

COMMUNICATIONS (ESF-2)

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I. INTRODUCTION

Communication is the process of transmission of information through verbal, written, electronic, or symbolic means. The basis for first responder communications is that they are operable, interoperable, reliable, portable, scalable, resilient, and, where possible, redundant. State assistance under this function involves utilizing relationships, equipment, personnel, and networks essential to coordinate and disseminate information before, during, and after large-scale emergencies or planned events. If first responder communications systems become overburdened or inoperable, users may utilize alternative available systems as necessary to augment communications and assist local public safety entities in performing their missions successfully.

A. PURPOSE

The State Emergency Response Team (SERT) Emergency Support Function-2 (ESF-2) is responsible for maintaining pathways to support the communications ecosystem. ESF-2 supports the restoration of communications infrastructure, facilitates, and processes that for state, tribal and local governments impacted by human-made and natural disasters. ESF-2 will coordinate communications resources (equipment, services, and personnel) that may be available from a variety of sources (i.e., state agencies, volunteer groups, county agencies, the commercial telecommunications industry, broadcast infrastructure technology groups, federal government agencies, and the United States military) before and/or after the activation of the State Emergency Operations Center (SEOC).

Success in providing first responder communications during disasters is reliant on proper planning. This ESF-2 plan addresses the areas of preparedness, response, recovery, and mitigation. Emergency management planners must test this plan during exercises and other opportunities to improve its quality.

B. SCOPE

ESF-2 plans, coordinates, and provides communications support to state, tribal, county, and municipal disaster response elements based on maintaining the emergency communications ecosystem.

The foundation of emergency communications lies in the stability of the emergency communications ecosystem. This ecosystem facilitates pathways for information sharing between government entities and the public. This ecosystem relies on effective technologies, policies, training, and usage techniques to be successful. The four (4) pathways of the communications

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ecosystem are:

- Government to Government – The ability of government entities, public service, and public safety to effectively provide and/or share information that allows for executing government processes and services, including the emergency response processes.
- Government to Public – The ability for government entities to provide and/or share emergent or non-emergent information with residents and visitors of their jurisdiction.
- Public to Government – The ability for residents and visitors to provide and/or share emergent or non-emergent information with government entities, including the process of obtaining emergency responses.
- Public to Public – The ability for humans to interact with one another to share information.

This ecosystem serves as the basis for ESF-2 planning, response, and mitigation, and should be prioritized based on the identified hazard.

ESF-2 will coordinate assets, personnel, equipment, and services available from federal, tribal, state, and local government agencies, as well as volunteer groups, the commercial telecommunications industry, and the United States military. ESF-2 serves as the coordination point for all first responder communications activities at the state level both before and after the activation of the SEOC. For the sake of clarification, communications in this document do not refer to public information or the operations within the Joint Information Center (JIC). The specific ESF-2 organizational structure and its corresponding roles are outlined further in this plan.

II. SITUATION AND ASSUMPTIONS

A. SITUATION

Disaster conditions may result from significant natural, technological, or human-made causes. Disasters can cause widespread damage to public safety and commercial voice and data communications networks. Incidents can result from day-to-day public safety activities that become overwhelming and require assistance from the SERT. Events can be planned gatherings, festivals, fairs, or areas where people gather that, due to natural, technological, or human-made causes, can result in an incident or disaster.

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B. ASSUMPTIONS

1. The initial response by public safety entities will focus on lifesaving activities. Local government officials will work to support and maintain public safety functions in and around the affected area(s). County emergency management agencies will become the central point of coordination and control for local relief activities.
2. The entire SERT, i.e., all ESFs, will require large amounts of information. This information will be essential for ensuring the continuity of first responder communications and information sharing between all levels of government when communications networks become degraded or inoperable.
3. All available forms of notification should be considered for disseminating information promptly during an emergency.
4. Parallel planning tracks may be occurring at the federal, tribal, state, local and commercial levels. The assumption is that all entities are communicating and integrating their plans.
5. Weather and other environmental factors may restrict mobile or transportable communications equipment movement and personnel deployment into the affected area(s).
6. The affected area's ability to communicate effectively to provide life safety related communications may be impaired.
7. A citizen's ability to access emergency services via commercial voice or data systems (access to 911) may be impaired or non-existent.
8. Significant portions of the first responder communications systems in the affected area(s) may become overwhelmed, inoperable, or destroyed during an emergency or in the aftermath of a disaster. Restoration of service(s) could span weeks or months, depending on the criticality and complexity of damage to the infrastructure.
9. There may be a situation or scenario for which communication networks are unattainable and public safety is required to operate in a "zero comms" environment for an extended time.

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III. ORGANIZATION AND ASSIGNMENT OF RESPONSIBILITIES

A. LEAD STATE AGENCY

1. NC DEPARTMENT OF PUBLIC SAFETY (NCDPS)

NORTH CAROLINA EMERGENCY MANAGEMENT (NCEM)

- a. Prioritize the protection, operation, continuity, and restoration of the emergency communications ecosystem.
- b. Maintain a roster of Information and Communications Technology Branch (ICT) personnel that can be activated for service. This roster will contain Communications Coordinators (COMC), Communications Unit Leaders (COML), Information Technology Services Unit Leaders (ITSL), Communications Technicians (COMT), Incident Tactical Dispatchers (INTD), Telecommunicator Emergency Response Teams (TERT) and Auxiliary Communicators (AUXC) personnel that have been approved in partnership with the State Interoperability Executive Committee (SIEC).
- c. Establish and maintain a database of communications resources and methods to coordinate and track the deployment and use of these resources.
- d. Assist SERT partners with access to the Government Emergency Telecommunications Service (GETS), Wireless Priority Service (WPS) and Telecommunications Service Priority (TSP) process.
- e. Assist state, tribal and county partners with the on-boarding process to become Public Alerting Authorities (PAA) on the Integrated Public Alert and Warning System (IPAWS).
- f. Coordinate deployment of strategic and tactical communications resources to provide on-scene support for continuity of government and first responder communications processes.
- g. Ensure all requests for assistance are properly triaged and routed to the proper ESF-2 SERT partner for action.
- h. Maintain proper information gathering, dissemination, and collaboration processes and platforms pertaining to potential threats to communications infrastructure.

B. SUPPORTING STATE AGENCIES AND SERT PARTNERS

1. NC STATE HIGHWAY PATROL (NCSHP)

TECHNICAL SERVICES UNIT (TSU)

- a. Operate, manage, and support the state's primary statewide land mobile radio system known as Voice Interoperability Plan for Emergency Responders (VIPER).
- b. Identify and assign personnel to maintain contact with and support ESF-2 leadership during SERT activation.
- c. In coordination with the 24-Hour Watch and the ESF-2 functional lead, provide personnel to manage the Strategic Technology Reserve (STR) mobile land mobile radio (LMR) towers.
- d. Report tower site statuses based on "Active (on-air)," "Active (generator power)," "Degraded (site trunking)," or "Degraded (off-air)."
- e. Identify access issues for fixed infrastructure sites. This includes damage or impediment (fires, floods, tree fall, etc.) to access roads.
- f. Identify emergent needs for power restoration or generator refueling to fixed infrastructure.
- g. Interface with other North Carolina LMR system administrators to ensure status of infrastructure and operability of systems at the regional and local level.
- h. Restrict talk group access and usage based on saturation due to eavesdropping by non-involved entities.
- i. Restrict users based on willful or accidental interference.
- j. Facilitate the maintenance, programming, and usage of the NCSHP strategic radio cache.
- k. Notify system users of any anticipated or actual degradations in radio coverage.

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2. NC DEPARTMENT OF PUBLIC SAFETY (NCDPS)

CIVIL AIR PATROL (CAP)

- a. Provide airborne or ground based logistical support for communications personnel or equipment.
- b. Provide emergency airborne data and voice relay services to critical command and control locations on the ground.
- c. Provide point-to-point high frequency (HF) radio communications pathways.
- d. Provide support for airborne and mobile ground repeaters.
- e. Provide logistical support for ESF-2 SERT partners for priority critical infrastructure restoration. This includes transportation of personnel and equipment to key locations.

NORTH CAROLINA NATIONAL GUARD (NCNG)

- a. Primary communications support exists within the Civil Support Teams (CST) and Joint Incident Site Communications Capabilities (JISCC). This includes the 42nd CST, 145th Airlift Wing, the 196th and 295th Signal Support Co.
- b. Coordinate mission assignments of NCNG communications equipment.
- c. Assist with frequency coordination for military aviation assets and/or programming of radio equipment to incorporate VIPER usage.
- d. Provide personnel and equipment for point-to-point or mobile communications support on a 24-hour basis, as required.
- e. Provide backup generator support (if available) to include personnel to transport, install, operate, and maintain generators and communications equipment.
- f. Provide subject matter expertise, guidance, and liaison activities regarding requests for military communications resources outside of those outlined above. This includes Department of Defense (DoD) resources operating under Title 10.

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3. NC AMATEUR RADIO

- a. Designate specific single point of contact to receive mission information, other instructions, and guidance from the Communications Branch Manager.
- b. Identify and assign personnel to maintain contact with and prepare to execute missions in support of ESF-2 during periods of activation.
- c. Provide radio communications support or other assistance as assigned during activations.
- d. Establish a plan and provide data over radio frequency (Winlink, Winmor, Pactor, etc).
- e. Staff AUXC radio positions at the State EOC, regional coordination center locations, or other locations as requested.
- f. Assist the 24-Hour Watch with PACE planning and testing.
- g. Coordinate with local amateur radio entities to ensure PACE planning and tactical readiness.
- h. Maintain connections to the SHARES network and pass all requested messages.
- i. Operate the State EOC FEMA National Radio System (FNARS) station as required.
- j. Operate public safety radios, as authorized, to facilitate the passage of messages.
- k. Coordinate with SKYWARN spotter groups to assist National Weather Service (NWS) offices with damage reports.
- l. Provide and relay situation reports from impacted areas (SPOT reports) to include status' of:
 - Local television broadcast signals;
 - Local radio broadcast signals;
 - Status of landline telephone services;
 - Status of power at the reporting location; and
 - Status of commercial voice and data networks.

4. NC DEPARTMENT OF INFORMATION TECHNOLOGY (NCDIT)

911 BOARD STAFF (PSAP COORDINATION)

- a. Serve as the ESF-2 Technical Lead for the disruption of 911 call delivery to PSAPs to include:
 - Physical damage to PSAP structure(s);
 - Significant PSAP staffing shortages due to injury or illness; and
 - Multi-system PSAP cyber disruptions, malicious or accidental.
- b. Provide coordination between ESF-2 and the Network Monitoring and Assistance Center (NMAC). This will provide status of the North Carolina Emergency Services IP Network (ESInet).
- c. Provide a liaison at the State EOC to provide information regarding the status for all PSAPs (primary and secondary) to ensure that citizens can access the 911 network.
- d. Facilitate 911 call alternate routing based on capabilities at the degraded PSAP and the alternate route PSAP. Consideration will be taken regarding the geographic impact area and the potentially impacted PSAPs to prevent a cascading route of 911 calls with an unknown destination.
- e. Coordinate with commercial wireline/wireless partners that have direct involvement with the restoration of networks that deliver 911 calls to PSAPs.

FIRST RESPONDERS EMERGING TECHNOLOGIES PROGRAM (FIRSTTECH)

- a. Provide specific, event based, technology platforms for usage within ESF-2.
- b. Provide direct support to the ESF-2 Functional Lead.
- c. Serve as the point of contact for FirstNet (US Department of Commerce) coordination.
- d. Work with NCDIT to coordinate state agency restoration of voice, data and other infrastructure systems.
- e. Provide supplemental staffing to NCEM or local response agencies.

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5. NORTH CAROLINA LOCAL GOVERNMENT INFORMATION SYSTEMS ASSOCIATION (NCLGISA) IT STRIKE TEAMS

- a. Utilize capable local IT professionals to form subject matter expertise resources to the SERT.
- b. Support IT systems at State EOC and RCC's at the request of NCEM Administration Section and/or ESF-2.
- c. Support NCEM Cyber with consequence management and recovery in response to a local, state or tribal system compromise.
- d. Provide incident/event-based support at the local, state or tribal level.

6. UNIVERSITY OF NORTH CAROLINA CENTER FOR PUBLIC TELEVISION (PBS-NC)

- a. Provide coordination with NCSHP TSU to ensure access and restoration of shared tower sites and shared resources (for example - VIPER microwave radio network) that become degraded.
- b. Ensure that the State EOC infrastructure is sufficient to provide for the broadcast of the Governor's press conferences. If it is not, work with NCEM External Affairs and ESF-2 commercial partners to implement solutions.

7. COMMERCIAL WIRELINE AND WIRELESS SERVICE PROVIDERS

- a. Provide POCs to liaison (virtual or in person) with ESF-2 functional leads to ensure appropriate information sharing regarding commercial network status, stability, damage and restoration.
- b. Prioritize critical infrastructure and/or key resource (CIKR) locations following damage (physical or electronic) to commercial networks. This includes:
 - Emergency Communications Centers (ECCs)
 - PSAPs
 - EOCs
 - Key Government Facilities
- c. Provide temporary infrastructure, where appropriate, to areas of damage to support the emergency communications ecosystem.

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8. NORTH CAROLINA ASSOCIATION OF BROADCASTERS (NCAB)

- a. Provide liaison activities to interact with engineering points of contact for radio and television stations.
- b. Provide information on transmitter status to ensure public messaging can be broadcast.
- c. Assess fuel and access needs to infrastructure sites. Priority will be given to alert and warning stations, i.e. Local Primary (LP) 1, LP2 and State Relay stations. This is outlined in the State Emergency Communications Committee's Emergency Alert System (EAS) plan.

9. NORTH CAROLINA NATIONAL EMERGENCY NUMBERS ASSOCIATION (NENA) AND NORTH CAROLINA ASSOCIATION OF PUBLIC COMMUNICATIONS OFFICIALS (APCO)

- a. Assist PSAPs and ECCs to ensure the health and welfare of staff.
- b. Assist PSAP Coordination with liaison activities to PSAPs and ECCs.
- c. Work with National PSAP associations to coordinate resources, support, and any donations that may be presented.

10. TECHNOLOGY VENDOR PARTNERS

- a. Technology vendor partners are welcomed to take part in SERT activities and support SERT objectives.
- b. Technology vendors should follow all appropriate laws and process for procurement and/or donation of goods and services.
- c. To every extent possible, technology vendors should coordinate movements and contact with SERT partners to maximize available communications resources.

C. SUPPORTING FEDERAL AGENCIES

1. U.S. DEPARTMENT OF HOMELAND SECURITY

FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA)

- a. Activate federal ESF-2 partners under the Stafford Act as required.

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- b. Provide short-term restoration support to local, state, and tribal area government first-responder communications where requested.
- c. Provide personnel to support ESF-2 operations.
- d. Provide first responder communications support to local, state, tribal, territorial, and insular area first responders as requested by the State Coordinating Officer (SCO) and as approved by the Federal Coordinating Officer (FCO).
- e. Mobilize Mobile Emergency Response System (MERS) resources to support federal response agencies and key federal buildings, response/recovery facilities and infrastructure within the area of operations.

CYBERSECURITY AND INFRASTRUCTURE SECURITY AGENCY (CISA)

- a. Provide direct support to ESF-2 functional leads at the State EOC.
- b. Assist with the information gathering and coordination with ESF-2 commercial wireline and wireless partners.
- c. Liaison with FEMA at the Regional Response Coordination Center (Region 4) and the National Response Center (Washington DC) to ensure that information is being provided to and from the State EOC.

2. U.S. FEDERAL COMMUNICATIONS COMMISSIONS (FCC)

- a. Assist with special temporary authorizations (STA) based incident specific needs. All STAs may be coordinated through ESF-2.
- b. Provide SME guidance on frequency assignment, 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 status.

3. U.S. DEPARTMENT OF COMMERCE

**NATIONAL TELECOMMUNICATIONS AND INFORMATION
ADMINISTRATION (NTIA)**

- a. Manage the federal use of spectrum and identifying 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 U.S. government in Internet Corporation for Assigned Names and Numbers.

FIRST RESPONDER NETWORK AUTHORITY

- a. Coordinate with the NC FirstTech to liaison 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, as agreed upon.

**4. NATIONAL OCEANIC AND AERONAUTICS ADMINISTRATION (NOAA)
NATIONAL WEATHER SERVICE (NWS)**

- a. Maintain radio transmitting stations throughout the state 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.

IV. CONCEPT OF OPERATIONS

A. GENERAL

Operational activities outlined in this plan will be executed in accordance with all North Carolina general statutes and policies of the NC Department of Public Safety. They will also align with the NCEOP ESF-2 Communications

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Plan and remain consistent with the National Incident Management System (NIMS) and the National Response Framework (NRF).

B. NOTIFICATION

The Communications Branch Manager will determine the extent to which ESF-2 coordination activities are needed and will identify the Communications Branch functions and positions that will be necessary to support the mission most effectively. The extent of activation and positions needed will be directly correlated with the needs and scope of the incident or event (e.g., less complex incidents may only require activation of certain positions, while larger scale, more complex incidents may require activation of all positions).

State EOC activations and subsequent ESF-2 staffing notifications will be communicated via phone, text messages, e-mail, information collaboration applications and other means available. The current contact listings for Communications Branch members, ESF-2 positions, and Communications SERT agency representatives are maintained by the Communications Branch Manager. In some cases, a mission order will be processed through NCSPARTA to facilitate reimbursement processes.

C. RESPONSE ACTIONS**1. INITIAL**

- a. Provide a general description of the situation as it pertains to ESF-2 and an analysis of the ESF's operational support requirements.
- b. Based upon the situation analysis, prepare a list of objective-based priority actions to support lifesaving and short-term recovery operations. The action list should be revised as the situation changes.
- c. Coordinate with the 24-Hour Watch for the equitable distribution and recall of previously assigned VIPER state event talk groups.
- d. Establish communications with the federal agencies and partner states to coordinate communications assets required beyond state capability.
- e. In coordination with the RCCs, coordinate and develop an ICS-205 Incident Radio Communications Plan for disaster operations. This plan will include SERT and RCC information.

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- f. Monitor NCSPARTA, radio, cell phone, and other communications platforms for communication support requests. State, local and/or county agencies may be incapable of making requests for support. In that case, ESF-2 Coordination will assess and deploy communications resources based on the severity of the situation. ESF-2 personnel will enter all communications resource requests and resource deployments into NCSPARTA for tracking purposes.
- g. Mobilize resources and coordinate communications support for all government, quasi-government and volunteer agencies using approved mission assignments.
- h. Prepare timely electronic briefings and paper reports on the status of ESF-2 response operations and the status of communications networks and systems. Maintain copies of all reports for preparation of after-action reports and lessons learned.
- i. Keep track of all expenditures concerning operations and submit these to the Administration and Logistics Section after terminating operations.

2. CONTINUING

- a. Gather information from impacted area and determine which communications systems are operational, including but not limited to commercial wireline and wireless networks, land mobile radio systems (LMR), and broadcast infrastructure.
- b. Coordinate, if needed, with federal ESF-2 partners to ensure that state and federal needs are met.
- c. Prioritize the deployment of equipment services based on available resources and critical needs.
- d. Maintain accountability of deployed communications resources and personnel.
- e. Coordinate with ESF-12 Energy partners to ensure the continuity of networks and to prevent unnecessary damage to communications infrastructure.

NORTH CAROLINA EMERGENCY OPERATIONS PLAN (NCEOP)

ANNEX A | APPENDIX 3 | TAB B

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- f. Coordinate with the NCEM Business EOC (BEOC) 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 the BEOC will support the public service entities.
- g. Ensure ESF-2 team members, or their agencies maintain appropriate records of costs incurred during the event.
- h. Provide ESF-2 coordination and support as required for recovery operations.

V. DIRECTION, CONTROL AND COORDINATION

A. LOCAL

Counties are responsible for their own first responder communications needs and systems. Counties will continue using existing communications equipment and service vendors as much as possible during emergencies and disasters. Counties will route those requirements that cannot be met locally to the SERT through accepted processes.

B. STATE

State agencies are responsible for their own communications needs and systems. In the event of a disaster, the state will assess damage to its communications systems and make repairs using existing resources as much as possible. If additional resources are needed, the state will call on local governments and the Emergency Management Assistant Compact (EMAC). If resources cannot be identified locally or through EMAC, FEMA may also assist as allowable.

C. FEDERAL

ESF-2 partners described by the National Response Framework monitor disaster situations and determine when there is a need for federal response. FEMA's (or their designee) may liaison with NCEM ESF-2 SERT to determine personnel and resources needed outside of the federal response requirements determined by each federal agency.

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VI. REFERENCES

- A. NC ESF 2 Communications Plan
- B. North Carolina Alert and Warnings Guidelines
- C. NC EAS Plan
- D. NC All Hazard ICT Guidebook
- E. NC ICT Concept of Operations
- F. NC Amateur Radio EOP
- G. NC SCIP Final
- H. NC Commercial Telecom Partner ConOps
- I. NC SIEC Comms Collaboration ConOps
- J. NC SIEC-VIPER Template Operating Requirement and Usage
- K. NC Strategic Tech Reserve SOG
- L. North Carolina ENC SOG
- M. NC SAR DMR Platform SOG
- N. North Carolina eFOG
- O. NC MCV Self Assessment
- P. NCEM Force Playbook