4. The challenges involved with addressing linear features such as transmission pipelines, railroads, and electric lines.

While many of the questions received pertain to addressing standards and E911, this meeting also brought to the fore an incredibly diverse range of address stakeholders. While headlines are most often garnered by an emergency responder unable to find a location in a timely fashion, it became clear that state and local governmental entities and private businesses must expend tremendous time and effort finding an address. The TUG requests that the Council request the Policy Advisory Group consider a recommendation regarding the adoption addresses as a MDEM layer (and assign it to MEMA if the portfolio management concept is adopted).

The TUG has historically played an important educational advisory role for the Council, most recently providing an overview of emerging technologies and trends to Council executives. In keeping with this role, the TUG will form a working group focused on the development of best practices documents for each MDEM layer and its accompanying standard. Best practices carry the greatest potential for realizing the intent of the Council's enabling legislation: saving taxpayer money through efficient management of the State's geospatial resources. Initial drafts will be available by the Q4 2014 meeting.

## US Census Bureau Memorandum of Understanding (MOU)

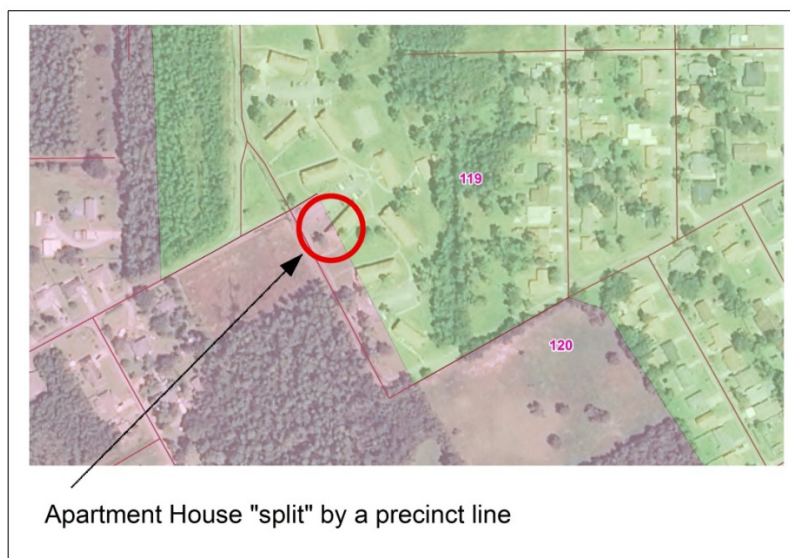
The MCCRSGIS was approached by the Census Bureau in 2013 to enter into the first Memorandum of Understanding with a state as a partner to update the Census Geographic Support System Initiative (GSS-I) data with state and locally developed data. The GSS-I includes 1) Street centerlines 2) Building footprints & 3) Point addresses. While this may initially appear to be of questionable value to Mississippi, it is actually of great benefit.

While the Census bureau has collected and refined great deals of geographic data over the years, they are often restricted from sharing certain elements due to restrictions over privacy concerns. *Title 13* which allows the collection of potentially sensitive information also prevents the Census from sharing the data. While some of the data such as income is easily understood and accepted as private, currently addresses are also considered private by congress.

The Census MOU negates the need for Census to expend funds on collecting address data and the state's desire for the information to be shared. Mississippi will have a statewide point address dataset as a result.

The state collection of building footprints will have a tremendous value to state and local governments as it is developed for efforts such as urban planning, disaster recovery, identification of non-permeable surfaces and more.

Census street centerlines are used in redistricting efforts. Despite the ongoing refinement of Census horizontal accuracy, overlays of Census data on local imagery or centerlines data often shows discrepancies. This can lead to confusion regarding extents of districts. Below is an example of how precinct lines based on old Census data can actually cut through a structure. By updating the Census street centerlines in the GSS-I with local data, such problems will not exist in future redistricting efforts.



MEMORANDUM OF UNDERSTANDING  
ESTABLISHING A JOINT STATISTICAL PROJECT

BETWEEN

The U.S. CENSUS BUREAU

AND

THE MISSISSIPPI COORDINATING COUNCIL FOR REMOTE SENSING AND GEOGRAPHIC  
INFORMATION SYSTEMS

Agreement No. 74-MOU-14-001

## 1. PARTIES AND PURPOSE

This document constitutes an agreement between the U.S. Census Bureau (Census Bureau) Geography Division (GEO) and the Mississippi Coordinating Council for Remote Sensing and Geographic Information Systems.

The Mississippi Coordinating Council for Remote Sensing and Geographic Information Systems coordinates remote sensing and geographic information system activities in Mississippi by setting and assuring enforcement of policies and standards to make it easier for remote sensing and geographic information system users around the state to share information.

The Census Bureau counts and profiles the people and institutions of the United States. In this capacity, the Census Bureau conducts a census of population and housing every 10 years, economic censuses every 5 years, and the American Community Survey every year, in order to provide social, economic, and housing information by geographic areas to implement governmental programs and to meet broad statistical needs. To support its data collection activities, the Census Bureau routinely performs work, such as geographic data collection from state and local government agencies.

## 2. AUTHORITY

**The Census Bureau's authority to participate in a joint statistical project with the Mississippi Coordinating Council for Remote Sensing and Geographic Information Systems is 13 U.S.C. § 8(b), which authorizes the Census Bureau to engage in joint statistical projects with non-profit agencies and organizations on matters of mutual interest, but only if the cost of such projects is equitably apportioned.**

**Additional authority for the Census Bureau is:**

- (1) 13 U.S.C. Section 6, which authorizes the Census Bureau to access/acquire data and information from outside entities;
- (2) 13 U.S.C. Section 8(b), which authorizes the Census Bureau to engage in joint statistical projects such as this; and
- (3) OMB Circular A-16, which specifies that the Census Bureau is the lead federal agency responsible for governmental unit boundary geospatial data, and specifically in Section (8)(5), coordinates and works in partnership with federal, state, tribal, and local government agencies, academia, and the private sector to efficiently and cost-effectively

collect, integrate, maintain, disseminate, and preserve spatial data, building upon local data where possible.

**No data protected by the confidentiality requirements of U.S.C. Title 13 will be shared pursuant to this agreement.**

- (1) **The Mississippi** Coordinating Council for Remote Sensing and Geographic Information Systems authority to participate in a joint statistical project with the Census Bureau is § 25-58-21 which authorizes the Mississippi Coordinating Council for Remote Sensing and Geographic Information Systems to coordinate remote sensing and geographic information system activities within Mississippi.
- (2) HB No. 861 of the 2003 Regular Session of the Mississippi Legislature (Senate Bill 2726) Establishing the Mississippi Coordinating Council for Remote Sensing and Geographic information Systems which also provides for the coordination of activities with higher education entities with other public remote sensing and GIS initiatives to achieve the maximum benefit for the State of Mississippi.

### **3. PURPOSE**

Pursuant to this agreement, the parties will define a cooperative program for the regular and coordinated collection and tracking of address, street centerline, and boundary datasets maintained by state and local government agencies in the state of Mississippi. The agreement provides a framework for sharing responsibilities and sharing data while implementing a regular and ongoing collection of local government GIS data that will satisfy needs of the U.S. Census Bureau and the Mississippi Coordinating Council for Remote Sensing and Geographic Information Systems.

The Census Bureau has determined that implementation of geographic partnership programs in the state of Mississippi cannot be done as effectively without the participation of the Mississippi Coordinating Council for Remote Sensing and Geographic Information Systems. Implementation of this agreement will reduce duplication of effort between these state and federal agencies, while reducing the burdens that the Mississippi Coordinating Council for Remote Sensing and Geographic Information Systems and the Census Bureau place on local governments in Mississippi.

### **4. MUTUAL INTEREST OF THE PARTIES**

The agreement is of mutual interest and benefit to the parties as it furthers each one's goal of accurately carrying out their responsibilities. For the Census Bureau, these responsibilities include acquiring address, street centerline, and boundary data from local governments, and using that data to update the Census Bureau's MAF/TIGER system. In the case of the Mississippi Coordinating Council for Remote Sensing and Geographic Information Systems, these responsibilities include/pertain to acquiring address, structure points, street centerline, and boundary data from state and local sources for the statewide coordination of GIS information and efficient use of resources. Each party has a need to gather and maintain geographic data pertaining to addresses, street features, and boundaries, and each party can benefit from the knowledge, expertise, and resources of the other party in a cooperative endeavor.

### **5. RESPONSIBILITIES OF THE PARTIES**

The Census Bureau agrees to perform the following activities and provide the following resources:

1. The Census Bureau will designate two agency positions, the holders of which will serve as regular primary and secondary contact points between the agencies for coordination of geographic data sharing. The designated contacts shall be responsive to unique and time-sensitive requests from the Mississippi Coordinating Council for Remote Sensing and Geographic Information Systems and provide relevant geographic data and information, if available, when requested.
2. During Census Bureau Geographic Support System Initiative (GSS-I) data collection activities in the state of MS, the Census Bureau will encourage city and county data providers to allow Census to share the acquired data with the Mississippi Coordinating Council for Remote Sensing and Geographic Information Systems.
3. By request of the Mississippi Coordinating Council for Remote Sensing and Geographic Information Systems contacts, or at least once per year, the Census Bureau will provide the Mississippi Coordinating Council for Remote Sensing and Geographic Information Systems with a copy of all eligible data that Census has acquired from county and city governments in Mississippi as part of the GSS-I.
4. The Census Bureau will encourage the coordinated development of accurate address, street centerline, and boundary datasets in Mississippi by participating in relevant state and regional GIS initiatives, conferences, and meetings.

The Mississippi Coordinating Council for Remote Sensing and Geographic Information Systems agrees to perform the following activities and provide the following resources:

1. The Mississippi Coordinating Council for Remote Sensing and Geographic Information Systems will designate two agency positions, the holders of which will serve as regular primary and secondary contact points between the agencies for coordination of geographic data sharing. The designated contacts shall be responsive to unique and time-sensitive requests from the Census Bureau and provide relevant data and information, if available, when requested.
2. The Mississippi Coordinating Council for Remote Sensing and Geographic Information Systems will encourage county and municipal governments to participate in the Census Bureau's Geographic Support System Initiative.
3. The Mississippi Coordinating Council for Remote Sensing and Geographic Information Systems will encourage county and municipal governments to participate in the Census Bureau's Boundary and Annexation Survey.
4. The Mississippi Coordinating Council for Remote Sensing and Geographic Information Systems will provide the Census Bureau with state-level datasets that contain address, structure point, parcel, legal boundary, and street centerline data where it is available.
5. The Mississippi Coordinating Council for Remote Sensing and Geographic Information Systems will encourage the coordinated development of accurate address, street centerline, and boundary datasets in Mississippi by participating in relevant state and regional GIS initiatives, conferences, and meetings.

## **6. EQUITABLE APPORTIONMENT OF COSTS**

The costs associated with this agreement are equitably apportioned between the parties to this agreement. No funds will be transferred as a result of this agreement; however, the parties believe that their contributions of staff time and expertise, facilities, data and technology are roughly equivalent.

## 7. CONTACTS

The primary contacts of each party to this agreement are:

Monica Smith  
Geographer, Geographic Areas Branch  
U.S. Census Bureau  
4600 Silver Hill Rd.  
Washington, DC 20233  
Telephone: 301-763-9168  
E-mail: monica.smith@census.gov

Jim Steil  
Director, Mississippi Automated Resource Information System  
Mississippi Institutions of Higher Learning  
3825 Ridgewood Rd.  
Jackson, MS 39211-6453  
Telephone: 601-432-6354  
E-Mail: jsteil@ihl.state.ms.us

The secondary contacts of each party to this agreement are:

Laura Waggoner  
Chief, Geographic Areas Branch  
U.S. Census Bureau  
4600 Silver Hill Rd.  
Washington, DC 20233  
Telephone: 301-763-9079  
E-mail: laura.waggoner@census.gov

Mark Sanders  
GIS Coordinator  
Mississippi Emergency Management Agency  
P.O. Box 5644  
Pearl, MS 39208  
Telephone: 601-933-6351  
E-Mail: msanders@mema.ms.gov

The parties agree that if there is a change regarding the information in this section, the party making the change will notify the other party in writing of such change.

## 8. DURATION OF AGREEMENT, AMENDMENTS AND MODIFICATIONS

This agreement will become effective when signed by all parties. The agreement will terminate five **(5) years from the date signed**, but may be amended at any time by mutual consent of the parties. **The parties will review this agreement at least once every three (3) years to determine whether it should be revised, renewed, or canceled.**

Any party may terminate this agreement by providing a ninety (90) day written notice to the other party.

Under the Inspector General Act of 1978, as amended, 5 USC App.3, a review of this agreement may be conducted at any time. The Inspector General of the DOC, or any of his or her duly authorized representatives, shall have access to any pertinent books, documents, papers, and records of the parties to this agreement, whether written, printed, recorded, produced, or reproduced by any mechanical, magnetic, or other process or medium, in order to make audits, inspections, excerpts, transcripts, or other examinations as authorized by law.

Nothing herein is intended to conflict with current Census Bureau or the Mississippi Coordinating Council for Remote Sensing and Geographic Information Systems directives. If the terms of this agreement are inconsistent with existing directives of either of the agencies entering into this agreement, then those portions of this agreement which are determined to be inconsistent shall be invalid; but the remaining terms and conditions not affected by the inconsistency shall remain in full force and effect. At the first opportunity for review of the agreement, all necessary changes will be accomplished by either an amendment to this agreement or by entering into a new agreement, whichever is deemed expedient to the interest of both parties.

## **9. RESOLUTION OF DISAGREEMENTS**

Should disagreement arise on the interpretation of the provisions of this agreement, or amendments and/or revisions thereto, that cannot be resolved at the operating level, the area(s) of disagreement shall be stated in writing by each party and presented to the other party for consideration. If agreement on interpretation is not reached within thirty (30) days, the parties shall forward the written presentation of the disagreement to respective higher officials for appropriate resolution.

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**Timothy F. Trainor**

**Chief, Geography Division  
U.S. Census Bureau, U.S. Department of Commerce  
4700 Silver Hill Road  
Washington, DC 20233-7400**

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**Robert Latham Jr.**

**Chair, Mississippi Coordinating Council for Remote Sensing and Geographic  
Information Systems  
Executive Director, Mississippi Emergency Management Agency  
P.O. Box 5644 Pearl, MS 39288**

## Mississippi Planning and Development Districts-PDDs

The activities of the PDDs have changed significantly over the past 40 years and these changes are expected to continue as needs, objectives, and programs evolve. Since each PDD represents a distinctly different region of the state, its activities, projects, and programs are somewhat different based on local needs and priorities. However, there are many common functions provided by each PDD.

### PDD Services

Each PDD in Mississippi provides a wide variety of programs and services to their local governments. The nature and extent of the programs vary depending on local needs and priorities. However, each PDD is committed to working with local governments to find feasible and economically sound solutions.

#### Planning and GIS Mapping

Comprehensive Plan Development  
 Hazard Mitigation Planning  
 Community Facilities Planning  
 Tourism Development  
 Transportation Planning  
 Address Mapping  
 Industrial Park Mapping  
 Land Use Planning  
 Infrastructure Mapping  
 Redistricting  
 Data Management

### ***Geographic Information System (GIS) Assistance.***

The Planning and Development Districts all have the resources to utilize ESRI software and have staff capable of providing GIS services throughout the State of Mississippi. The level of expertise in GIS and availability of equipment varies from District to District depending on expertise, demand and established work programs. However, a statewide structure and mechanism is in place to provide training and enterprise application development of shared services.

Through the Mississippi Association of Planning and Development Districts the Districts have the capability to provide a statewide enterprise GIS System which can meet the needs of all the Districts as desired and feasible in terms of cost benefit to identified user groups. Relevant enterprise data is currently being hosted on virtual servers using the latest GIS technologies to provide the Mississippi community with a varied amount of GIS resources. Currently, MAPDD provides a number of interactive web viewers for local planning and statewide information. These viewer applications can be customized to provide a platform for hosting additional regional and statewide application.

## Mississippi Geospatial Conference

The First Annual **Mississippi Geospatial Conference** was held October 17-18, 2013 on the Gulf Coast Campus of University of Southern Mississippi in October. This was the first statewide conference for geospatial professionals in the state since Katrina. Over 60 participants from federal, state, local, academia, non-profits, and the private sector were represented in the two day event. Initiated by the Mississippi Association for Spatial Technologies [MAST] [www.mastgis.org](http://www.mastgis.org) the conference was broadly supported by 10 sponsors. Plans are for the 2<sup>nd</sup> annual to be held in October of 2014, also at the Gulf Park Campus of USM.





FIRST ANNUAL

# MISSISSIPPI GEOSPATIAL CONFERENCE

OCTOBER 17-18, 2013

BROUGHT TO YOU BY:





**GENERAL DYNAMICS**  
Information Technology




**CDM  
Smith**




*the District*

Southern Mississippi  
Planning and Development District



THE UNIVERSITY OF  
SOUTHERN MISSISSIPPI  
GULF COAST

## National States Geographic Information Council (NSGIC)

A Council-level membership to the National States Geographic Information Council [NSGIC] was obtained by a partnership of MEMA and MARIS to increase opportunities for Mississippi participation in geospatial coordination activities. Both NSGIC [www.nsgic.org](http://www.nsgic.org) and the MCCRSGIS share the belief that “GIS and geospatial data have become primary tools in government and the private sector because they provide visual, integrated, intelligent, analytical, and cost-effective solutions in support of these diverse areas. In addition, GIS can reduce or eliminate redundant work within and between units of government, providing operational efficiencies, and economies of scale in data collection, information handling and distribution”. Mississippi is a charter member of NSGIC and has benefited since 1991 by participating in this organization of GIS coordination professionals from across the nation. Council-level membership allowed for greater Mississippi participation and new attendees to the NSGIC conference. Those in attendance from Mississippi this year were representatives from State and local government as well as IHL. Addressing was a focal point of the 2013 conference with a review of state’s activities, GIS Inventory tool, Geospatial Maturity Assessment, and information updates from USDOT, Census, NOAA, USGS and others.

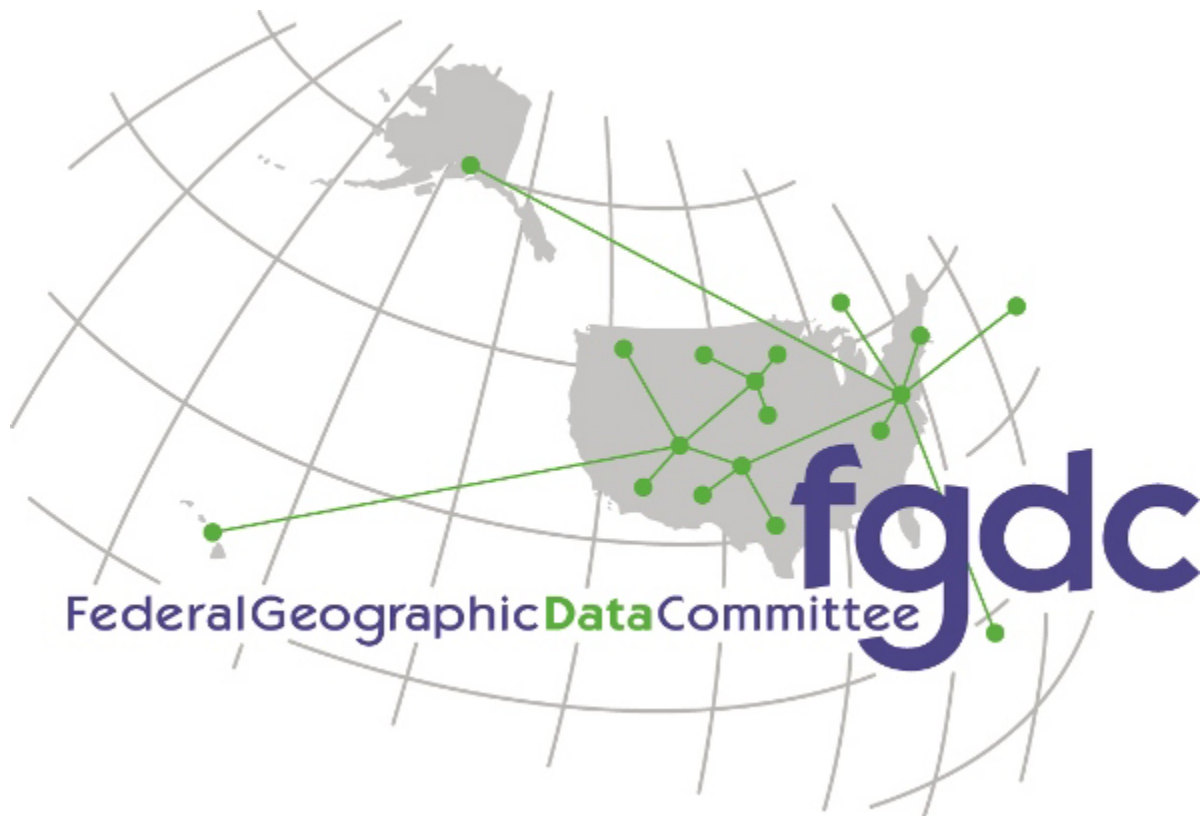


## National Geospatial Advisory Committee (NGAC)

Mississippi is well represented in geospatial matters at the national level ---- The National Geospatial Advisory Committee (NGAC) is a Federal Advisory Committee sponsored by the Department of the Interior under the Federal Advisory Committee Act. [www.fgdc.gov/ngac](http://www.fgdc.gov/ngac) Members of NGAC are appointed by the US Secretary of Interior. Two of the thirty members of the NGAC committee are from Mississippi: Professor Joanne Gabrynowicz of the University of Mississippi Law School and Mr. Talbot Brooks of Delta State University.

The advisory committee provides recommendations on geospatial policy and management issues to the Federal Geographic data Committee (FGDC), the interagency executive group responsible for providing leadership and direction in federal geospatial programs.

The NGAC is selected to achieve a balanced representation of the varied interests associated with geospatial programs and technology. The NGAC functions solely as an advisory body.



## Harrison County GIS Coalition

### **Mission**

The purpose of the Harrison County GIS Coalition (HCGISC) is to improve communication concerning county and city GIS data updates, data maintenance procedures, best practices, coordination of technology, standardization, data sharing, and education and outreach. The Harrison County GIS Coalition facilitates, through a unified cooperative, the effective development and sharing of spatial information to coordinate with regional and state agencies to facilitate GIS objectives, standards and data sharing.

### **Goals**

Goals and Objectives: To identify and prioritize countywide GIS goals and objectives; and to create opportunities for the county and cities to cooperate in meeting those goals and objectives.

Strategic Plan: To serve as the core technical group of the Steering Committee for the County Enterprise GIS Strategic Plan to guide the implementation and completion of the goals and associated objectives expressed in this Charter.

GIS Advocacy: To promote greater understanding and use of the benefits of GIS.

GIS Governance: To serve as the primary forum for members to discuss and define a sustainable and comprehensive infrastructure and business practices required to achieve a successful enterprise GIS.

Funding: To leverage existing and generate new funding for cooperative GIS efforts and to create and sustain the countywide enterprise GIS.

Collaboration: To pursue partnerships with outside agencies for joint GIS projects and endeavors.

Education, Training and Outreach: To pursue educational and training opportunities for GIS professional development. To promote and coordinate spatial systems and spatial data development in Harrison County Mississippi, the Gulf Coast region and the State of Mississippi.

### **Members**

Harrison County, City of Biloxi, City of D'Iberville, City of Gulfport, City of Long Beach, City of Pass Christian, Gulf Regional Planning Commission, and Southern Mississippi Planning and Development District



