

Mississippi Emergency Support Function #2 – Communications Response Annex

MS ESF #2 Coordinator:

Mississippi Emergency Management
Agency

MS Primary Agencies:

Mississippi Emergency Management
Agency
Mississippi Department of Information
Technology Services
Mississippi Department of Public Safety
Mississippi Wireless Communication
Commission

MS Support Agencies:

Civil Air Patrol
Mississippi Department of Corrections
Mississippi Forestry Commission
Mississippi Military Department
Mississippi Public Service Commission
Mississippi Department of
Transportation
Mississippi Department of Wildlife,
Fisheries and Parks
Radio Amateur Communication
Emergency Services
Mississippi Department of
Environmental Quality
Mississippi Institutions of Higher
Learning
National Weather Services

MS Private Sector Partners:

AT&T Communications
Wireless Telecommunications Providers
Cellular Service Providers

Federal ESF Coordinator:

Department of Homeland
Security/Information Analysis and
Infrastructure Protection/National
Communications System

Federal Primary Agency:

Department of Homeland
Security/Information Analysis and
Infrastructure Protection/National
Communications System

Federal Support Agency:

National Weather Service

Introduction

Purpose

This Emergency Support Function (ESF) provides a functional communications network to support the County, State, Tribal, Federal agencies and other efforts during response and recovery activities related to an emergency or major disaster. This network supports the effective collection and transfer of information and data to and from all intended recipients in a timely and accurate manner.

The success of ESF #2 requires the coordination, pooling, and networking of both “available” and “obtainable” communications resources provided by State, Tribal, and Federal agencies, local government entities, volunteer organizations, corporations, or other telecommunications providers. The term “available” refers to resources within the existing inventory or control of participating agencies that can be used for the event. The term “obtainable” refers to resources to be acquired through mutual aid agreements, contract, lease, or purchase.

Scope

If local government communications capabilities or resources become inadequate to meet emergency or major disaster needs, the ESF #2 of the Comprehensive Emergency Management Plan (CEMP) will be activated to provide support to those jurisdictions and agencies affected. This support will be provided in accordance with the Concept of Operations in the State CEMP that also consolidates the concepts of the National Response Framework (NRF).

If Federal ESF #2 is activated to assist either State or Local government, the primary agency for overall coordination of Federal resources is the National Communications System in cooperation with General Services Administration (GSA) and the Federal Emergency Management Agency (FEMA).

Policies

- An emergency or major disaster may strike one or more areas of the State at any time. The primary event may be a natural disaster, a technological, or other manmade event that causes varying degrees of damage ranging from minor to severe. Secondary effects may also increase damage to further render local communications systems inadequate or inoperable for a prolonged period.
- Two-way communication is essential for the orderly and efficient management of disaster operations. Prior to the impact of a disaster, coordination with local governments and often with adjacent states is critical. As a consequence, decisions affecting these areas must be communicated to them before conditions prevent the completion of these preparedness and/ or response activities.

- Communications systems throughout the state include traditional radio, telephone, telefax, and data systems, which may be supported by satellite, e-mail, Internet, and other modern electronic devices. These systems may be disrupted or limited by weather phenomena, antenna damage, transmission line damage, power outages, or other problems.
- Following disasters that have caused extensive damage, communications assistance and support may be required both from within and outside the state in order to alleviate human suffering and to restore the affected community (ies) to normal in the least amount of time, if possible.
- County and municipal officials, nonprofit organizations, and private-sector entities respond to the vast majority of incidents acting under their authorities or through agency or interagency contingency plans.
- The use of both traditional communications systems and modern technologies, such as WebEOC, Internet, high-frequency phones and radios, and satellite networks, combined with backup from other state agencies tasked under this ESF, will enhance the state's capability in communications and automated data systems.
- Alternate, backup, or substitute methods of communication that may be required will be provided by other support agencies having these assets.
- Quasi-public activities, industry, commercial firms, and amateur radio operators are capable of augmenting established communications systems.
- Communications within the disaster area will require re-establishment or augmentation to provide verbal exchange between the state and federal disaster officials. Assistance can be provided with the deployment of MEMA's Mobile Operations Command Center (MOBOPS). MOBOPS' abilities include: a fax line, nine (9) telephone lines, two (2) 800 trunks, UHF, two (2) high band channels, two (2) low band channels, two (2) satellite radios, a marine radio, an aircraft radio, a camera system, video teleconferencing capacity, and HughesNet system for internet connection and additional capabilities.
- Emergency communications links between the State Emergency Operations Center (SEOC), the federal government, and state agencies will be developed as needed.
- Ensuring the security of certain privileged or proprietary information will be accomplished.
- In a major disaster, existing communications may require augmentation to handle the increased volume of traffic.

Concept of Operations

General

- MEMA, ITS, WCC, and MDPS will share primary responsibility for maintaining and operating the emergency communications systems and conducting the restoration of the communications infrastructure.
- Existing state telecommunications infrastructure will provide the primary means for State government communications.
- All agencies represented in this ESF have been tasked with providing available backup and supplemental support communications systems.
- Contact with the Mobile Operations Command Center, State Emergency Response Team (SERT), and Rapid Needs Assessment Team (RNA) will be maintained at all times to coordinate and support operations in the field.
- Depending on the scale of events, supplemental communications resources can be requested through the FEMA Initial Response Resources (IRR) package as well as through the NRP.
- All agencies with ESF #2 responsibilities will ensure that they have Standard Operating Procedures (SOPs) in place to enable them to perform appropriate levels of mitigation, preparedness, response, and recovery related to the event. Agencies will have completed mitigation and preparedness activities prior to the initiating event.
- The primary means of radio communication utilized by MEMA is satellite radio:
 - The MEMA satellite radio has four talk groups that are backed-up by Iridium satellite hand held phones.
 1. **MEMA Primary** – satellite talk group used for communications between MEMA Personnel and MEMA Communications
 2. **MEMA Statewide** – satellite talk group used for communications between MEMA Personnel / MEMA Communications and outside agencies including local Emergency Management Offices and State Agencies
 3. **MEMA Command** – satellite talk group used for communications by key MEMA personnel and key personnel from select state agencies to provide a more accessible and more secure means of radio communication.

4. **Radiological Emergency Program** – satellite talk group that is utilized by MEMA personnel, local emergency management agencies, and other state agencies during a radiological event or exercise.
- MEMA radio communications include ultra high frequency (UHF) radios. These radios and frequencies are used as a supplement to the satellite radio system. MEMA UHF radios are used to provide hand held communications over the satellite radio system (provided via UHF to Satellite interfaces) as well as direct personnel to personnel communications at the State Emergency Operations Center and as needed for field operations.
 - MEMA radio communications include low band frequencies. The low band frequency serves as a back-up to the satellite radio system. The low band radio system can be accessed via repeaters statewide.
 - MEMA utilizes the ACU-1000 to supplement radio communications on satellite, 800 MHz, high Band, low Band, aircraft, marine and UHF radio frequencies as well as cellular phone systems. This is accomplished by providing interoperability between these communications systems, allowing a particular radio system to communicate to other radio systems on different frequency ranges. MEMA employs this at the State Emergency Operations Center (SEOC) and on the MEMA Mobile Operations Center (MOBOPS).
- MEMA Headquarters Primary Data Connectivity when connectivity to ITS is disrupted:
 - (2) Hughes 1.2 meter satellite systems installed at MEMA headquarters. This will provide 512 kb upload and 1.5 meg download for critical internet communications. This will also ensure communications to MOBOPS when it is deployed.
 - Secondary means of communications and connectivity when normal connectivity is disrupted to ITS: Cellular South Cell Cards will be used with laptops to provide internet connectivity via Cellular South cell system. This will provide 1.5 meg speed to the internet.

Organization

State Emergency Operations Center

- MEMA will be the ESF-2 Coordinating Agency due to the operation of the State's 24-hour Warning Point in the Communications Center within the SEOC. The State Warning Point will be manned 24 hours a day/7 days a week. The MS Highway Patrol under the MS Department of Public Safety provides back-up communications to the SEOC.
- MEMA has low- band radio channels, high-band channels including State Wide Law, 3 Satellite radios, FNARS radio, Grand Gulf Operational Hotline, Riverbend radio, State and Federal NAWAS, HAM radio and internal 450 MHz radio. MEMA also has capabilities of linking together channels through to use of ACU-1000. Although ESF-15 has the primary responsibility to activating the EAS, this capability is also in the Communications Center for back up initiation.
- Personnel of the SEOC Communication Center are adjusted as needed to provide additional support when an emergency or disaster event either threatens or actually impacts an area of the State. The Communications Call Center is additionally activated to provide support with the increase in call volume.

Administrative and Logistical Support

- The Director of MEMA exercises control over the emergency management communications organization. Operational control for ESF #2 is passed down from the Director to the Deputy Director to the Response Office Director to the Communications Supervisor to the EM-Telecommunicators and the Communications Call Center personnel.
- The MEMA Communications Supervisor coordinates and controls personnel and equipment from support organizations in accordance with SEOC emergency operating procedures.
- In catastrophic events, the MEMA Communications Supervisor may be assisted by a deputy from ITS, MDPS, or one or more of the supporting agencies.
- Operational logs, messages, requests, and other appropriate documentation will be maintained for future reference. Paper documents will be saved to a CD and the paper documentation will be shredded after three years on file.
- Each ESF #2 agency that has an automated financial management system will utilize that system to capture the incurred costs of all available, acquired, and contracted resources used during the support activities related to emergency or major disaster operations. Those agencies not having access to an automated system will utilize their existing system to capture all related costs for reporting and potential reimbursement.

- All ESF #2 agencies should ensure that their financial management system, automated or otherwise, is used to capture their incurred costs during an emergency, major disaster, or exercise and must be in compliance with applicable agency, State, and Federal guidelines, rules, standards, and laws. This understanding is based on the knowledge that any reimbursement of incurred costs is subject to audit.
- The MEMA communications supervisor is responsible for maintaining an adequate stock of repair parts and operating supplies.
- Support agencies with communications systems linked to the SEOC are responsible for the maintenance of their equipment.
- Internal and external communications equipment is essential to support disaster recovery efforts. Each is needed to disseminate instructions and operational guidance. Internal communications equipment may utilize existing telephone systems, e-mail, satellite radio, facsimile machines, high-frequency radio, or messengers. External communications equipment utilizes existing systems. In a major disaster, existing communications may require augmentation to handle the increased volume of traffic.
- Once ESF #2 is activated, representatives in the SEOC will contact Emergency Coordinating Officers (ECO) for each ESF #2 support agency. Upon activation, ESF #2 will coordinate with other ESFs, as necessary.

Actions

Preparedness

- The MEMA, in conjunction with support agencies:
 - Ensures that ESF SOPs are developed and maintained that conform to this CEMP and provide greater detail on the ESF operations.
 - Trains and exercises MS-ESF #2 personnel.
 - Designates an ECO, alternate ECO, and an ESF #2 liaison who will go to the SEOC, State Hurricane Support Center, State Earthquake Support Center, Disaster Field Office, SERT, RNA, or other areas of operation.
- All agencies with MS-ESF #2 responsibilities:
 - In accordance with Section 33-15-14(2)(a)(viii), MS Code of 1972, annotated, ensure that they have SOPs in place to enable them to perform appropriate levels of communications support in mitigation, preparedness, response, and recovery.
 - Participate in training and exercises when scheduled.

MS Emergency Management Agency:

- Manages and directs prevention and preparedness efforts in areas of agency expertise.
- Monitors the status of situations that may develop into a major incident to determine that adequate National Security or Emergency Preparedness (NS/EP) telecommunications services are provided to support response operations, and assess existing Federal NS/EP telecommunications services.

MS Department of Information Technology Services:

- Provides telecommunications systems, services, and support to state government agencies under ITS purview through direct support or through procurements on behalf of the state.

MS Department of Public Safety:

- *Pending Information from Agency*

MS Wireless Communications Commission:

- *Pending Information from Agency* (address MSWIN)

Pre-Incident

MS Emergency Management Agency:

- Alerts applicable local governments in the danger areas through the appropriate local EMA office. Notifications for information to communicate may include severe weather information and/or damage, hazardous material spills, radiological incidents and shipments, major structure fires and explosions, major transportation accidents, search and rescue, missing/overdue aircraft, bomb threats, wild land fires, civil disorder, dam failure, water
- Acquires the appropriate equipment and telecommunications services and makes ready for emergency operations.
- Perform weekly tests on the State and Federal NAWAS, Grand Gulf Operational Hotline and Riverbend radio, Statewide Satellite Radio, Satellite Phones, High Band State Wide Law channel, and FNARS radio. Also, perform quarterly notification drills with Grand Gulf Nuclear Station in accordance with the MREPP.
- Maintain a current contact list of vendors for technical support purposes.
- Maintain a current list of ITS Network Operations Center contact numbers.
- Maintain a current list of all AT&T emergency contact numbers.

- Maintains alert and notification procedures for MEMA personnel, ESF #2 support personnel, and other key personnel supporting the Mississippi Emergency Operations Plan (MEOP).
- Provides an ECO (and alternate if 24-hour coverage is necessary) and MS-ESF #2 liaison to the SEOC.

MS Department of Information Technology Services:

- Maintains the state’s telecommunications infrastructure in support of voice, video, and data transmission.
- Maintains a statewide inventory of state-owned communications systems and services.
- Works with MEMA and other state agencies on procedures and processes to acquire ITS services and support, including service restoration prioritization, emergency contact information, and coordination of telecommunications equipment available for emergency use.
- Works with MEMA and other state agencies to prioritize telecommunications needs before an event.
- Establishes procedures for state agencies to notify ITS of closures or relocations prior to an event.
- Establishes procurement tools to provide emergency LAN/PC/printer/e-mail support services.

MS Department of Public Safety:

- *Pending Information from Agency*

MS Wireless Communications Commission:

- *Pending Information from Agency*

Incident

MS Emergency Management Agency:

- Alerts applicable local governments in the danger areas through the appropriate local EMA office. Notifications for information to communicate may include severe weather information and/or damage, hazardous material spills, radiological incidents and shipments, major structure fires and explosions, major transportation accidents, search and rescue, missing/overdue aircraft, bomb threats, wild land fires, civil disorder, dam failure, water supply failure, terrorist incidents including weapons of mass destruction, general health hazards, and other events, as needed.

- Alert notifications are made through telephone, e-mail, pagers, text to cell phones, radio, and fax capabilities.
- Ensures that all information regarding potential and/or actual major incidents is brought to the attention of the Director, OSTP, in a timely manner.
- Upon activation of ESF #2, ECO will communicate this information to all other ESF #2 members.
- Ensures adequate communications are established and maintained.
- Obtains an initial situation and damage assessment through established intelligence procedures.
- Coordinates the distribution of assets, as needed.
- Maintains a complete log of actions taken, resource orders, records, and reports.
- Coordinates the efforts through a liaison to ESF #5.
- Assists in gathering and providing information to ESF #5 for establishing priorities.
- Assists in gathering and providing information to ESF #15 for press releases.
- Coordinates response activities with the MS Office of Homeland Security (MOHS), GSA, and other Joint Telecommunications Resource Board (JTRB) member organizations.
- Collects and provides event-related information to all participants in an emergency or disaster operation and provides information to the general public.
- Coordinates with ESF #12–Energy regarding communications industry requests for emergency fuel re-supply; and coordinate with ESF #13 for safe access into incident areas for telecommunications work crews .

MS Department of Information Technology Services:

- Ramps up ITS Network Operations Center to assist state agencies in turning down services or relocating telecommunications facilities, if needed.
- Identifies, reports, and tracks network and communications outages with service providers by opening a ticket with AT&T. The ITS Network Operations Center should indicate the ticket is a priority – site down and request immediate escalation. The ITS NOC will also contact the AT&T service manager to escalate the ticket once AT&T has assigned a ticket number.

- The ITS NOC will contact the MEMA point of contact updating them on the ticket. The ITS NOC should provide a status to MEMA every hour until resolution.
- At this time, AT&T service manager will call Business Repair Center (BRC) to have the circuit/telephone number(s) tested. If trouble can be remotely, it will be cleared. If not, a technician will be dispatched for problem resolution. Trouble ticket will be escalated by the Service Manager to ensure that the problem is given priority. Hourly updates of solution will be provided to the ITS NOC and then relayed immediately to MEMA. Service manager will stay engaged until trouble is cleared and service is restored.
- Works with service providers and state business partners to maintain the primary communications infrastructure critical to state operations.

MS Department of Public Safety:

- *Pending Information from Agency*

MS Wireless Communications Commission:

- *Pending Information from Agency*

Recovery

MS Emergency Management Agency:

- Manages and directs response and recovery efforts in areas of agency expertise.
- Supports the JTRB, as required, in accordance with SOPs issued by the Director, OSTP.

MS Department of Information Technology Services:

- Works with state agencies to obtain Telecommunications Service Priority (TSP) numbers for critical circuits.
- Works with MEMA's ECO to ensure communications are adequate to support the state's recovery efforts.
- Makes state-approved telecommunications contracts available to local governments to ensure level pricing during restoration phase.
- Works with communications providers to restore facilities to pre-existing capabilities.

MS Department of Public Safety:

- *Pending Information from Agency*

MS Wireless Communications Commission:

- *Pending Information from Agency*

Post-Incident

MS Emergency Management Agency:

- Prepares an after-action report that identifies key problems, indicates how they will be or were solved, and makes recommendations for improving ESF response operations. All ESF #2 organizations assist in preparation of the after-action report.

MS Department of Information Technology Services:

- Works with MEMA to identify problems with established processes and procedures relative to ESF #2 responsibilities.
- Works with State agencies to identify problems with established processes and procedures relative to disaster efforts.
- Works with service providers to identify problems with established processes and procedures relative to disaster efforts.

MS Department of Public Safety:

- *Pending Information from Agency*

MS Wireless Communications Commission:

- *Pending Information from Agency*

Responsibilities

MEMA – ESF Coordinator

- Plans and coordinates among state agencies to determine equipment needs, and develops operating procedures relating to the SEOC.

MEMA – Primary Agency

- Activates communications and warning equipment, as needed, to disseminate routine watches and warnings.
- Augments Communications Center and Call Center personnel needs within the SEOC.
- Notifies emergency management communications personnel when to take duty stations.

- Notifies state agencies and others with communications capabilities when to assign personnel to the SEOC for duty.
- Determines which communications systems in the disaster area are working and how to coordinate them with state systems for information exchange.
- Determines field location for establishment of a disaster communications center outside the disaster area.
- Assists disaster areas in setting up emergency communications systems with the coordination of state agencies, quasi-public agencies, and the private sector.
- Requests activation of Emergency Management Assistance Compact (EMAC), IRR, or ESF #2 of the NRP, as needed.
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Support Agencies

Agency	Functions
MS Department of Corrections	<ul style="list-style-type: none"> • Support ESF #2 participation and provide backup support to other participating agencies as needed.
MS Department of Transportation	<ul style="list-style-type: none"> • Support ESF #2 participation and provide backup support to other participating agencies as needed.
MS Department of Wildlife, Fisheries, and Parks	<ul style="list-style-type: none"> • Provide backup communications systems. • Support ESF #2 participation and provide backup support to other participating agencies as needed.
MS Forestry Commission	<ul style="list-style-type: none"> • Provide backup communications systems. • Support ESF #2 participation and provide backup support to other participating agencies as needed.
MS Military Department	<ul style="list-style-type: none"> • Provide backup communications systems to critical command and control entities. • Support ESF #2 participation and provide backup support to other participating agencies as needed.

MS Public Service Commission	<ul style="list-style-type: none"> • Support ESF #2 participation and provide backup support to other participating agencies as needed.
Civil Air Patrol	<ul style="list-style-type: none"> • Provide air and ground communication support, as required. • Provide backup communications systems as available.
MS Institutions of Higher Learning	<ul style="list-style-type: none"> • Support ESF #2 participation and provide backup support to other participating agencies as needed.
Department of Environmental Quality	<ul style="list-style-type: none"> • Support ESF #2 participation and provide backup support to other participating agencies as needed.
Radio Amateur Communication Emergency Services	<ul style="list-style-type: none"> • Provide communications service to in-state and out-of state areas to augment existing systems. • Provide backup communications systems as available.
National Weather Service	<ul style="list-style-type: none"> • Activate the National Weather Warning System and other available warning systems to include National Oceanic and Atmospheric Administration (NOAA) weather radio, the Emergency Alert System, Public Radio in Mississippi, Mississippi Educational Television, and the Weather Wire system. • Provide backup communications systems as available.

Appendices

Appendix 1 – MS Highway Safety Patrol Districts

Appendix 2 – List and Locations of National Weather and Alert System (NAWAS)

Appendix 3 – SATCOM Network

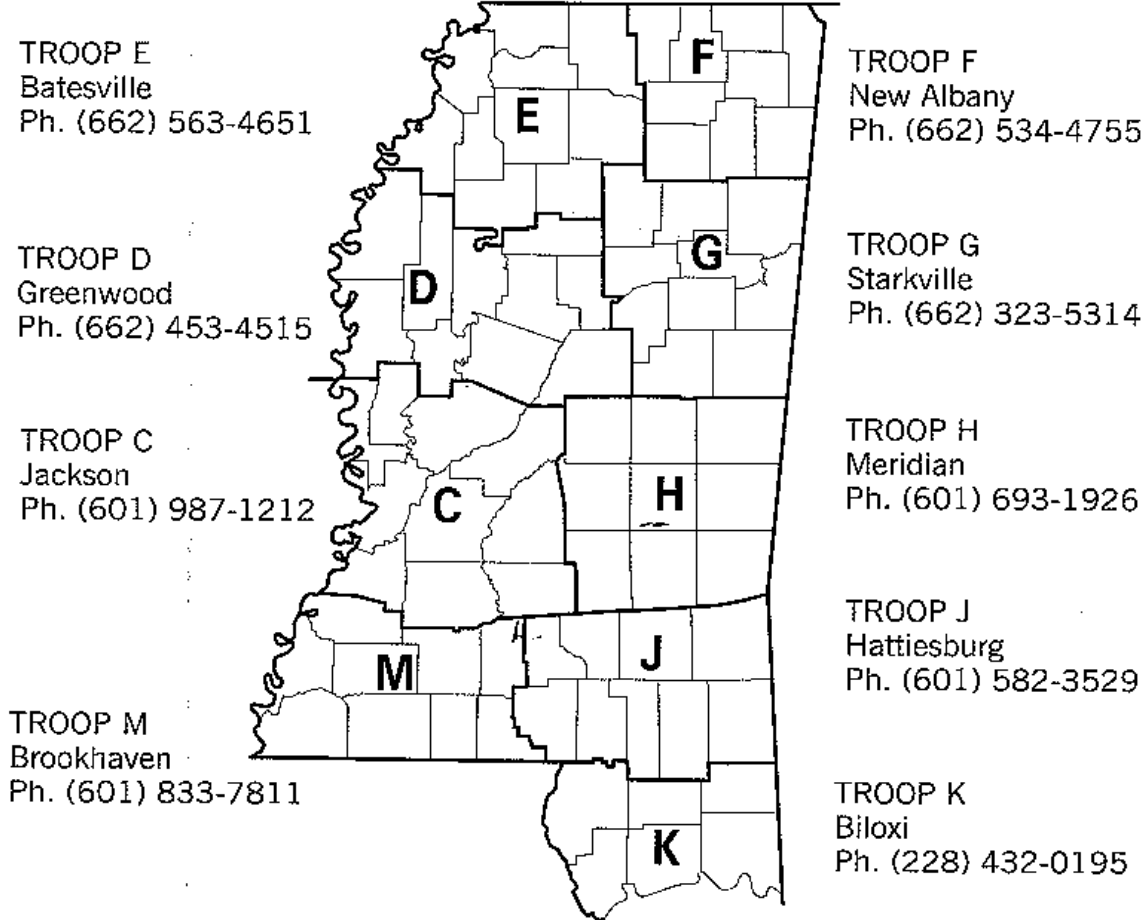
Appendix 4 – NWS Warning Areas

Appendix 5– ITS Statewide Frame Relay/ATM Backbone Network

Appendix 6- ESF-2 Organizational Chart

Appendix 1 – MS Highway Safety Patrol Districts

**MISSISSIPPI HIGHWAY SAFETY PATROL
DISTRICT HEADQUARTERS**



Substations maintained on a 24-hour basis.

Appendix 2 – List and Locations of National Weather and Alert System (NAWAS)

Jackson Weather		Desoto EMA	Vicksburg P.D.
Memphis Weather		Hancock EMA	Yazoo City P.D.
Mobile Weather		Jackson EMA	Adams SO
Slidell Weather		Lamar EMA	Bolivar SO
Batesville MHP		Lauderdale EMA	Coahoma SO
Biloxi MHP		Leake EMA	Desoto SO
Brookhaven MHP		Madison EMA	Harrison SO
Greenwood MHP		Monroe EMA	Hinds SO
Hattiesburg MHP		Montgomery EMA	Holmes SO
Jackson MHP		Warren EMA	Jackson SO
Meridian MHP		Washington EMA	Lee SO
New Albany MHP		Pearl River EMA	Leflore SO
Starkville MHP		New Albany Dispatch	Madison SO
Alcorn Co. 911		Lauderdale Co. Dispatch	Marion SO
Coahoma Co. 911		Stennis Space Ctr.	Monroe SO
Hancock Co. 911		Parchman Security	Pearl River SO
Lowndes Co. 911		Town of Flora	Perry SO
Neshoba Co. 911		Governor's Mansion	Pike SO
Noxubee Co. 911		Lee Co. Comm.	Rankin SO
Stone Co. 911		Clinton F.D.	Simpson SO
Warren Co. 911		Senatobia F.D.	Sunflower SO
Bolivar CD		Waveland F.D.	Tishomingo SO
Brookhaven/Lincoln CD		Batesville P.D.	Tunica SO

Carroll CD		Biloxi P.D.		Washington SO
Columbus/Lowndes CD		Canton P.D.		Natchez Trace Pkwy
Greenwood/Leflore CD		Clarksdale P.D.		Jackson FBI
Harrison CD		Cleveland P.D.		
Kosciusko/Attala CD		Greenwood P.D.		
Natchez/Adams CD		Gulfport P.D.		
Pike CD		Hattiesburg P.D.		
Tupelo/Lee CD		Jackson P.D.		
Brandon EOC		Madison P.D.		
Grenada EOC		Magee P.D.		
Hattiesburg EOC		Mc Comb P.D.		
Hinds EOC		Natchez P.D.		
Laurel/Jones EOC		New Albany P.D.		
Oktibbeha EOC		Oxford P.D.		
Parchman EOC		Pelahatchie P.D.		
Pontotoc EOC/ FD		Richland P.D.		
Rankin EOC		Ridgeland P.D.		
Tunica EOC		Southhaven P.D.		

Appendix 3 – SATCOM Network

	Adams County EMA		Hinds EOC
	Coahoma County EMA		Bolivar CD
	Copiah County EMA		Claiborne CD
	DeSoto County EMA		Hancock CD
	George County EMA		Harrison CD
	Grenada County EMA		Pearl River CD
	Hattiesburg EMA		Stone CD
	Jackson County EMA		MDOT Radio
	Lauderdale County EMA		RAD Health
	Panola County EMA		MS Dept of Public Safety
	Tate County EMA		Wildlife, Fisheries, and Parks
	Tunica County EMA		
	Warren County EMA		

Appendix 5 – National Weather Service Warning Areas

Jackson Weather

Slidell Weather

Mobile Weather

New Orleans Weather

Memphis Weather

Appendix 5 – ITS Statewide Frame Relay/ATM Backbone Network Description

BellSouth was awarded a contract in 1995 that established public Frame Relay switches in seven locations across the state (Memphis, TN; Tupelo; Greenwood; Meridian; Jackson; Hattiesburg; and Gulfport). In 1998 BellSouth was awarded the new contract for Frame Relay and ATM IntraLATA services that included guaranteed dedicated bandwidth between the switches statewide. These regional switches, the dedicated bandwidth between the switches, and the Jackson hub make up the Statewide Frame Relay/ATM Backbone Network. Agencies purchase local access circuits at a fixed rate to access the Statewide Backbone Network. K-12 public schools, community colleges, universities, public libraries, and state agencies now implement Logical Wide Area Networks utilizing the statewide Frame Relay/ATM Backbone Network. This is a TCP/IP network. Some of the current applications on the statewide Backbone Network are:

- LAN/WAN interconnection
- High-speed image transfer
- Host-to-host data transfers
- Client/server applications
- 3270 applications
- Statewide e-mail
- Supercomputing access
- Remote systems management
- Intranet web-based applications
- Internet access, services, and web-based applications
- Internet2
- Multimedia applications (voice, video, and data)

Configuration

- OC12 dedicated bandwidth from Jackson to Tupelo (provided by BellSouth)
- OC12 dedicated bandwidth from Jackson to Hattiesburg (provided by BellSouth)
- OC3 dedicated bandwidth from Jackson to Greenwood (provided by BellSouth)
- OC3 dedicated bandwidth from Jackson to Meridian (provided by BellSouth)
- OC3 dedicated bandwidth from Jackson to Gulfport (provided by BellSouth and InterLATA carrier ITC DeltaCom)
- DS3 dedicated bandwidth from Jackson to the Memphis, TN, LATA (provided by BellSouth and InterLATA carrier ITC DeltaCom)
- OC12 access from the Capital Area Campus Network to the Backbone

Services Provided

Currently, these services are provided on the Statewide Frame Relay/ATM Backbone Network:

- TCP/IP communications and addressing
- SNA encapsulation (DataLink switching)

- Virtual Private Networks (VPN)
- Internet caching engines
- Domain Name Services (DNS)
- Webserver resources
- Mail server resources
- Intranet/Internet security (firewall)
- Private-to-public address translation
- Dial-up services for TCP/IP and SNA
- Intrusion detection systems
- Security management and reporting
- Network monitoring, management, and reporting
- Level pricing statewide
- Commodity Internet access and related services
- Internet2 access to qualified participants

The State Frame Relay/ATM Backbone Network is scheduled to migrate to an MPLS Network beginning in late 2006. The migration will take 18 to 24 months to complete.

Internet Access

Description

Internet access is currently provided via a contract with BellSouth, who serves as our Internet Service Provider (ISP). The selection of an ISP is an ongoing process whereby the required services and access will be identified and bid, typically for a multi-year contract. BellSouth utilizes services from multiple-tier network service providers. The current contract provides Internet access via the Statewide Frame Relay/ATM Backbone Network for multiple sites around the state.

Internet access has a large impact on the existing Statewide Backbone Network, primarily from the educational entities within state government. Whereas state agencies and other institutions use the Backbone for communications with other State entities, in particular the State Data Center, the educational entities use the Backbone primarily to facilitate access to the Internet. Currently, the primary mode of access to the Internet is through the leased circuits. However, there are other access points including the Campus Area Network and dial-up access via the contract with BellSouth for Internet dial-up accounts.

Configuration

Access to the Internet for all state entities is now a fractional OC12 circuit provisioned at 495Mbps for the State of Mississippi.

Services Provided

Listed below are the services offered by ITS associated with Internet access. State government entities can take advantage of these services to provide access to their Internet users, or they may elect to configure their own Internet servers that will also reside on the Campus Area Network and/or the Statewide Frame Relay/ATM Backbone Network.

- E-mail
- Web services, including MS.Gov
- DNS. (ITS administers the *state.ms.us*, the *ms.gov*, and the *mississippi.gov* domains.)
- Security Services, including firewalls, authentication servers, VPNs, and intrusion detection systems
- Internet mail relay, virus protection, and SPAM filtering

State of Mississippi Frame Relay/ATM Backbone Network

Appendix 6- ESF-2 Organizational Chart

