

ANNEX 2

ESF-2 - COMMUNICATIONS

COORDINATING: SC Department of Administration, Division of Technology Operations

PRIMARY: SC National Guard; SC State Guard; SC Emergency Management Division; SC Department of Natural Resources, Division of Law Enforcement; SC Department of Public Safety; SC Department of Transportation; SC Forestry Commission; SC Office of Regulatory Staff; South Carolina Educational TV Network; SC Law Enforcement Division; SC Department Probation Pardon and Parole; Civil Air Patrol; Radio Amateur Civil Emergency Services; Amateur Radio Emergency Service

I. INTRODUCTION

- A. Communications is the process of transmission of information through verbal, written, electronic, or symbolic means.
- B. The foundation for emergency communications is based on being operable, interoperable, reliable, portable, scalable, resilient, and where possible, redundant.
- C. State assistance under this function consists of the utilization of equipment, personnel, and networks essential to coordinate and disseminate information before, during, and after a large-scale emergency event.
- D. In the event normal emergency communications systems become overburdened or inoperable, other available systems may be utilized as necessary to augment communications and assist local public safety entities with performing their missions successfully.

II. PURPOSE

Provide a means of defining how Emergency Support Function 2 – Communications (ESF-2) through coordination with appropriate Federal, State, and local agencies/organizations and commercial providers supports the restoration of communications infrastructure, systems, and applications impacted by manmade and natural disasters to minimize loss of life and property.

III. CONCEPT OF OPERATIONS

- A. The SC Department of Administration (Admin), Division of Technology Operations (DTO) is responsible for coordinating all ESF-2 administrative, management, planning, training, preparedness, and mitigation, response, and recovery activities to include developing, coordinating, and maintaining the ESF-2 Standard Operating Procedures (SOP). DTO maintains and coordinates State communications contracts.
- B. ESF-2 primary supporting agencies will assist the DTO in the planning and execution of the above.
- C. ESF-2 personnel must be familiar with the corresponding Federal Annexes. This familiarization will include but not be limited to the structure, organization, functions, and responsibilities of the Incident Management Assist Teams (IMAT) and the Joint Field Office (JFO).
- D. ESF-2 will coordinate with all primary supporting and other appropriate departments/agencies and organizations to facilitate communications readiness and recovery during disasters or other emergency situations.
- E. In the event of an emergency and/or disaster, ESF-2 will initiate actions appropriate to coordinate support for statewide communications. Every effort will be made to support local equipment and personnel needs when requested and to integrate local resources when appropriate into regional or statewide responses.
- F. ESF-2, in support of Federal, State, local jurisdictions and commercial partners, and in coordination with local Emergency Management officials, will assess the situation and develop communication strategies.
- G. ESF-2 coordinates alternate communications systems for use in the event the existing systems are damaged and rendered inoperable.

IV. ESF ACTIONS

A. Prevention/Protection

The following tasks, both strategic (non-emergent) and tactical (emergent), should be completed in order to properly prepare for states of emergency.

1. Participate in state and local exercises to validate communications plans and supporting SOPs/SOGs.
2. Identify public and private critical telecommunications facilities and systems.
3. Identify Primary, Alternate, Contingent, and Emergency (PACE) communications systems for use in the event that existing day-to-day pathways are damaged and rendered inoperable.
4. Develop and coordinate frequency management plans, talk-groups, and channels in preparation for emergency response operations.
5. Coordinate regularly with all ESF-2 support agencies and partners to ensure a state of communications readiness.
6. Prepare and maintain a roster of Communications Unit (COMU) personnel that can be activated for service. This roster will contain Communications Unit Leader (COML), Communications Technician (COMT), Incident Tactical Dispatch (INTD), Telecommunicator Emergency Response Team (TERT), and Auxiliary Communications (AUXC) personnel that have been approved in partnership with the State Interoperability Executive Committee (SIEC).
7. Establish and maintain a database of communications personnel, resources, and methods to coordinate and track the deployment and use of these resources.
8. Assist SERT partners with access to the Government Emergency Telecommunications Service (GETS).
9. Assist SERT partners with access to the Wireless Priority Service (WPS).
10. Assist state, tribal, and local partners with access to the Telecommunications Service Priority (TSP) process.

B. Response

The role of ESF-2 is to identify communication requirements, prioritize these requirements, and develop a response plan to acquire and rapidly deploy communications capabilities to fill communications gaps that are reported by stakeholders. Based on the type of emergency, the response phase may be limited by weather conditions, personnel and equipment security, or physical access/damage to a site.

1. Coordinate frequency management plans, talk-groups, and channels to develop a comprehensive Incident Radio Communications Plan (ICS 205) for disaster operations as needed. This plan will include SERT and incident response information.
2. Provide safety checks via communications pathways that are not impacted as identified in the County's PACE plan. This can be facilitated in numerous ways, but the goal is to ensure that 911 lines are open and public safety entities are being notified of life safety issues. Response is determined at the local level based on conditions.
3. Prepare to mobilize mobile and transportable equipment identified to fill a communications gap reported in Palmetto.
4. Provide safety checks for communications resources staged for anticipated response into the affected area(s).
5. Prioritize the deployment of capabilities based on available resources and critical needs.
6. Monitor the status of commercial voice and data networks. This includes cellular, fiber, microwave and/or portable networks.
7. Monitor operational status of the Palmetto 800 700/800 MHz trunked system. This is the state's primary land mobile radio (LMR) system and will be the shared interoperability platform for authorized responding ESF-2 resources. Degradation reporting will be coordinated through the Motorola Network Operations Center (NOC).
8. Monitor the status of regional or local radio systems where able (non-Palmetto 800).
9. Coordinate with ESF-12 Energy SERT Leader to ensure the continuity of networks and to prevent unnecessary damage to communications infrastructure.
10. Monitor/maintain operation of HF radio systems including the Federal National Radio System (FNARS) and Shared Resources (SHARES) systems. This will be facilitated through the SCEMD Radio Room and AUXC POC.
11. Gather communications damage assessment information from public and private telecommunications providers and provide the information to the Situation Unit in the SEOC and ESF-14 (Initial Recovery and Mitigation).
12. Monitor the status of media infrastructure to ensure that the public has a means to receive alerts and warnings and/or public information. Ensure the Joint Information Center (JIC) is included for situational awareness.

13. Coordinate remote services to include cybersecurity analysis, monitoring or countermeasures. Assist with consequence management until recovery measures can begin.
14. Monitor, track, and document costs for any potential reimbursement.
15. Ensure Federal ESF-2 partners are kept informed of current response status and disaster conditions. Specific to FEMA, this involves the use of the Lifeline status.
16. Monitor inventory of in-state available communications resources and coordinate with Logistics to request additional resources as needed.

C. Recovery

Emergency communications are defined as those that are utilized when normal commercial or State communications applications have failed or have become severely degraded. Emergency communications are meant to support normal communications for a limited duration until normal communications can be re-established. As communications are restored, temporary emergency communications equipment is demobilized in a systematic manner signaling the transition from emergency response to the recovery phase. All users must be properly notified and transitioned back to normal operations prior to the deactivation of the emergency communications.

1. Gather information from impacted area and determine which communications systems are operational, including but not limited to land-line telephone service, cellular voice/data networks, and land mobile radio systems (LMR).
2. Assess the communications requirements for any damage assessment teams who will deploy to the impacted area to survey damage. Coordinate the procurement and distribution of the equipment.
3. Coordinate if needed with Federal ESF-2 partners to ensure that state staff has the necessary communications equipment such as telephone lines and internet connectivity to function at a Joint Field Office (JFO).
4. Continue to coordinate with ESF-12 Energy SERT Leader to ensure the continuity of networks and to prevent unnecessary damage to communications infrastructure.
5. Coordinate with ESF-24 to delineate between commercial telecommunications support for public safety entities and public service entities (schools, shelters, places of worship, etc.). ESF-2 will handle support for public safety responders, while ESF-24 will support the public service entities.

6. Ensure ESF-2 team members or their agencies maintain appropriate records of costs incurred during the event.
7. Provide ESF-2 coordination and support as required for Recovery Operations.
8. Coordinate the demobilization of emergency communications equipment and personnel as regular communications are restored.
9. Conduct internal After-Action Reviews and document lessons learned and recommendations for improvement of Emergency Operations Plans, Procedures, and Guidelines.

D. Mitigation

1. ESF-2 shall be a major element in all regional and statewide disaster exercises. Communications and Interoperability will be a primary focus of ESF-2 and the South Carolina Department of Administration.
2. Fostering responsible data sharing, where appropriate, amongst all ESF-2 SERT partners. This includes all levels of government, including commercial partners.
3. ESF-2 will be integrated into all phases of emergency response.
4. Integrate “all hazards” vulnerability studies into ESF-2 planning. Identification of critical infrastructure and downstream consequence management shall be included and identified.
5. Incorporate lessons learned into updated plan during next revision.
6. Support and plan for communications mitigation measures.
7. ESF-2 will work closely with the SC APCO and NENA chapter presidents to prepare Public Safety Answering Points (PSAPs) for future natural and/or manmade disasters.
8. Support requests and directives resulting from the Governor and/or FEMA concerning mitigation and/or re-development activities.
9. Document matters that may be needed for inclusion in agency or state/federal briefings, situation reports, or After-Action Reports (AAR).

V. RESPONSIBILITIES

ESF-2 support agencies will identify, train, maintain contact with, and upon request, provide staff to prepare and/or execute missions in support of ESF-2 during periods of activation.

A. State Agency Partners**1. SC Department of Administration, Division of Technology Operations**

- a. Identify, train, and assign personnel to staff ESF-2 in the SEOC.
- b. Coordinate with all primary supporting and other appropriate departments, agencies, and organizations to ensure communications readiness and recovery during disasters or other emergency situations.
- c. Notify ESF-2 supporting agencies upon activation.
- d. In the event of an emergency and/or disaster, initiate actions appropriate to support statewide communications. Every effort will be made to support local equipment and personnel needs when requested and to integrate local resources when appropriate into regional or statewide response.
- e. Maintain and coordinate State telecommunications contracts that provide communications equipment, services, and systems.
- f. Coordinate the identification of alternate communications systems for use in the event the existing systems are damaged and rendered inoperable.
- g. Coordinate frequency management plans, talk groups, and channels for use during emergency response operations.
- h. Coordinate and maintain the State's Strategic Technology Reserve (STR) of contingency radios, satellite phones, portable towers, generators, mobile networks, and internet access.

2. SC National Guard

- a. Provide support to include personnel to transport, install, operate, and maintain communications equipment to maintain 24-hour communications operations.

3. SC State Guard

- a. Provide personnel, radio equipment, and transportation to support communications operations.

4. SC Emergency Management Division
 - a. Provide a location in the SEOC Radio Room for Radio Amateur Civil Emergency Services (RACES)/Amateur Radio Emergency Services (ARES).
 - b. Recruit, train, and designate RACES/ARES operators to operate equipment in support of High-Frequency (HF) teams and the SEOC Radio Room.
 - c. Provide ESF-2 with SC Healthcare Emergency Amateur Radio Team (SCHEART) function and status reports as necessary.
 - d. Provide personnel, radio equipment, and transportation to support communications operations.
 - e. Provide backup communications capabilities through SCEMD Local Government Radio (LGR) low band radio communications network, as assets allow.
5. SC Department of Natural Resources, Division of Law Enforcement
 - a. Provide personnel, radio equipment, and transportation to support communications operations on request, as assets allow.
 - b. Provide backup communications capability through SCDNR statewide radio communications network, as assets allow.
6. SC Department of Public Safety
 - a. Provide personnel, radio equipment, and transportation to support communications operations.
 - b. Provide alternate State Emergency Operations Center/Warning Point facilities.
 - c. Provide support to statewide two-way radio communications with agency airborne repeater
7. SC Department of Transportation
 - a. Provide radio technicians, if available.
 - b. Provide backup communications capability through SCDOT statewide radio communications network.
8. SC Forestry Commission
 - a. Provide radio technicians, if available.
 - b. Provide backup communications capability through the SC Forestry Commission statewide radio communications network.
 - c. Provide Forestry aircraft to support airborne communications missions, when available.
9. South Carolina Educational TV Network

- a. SCHEART will provide support to ARES, and combined, will synchronize to help identify, train, and assign ham radio operator and/or radio response teams to provide redundant communication support for State and local healthcare facilities to support statewide coordinated communications.
 - b. Establish and maintain contact with the SEOC, the SC Department of Health and Environmental Control (SCDHEC), and the South Carolina Hospital Association (SCHA) EOCs during periods of activation to assist with message distribution, patient movement, and the overall reporting process.
 - c. Provide personnel, facilities, and equipment to support communications operations.
 - d. Maintain NWS Radios so distribution of emergent weather information is transmitted around the state.
10. SC Law Enforcement Division
- a. The Statewide Interoperability Coordinator (SWIC), or their designee, will coordinate with ESF-2 to support communications operations.
 - b. Provide personnel, radio equipment, and transportation to support communications operations on request, as assets allow.
 - c. Provide backup communications capability through SLED statewide radio communications network, as assets allow.
 - d. Provide alternate National Warning System (NAWAS) capability to include facilities, equipment support, and procedures.
11. SC Department of Probation, Pardon, and Parole
- a. Provide personnel, radio equipment, and transportation to support communications operations.
12. SC Office of Regulatory Staff
- a. Identify and prioritize power utility issues affecting communication systems.
 - b. Assist with gathering situational awareness of traditional telephone, broadband, and cellular providers.
13. Civil Air Patrol
- a. Provide radio communications assistance.
 - b. Provide airborne platforms to support State provided repeaters.
 - c. Provide SEOC Radio Room operators, when needed.
14. Radio Amateur Civil Emergency Services/Amateur Radio Emergency Services

- a. RACES, supported by ARES, will coordinate high frequency radio capabilities.
 - b. Provide radio communication assistance.
 - c. Provide reports from disaster areas.
 - d. Ensure operators are able to conduct self-sustained operations for periods up to 72 hours when needed.
- B. Private Sector Support
- 1. General
 - a. Private sector support partners include the South Carolina Telecommunications and Broadband Association, commercial telecommunications (voice and data) partners, and Motorola Solutions, Inc.
 - b. Commercial voice and data infrastructure (wireline and wireless) is vital to the success of the SERT. The coordination of all shortfalls and/or outages reported by local EOCs, as noted above, will be coordinated by ESF-2 with the following exceptions:
 - (1) The degradation or outage is experienced at an SCEMD facility. Outage reporting should, however, be informally reported to ESF-2 in order to speed restoration processes where applicable.
 - (2) Assistance for support to a shelter, mass care, healthcare, or mass feeding location with providing greater capacity or bulk charging for large groups of people.
 - 2. Private Sector Support Responsibilities
 - a. Share information, where appropriate, to provide overall network status. ESF-2 is aware of proprietary requirements and urges commercial partners to provide reports utilizing the ESF-2 outage reporting template which removes proprietary information.
 - b. Provide single points of contact in order to streamline escalated requests for information and action.
 - c. Provide patent lines of communications between coordination/command points and first responders that are providing lifesaving activities.
 - d. Work cooperatively amongst all telecommunications companies to ensure the welfare of all South Carolinians is taken into consideration.
 - e. Ensure that customers are given adequate information on network status and ability to access 911.
 - f. Foster a non-competitive, non-sales environment.

- g. Coordinate with ESF-24 to ensure access permissions are in place prior to the State of Emergency.
- h. Where applicable, coordinate with the South Carolina Telecommunications and Broadband Association for outage reporting.

3. Motorola Solutions, Inc.

The Motorola Solutions Palmetto 800 network is a Motorola Project 25 compliant system. Motorola provides equipment and support where needed in accordance with current contracts. ESF-2 is the primary POC and coordinating entity for this interaction during activations. Motorola Solutions, Inc. will provide the following coordination and support as needed and appropriate.

- a. Support ESF-2 with the restoration of Palmetto 800 infrastructure to include tower site equipment, antenna equipment, connectivity to sites, and network optimization.
- b. Personnel to provide network outage and system status reporting.
- c. Subscriber units to supplement SC's STR.

C. Federal Agency Partners

1. CISA Emergency Communications Division (ECD)

- a. Coordinate the planning and provision of national security/emergency preparedness communications for the federal government under all circumstances, including crisis or emergency, attack, stabilization, and reestablishment.
- b. Coordinate the restoration of communications infrastructure and support federal departments and agencies in procuring and coordinating national security/emergency preparedness communications services.
- c. Coordinate with other States on potential EMAC support as requested by the State.
- d. Coordinate emergency activations of GETS and WPS.
- e. Coordinate with FEMA and support agencies to develop ESF-2 documentation, policies, and procedures.
- f. Coordinate with FEMA and support agencies to deploy personnel to support ESF-2 operations at the request of the ESF-2 Lead/Communications Branch Manager.
- g. Provide shared situational awareness and recommendations on cybersecurity risks, incidents, analysis, and warnings for federal and non-federal entities to enable operational actions.
- h. Provide timely technical assistance, risk management support, and incident response capabilities to federal and non-federal entities

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- with respect to cybersecurity risks and incidents, which may include attribution, mitigation, and remediation.
- i. Liaise with IOD Region 4 operations and CISA Central to provide situational awareness as required.
2. Federal Emergency Management Agency (FEMA)
 - a. During Disasters, activate federal ESF-2 under the Stafford Act as required.
 - b. Provide short-term restoration support to local, state, tribal, territorial, and insular area government emergency communications.
 - c. Provide personnel to support ESF-2 operations as required with official deployment request and approved Mission Assignment.
 - d. Coordinate with FCC, NCC, CISA, and other support agencies to develop appropriate documentation, policies, and procedures.
 - e. Provide emergency communications support to local, state, tribal, territorial, and insular area first responders as requested by the State Coordinating Officer and as approved by the Federal Coordinating Officer.
 - f. Coordinate activities to assist with the restoration of public safety communications systems and first responder networks as requested by the State Coordinating Officer and as approved by the Federal Coordinating Officer.
 - g. Mobilize Mobile Emergency Response System (MERS) resources.
 - h. Provide communications and information technology (IT) to federal response/recovery facilities within the area of operation. This includes federal USAR assets that deploy.
 3. Department of Commerce – National Telecommunications and Information Administration (NTIA)
 - a. Manage the federal use of spectrum and identify additional spectrum for commercial use as required by the incident/event.
 - b. Ensure the stability and security of the Internet domain name system through its participation on behalf of the US government in Internet Corporation for Assigned Names and Numbers.
 4. Department of Commerce – First Responder Network Authority (FirstNet.gov)
 - a. Coordinate with DTO to liaise between ESF-2 and AT&T (FirstNet.com) to ensure that contractual obligations are met between AT&T and their FirstNet customers.
 - b. Assist with the coordination of AT&T FirstNet deployable resources as appropriate and agreed upon.

5. Federal Communications Commission (FCC)
 - a. Assist with special temporary authorizations (STA) based on incident specific needs. All STAs will be coordinated through ESF-2.
 - b. Provide Subject Matter Expertise (SME) guidance on frequency assignments, allocation, and coordination as required by law.
 - c. Provide frequency analytics based on pre- and post-disaster conditions.
 - d. Coordinate and compile the Disaster Information Reporting System (DIRS) which provides information about communications infrastructure.
6. National Oceanic and Aeronautics Administration (NOAA)/National Weather Service (NWS)
 - a. Maintain radio transmitting stations throughout the state in order to broadcast weather forecasts, as well as alerts, watches, and warnings for severe weather and natural hazards.
 - b. Support the Emergency Alert System and provide, in coordination with ESF-2, public dissemination of critical pre-event and post-event information over the all-hazards NOAA radio system, the NOAA Weather Wire Service, and the Emergency Managers Weather Information Network.
 - c. Identify all needs for SKYWARN trained net control assistance during EOC activations.

VI. MEMORANDUMS OF UNDERSTANDING (MOU)

Memorandum of Understanding between the South Carolina Emergency Management Division and the Amateur Radio Emergency Service (See Annex 1 to Attachment D (MOUs, MOAs, and Other Agreements) to the SCEOP).

VII. FEDERAL ASSISTANCE

- A. This Annex is supported by the National Response Framework, ESF-2 (Communications).
- B. Federal ESF-2 supports the restoration of the communications infrastructure, facilitates the recovery of systems and applications from cyber-attacks, and coordinates Federal communications support to response efforts during incidents requiring a coordinated Federal response.
- C. Federal ESF-2 provides communications support to Federal, State, tribal, and local governments and first responders when their systems have been impacted, and provides communications and information technology (IT) support to the JFO and JFO related field teams.
- D. The National Communications System (NCS) and the Cybersecurity and Infrastructure Security Agency Emergency Communication Division (CISA ECD) work closely to coordinate the Federal ESF-2 response to cyber incidents. This convergence requires increased synchronization of effort and capabilities between the communications and IT sectors to facilitate the Federal ESF-2's ability to respond to all types of incidents.
- E. The FEMA Regional Administrator is authorized to establish temporary communications during or in anticipation of an emergency or major disaster and make them available to State and local government officials and other persons deemed appropriate.
- F. Federal Emergency Communications Coordinator
 - 1. For a major disaster, the Federal Coordinating Office (FCO) will appoint a Regional Emergency Communications Coordinator (RECC). The RECC will deploy to the disaster area as the principal Federal Telecommunications Manager for that area.
 - 2. The RECC coordinates with ESF-2 to ensure Federal communications requirements do not conflict with State needs.
 - 3. The RECC will normally deploy as a part of the IMAT and assists in coordinating Federal telecommunications support in the Unified Coordination Group and Staff. On arrival, the RECC will assess the need for mobile and transportable telecommunications equipment and provide assistance to State ESF-2 as required.
- G. Communications provided under the Stafford Act are intended to supplement but not replace normal communications that remain operable after an emergency or major disaster. Such emergency communications will be discontinued immediately when the essential communications needs of the Federal, State, and local officials have been restored.

- H. After use, the Lead Agency coordinates the release of Federal communications resources as soon as commercial, State, and local communications can support the response mission. It is also up to the Lead Agency to maintain a record of all communications support provided.