Communications

ANNEX B - KNOX COUNTY EMERGENCY OPERATIONS PLAN

7/15/2019

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Primary Agencies:	Knox County Emergency Management Agency
	Knox County 9-1-1
Support Agency:	Amateur Radio Emergency Services

I. INTRODUCTION

A. Purpose

The purpose of this annex is to outline primary and alternate communications procedures and capabilities to be employed in the event of an emergency.

B. Scope

This annex has been developed to address the needs of all of Knox County regarding the issues of communications and related capabilities during an emergency or disaster event. It addresses the primary and substitute communication methods to ensure the community is informed during emergency or disaster events.

C. Policy

It is the policy of Knox County to develop plans and procedures that incorporate the concepts of the National Incident Management System (NIMS), the Incident Command System (ICS) and the National Preparedness Goal.

D. Core Capabilities

This annex addresses the following Core Capabilities as defined in the National Preparedness Goal:
- Operational Coordination
- Operational Communication

II. SITUATION AND ASSUMPTIONS

A. Situation

1. The Emergency Operations Center Communications Room (EOC-C) is located at:

    Knox County Office of Homeland Security and Emergency Management
    11540 Upper Gilchrist Road
    Mount Vernon, Ohio 43050

    There is sufficient communications equipment available to provide the communications necessary for most emergencies. In a large scale disaster additional resources may be required.

2. The Knox County Primary Dispatch Center (PDC) is located within the Knox County Service Center at:

   Knox County 9-1-1
   117 East High Street
   Suite B155
   Mount Vernon, OH 43050

   So long as the PDC remains operational it will continue to serve as the emergency communications dispatch center for Knox County. In the event the PDC center becomes inoperable, all county communications will relocate to the Backup Dispatch Center. The PDC capabilities are listed in TAB A.

3. The Knox County Backup Dispatch Center (BDC) is located at:

   Knox County Sheriff's Office
   11540 Upper Gilchrist Road
   Mount Vernon, Ohio 43050

   In addition to serving as the backup dispatch center, the BDC may be utilized when the primary dispatch center remains operational specifically to provide communications related to a disaster or emergency in support of the EOC-C.

B. Assumptions

1. The EOC-C will be staffed when the EOC is activated.
2. Some level of radio communications within the county will survive the effects of a disaster.
3. The following agencies and organizations will deploy as radio operators in the EOC-C:
   a. Knox County 9-1-1 Dispatchers
   b. Amateur Radio Emergency Service (ARES) Operators
   c. Other staff as needed
4. Each response agency or organization will provide their own equipment to communicate with dispatch facilities.

III. CONCEPT OF OPERATIONS

A. EOC Activation and Notification

The Knox County Emergency Operations Center (EOC) will be activated as outlined in Annex A of the Knox County Emergency Operations Plan.

B. Emergency Communications Center

1. The EOC-C is vital to EOC operations. Its purpose is to provide both primary and secondary communications for the EOC.

2. The EOC-C is capable of operating continuously for the duration of the emergency. Staffing will be maintained when the EOC is activated as outlined in Annex A.
3. Primary communication with the EOC is by telephone. If the telephones are inoperable, communications may be relayed by radio or cellular devices. ARES can be utilized to provide primary as well as secondary communications to incident command, incident responders, shelters, lodging, feeding facilities, and other agencies.
4. In the event that all communication systems have failed, first responders shall report directly to their designated station or department. The public will be directed to go to their local EMS, fire or police station for assistance.

C. Alternate EOC

In the event the primary EOC is unavailable for activation, one of the alternate EOC's listed in Annex A, Emergency Operations Center, will be utilized. If the PDC is still operational, then it will serve as the EOC-C until an onsite EOC-C can be established. If the PDC is inoperable, then it will be the responsibility of the Communications Coordinator (a member of the EOC Logistics Staff) to establish an EOC-C.

IV. ORGANIZATION AND ASSIGNMENT OF RESPONSIBILITES

A. Organization

1. When the EOC is activated, the EOC-C staff will provide the EOC with communications capabilities
2. The Communications Coordinator is a member of the EOC Logistics Staff and is responsible for managing all communications with the PDC, the BDC, the EOC and the EOC-C.
3. Amateur Radio Emergency Service (ARES) will provide communications support to the EOC-C and other locations as needed.

B. Communication Staff Responsibilities

1. The Communications Coordinator will be responsible for supervision of all EOC-C communications staff.
2. Communications staff will provide the following:
   a. Communications in an emergency
   b. Coordination of necessary repairs to communications infrastructure
   c. Maintain all communications logs, forms, and reports
   d. Follow all Standard Operation Procedures (SOP) and Guidelines (SOG)

V. DIRECTION AND CONTROL

A. The Knox County Communications Coordinator will report to the EOC upon activation and communicate directly with the Logistics Section Chief. The Coordinator will provide direction and control over all communications activities within the county and coordinate with other EOC representatives.

B. Each agency and organization with communications capabilities in the EOC will report their activities and current status of their on-site operation to the Communications Coordinator.

VI. CONTINUITY OF GOVERNMENT

A. The line of succession of for the Communications Coordinator is as follows:

1. 9-1-1 Operations Director
2. 9-1-1 Operations Assistant
3. 9-1-1 Dispatch Supervisors
4. ARES Emergency Coordinator
5. ARES Assistant Emergency Coordinators

VII. ADMINISTRATION AND LOGISTICS

A. General Administration

The channels, talk groups and frequencies utilized in Knox County Communications are listed in Tab B. Communications Infrastructure Information is listed in Tab C.

B. Communications Protection

1. Radio
   a. Wind, blast, and lightening may damage antennas, but these can be quickly repaired. With sufficient warning, protective measures can be taken.
   b. Electromagnetic Pulse, generated with the detonation of a nuclear device, is an element of damaging consequences to communications. Special precautions must be implemented to protect communications facilities and equipment from this damaging element such as disconnecting the antenna from the radio.
2. Telephone - Priority for services restorations shall be as established by the Knox County EMA (KCEMA) Director and/or the Communications Coordinator.

C. Personnel

1. The KCEMA Director or the Communications Coordinator may institute background investigation on any person assigned or to be assigned to the communications center.
2. The Communications Coordinator may accept or reject any tentative communications assignee.
3. The Communications Coordinator has the authority to dismiss any assignee with the approval of the KCEMA Director.

D. Contract Services

A service contract is maintained by KCEMA with private businesses for support of the telephone system, emergency call center, and information technology services within the EOC.

E. Training and Exercises

1. Each agency/department is responsible for assigning personnel, as requested, to the EOC and is responsible for ensuring those individuals are adequately trained on their equipment, familiar with EOC procedure and SOPs.
2. Radio operators of emergency response agencies are trained by each respective employment department.
3. All personnel that may be assigned to emergency communications will participate in quarterly EOC trainings/exercises.
4. The Communications Coordinator is responsible for providing any just-in-time training as necessary for effective communications operations.

F. Logistics

1. The Communications Coordinator and the KCEMA Director have obtained and stored within the EOC a supply of communications material for emergency operations. The supply includes radios, logs, forms, pencils, and paper.
2. The Communications Coordinator is responsible for notifying the KCEMA Director or designee of all supplies that need to be replenished.

VIII. PLAN DEVELOPMENT AND MAINTENANCE

A. The KCEMA and all agencies with responsibilities for emergency communications within Knox County are invited to be involved with review of this annex. Representatives of each support agency are responsible for reviewing this annex and submitting changes to the KCEMA Director. These recommendations should be based upon opportunities for improvement identified through exercises, actual events, and changes in organizational structure.

B. KCEMA will coordinate any necessary meetings to review the recommendations identified and incorporate any needed changes to this annex to include any state and federal requirements.

C. The KCEMA will publish and distribute all changes to this annex and forward revisions to all responsible agencies listed in this annex.

D. All agencies with responsibilities in emergency communications operations are responsible for developing and maintaining departmental SOP's, mutual aid agreements, equipment inventories and personnel roster including 24-hour emergency contact information.

IX. AUTHORITIES

A. Authorities - Ohio Revised Code Section 5502.21
B. References - None used

X. AUTHENTICATION

_____   _____
Operations Director,   Date
Knox County 9-1-1

_____   _____
Emergency Coordinator,   Date
Knox County Amateur Radio Emergency Services

_____   _____
Director,   Date
Knox County Emergency Management Agency

_____   _____
President,   Date
Knox County Board of Commissioners

XI.   TABS

TAB A – 9-1-1 COMMUNICATION CENTER CAPABILITIES

TAB B – RADIO FREQUENCIES, CHANNELS AND TALK-GROUPS

TAB C – INFRASTRUCTURE INFORMATION

APPENDIX 1 – Knox County ARES Operations Manual

TAB A – 9-1-1 COMMUNICATION CENTER CAPABILITIES

1. Multiple redundancy has been provided for all Knox County Communications systems as follows:
   a. Fiber-optic Wide-Area Network (WAN) provided by Time Warner Cable allows linkages between PDC (20mb), BDC (20mb) and Mount Vernon Police Department (10mb).
      1) Telex radio communications network configured between PDC and BDC and allows for normal radio communications from the BDC radio tower.
      2) In the event of the total loss of the BDC radio tower, both PDC and BDC can utilize the PDC radio tower
      3) In the event of total loss of fiber-optic link, both PDC and BDC can utilize their own, on site radio tower
      4) In the event of the total loss of the Telex IP network, the EOC-C has the ability to directly access all VHF and MARCS frequencies utilizing the onsite multi-frequency radios
      5) In the event of the total loss of the Telex IP network, the PDC has direct access to all VHF frequencies utilizing the onsite multi-frequency radios.
   b. WAN between PDC and BDC also allows for redundancy in Emergitech network.
      1) Normal operations allows for both PDC and BDC to access primary servers and linkages at PDC for utilization of information systems.
      2) In the event of loss of hot servers at PDC, warm server at BDC can be powered up with a fully updated database.
      3) In the event of loss of fiber-optic link PDC can operate locally on its hot server. Utilization of BDC warm server is not recommended in this situation, due to inability of database to synchronize.
      4) In the event of loss of fiber-optic link, BDC can operate locally from the warm server. Use of PDC servers in this situation is not recommended as outlined above.
      5) In the event of total loss of the Emergitech network Information Systems must occur via pen and paper.
   c. WAN between PDC and BDC also allows for redundancy in Zuercher call-taking network
      1) Normal operations allows for both PDC and BDC to utilize split servers at PDC and BDC providing access to eight 9-1-1 trunk lines and eight administrative call-taking lines.
      2) In the event of the loss of servers at either the PDC or BDC call taking at both locations can continue from the operable set of servers. Depending on the extent of the failure accessible lines may be cut in half.
      3) In the event of loss of fiber-optic link, PDC and BDC can operate locally from their own servers with four 9-1-1 trunks and four administrative lines at each site.
      4) In the event of total loss of the Zuercher Network the Knox County/CenturyLink Disaster Recovery Plan allows for emergency calls to be routed to Richland County or any phone lines available onsite.
   d. Redundant WAN connection between PDC and BDC planned via radio microwave link (2017)

2. The following outlines the capabilities of the EOC-C:
   a. Direct access to XEMA-COC MARCS radio
   b. Direct access to XSO-42 MARCS radio
   c. Direct access to MARCS frequency agile radio with all channels listed in tab 2
   d. Direct access to VHF frequency agile radio with all channels listed in tab 1
   e. Direct access to HAM multi-frequency radio
   f. Direct access to HAM multi-band, multi-frequency radio
   g. Single position access to all Knox County 9-1-1 capabilities via Telex network
   h. Single position access to all Knox County 9-1-1 Emergitech InterCAD capabilities
   i. Single position access to all Knox County 9-1-1, 9-1-1 trunks and phone lines via Zuercher network
3. The following outlines the capabilities of the BDC:
   a. Direct access to XSC42EMG school alert MARCS radio
   b. Two position access to the Knox County 9-1-1 Telex Network which includes:
      1) Access to all channels and frequencies listed in Tab 1
      2) Access to all channels and frequencies listed in Tab 2
   c. Two position access to the Knox County 9-1-1 Emergitech InterCAD network which includes access to the following software systems
      1) InterCAD (Information Management System)
      2) InterBADGE (Law Enforcement Reporting System)
      3) InterFIRE (Fire/EMS Reporting System)
      4) MediaWorks (Audio Recording Archive)
      5) Protect X (Camera Recording System)
      6) AccuGlobe (Mapping System)
      7) Law Enforcement Automated Data System (LEADS)
      8) Direct Internet Access via fiberoptic network with 10mbps download x 10mbps upload allowing access to PowerDMS document management system and any other needs.
   d. Two position access to the Knox County 9-1-1 Zuercher call-taking network providing access to all telephone communications lines outlined in VII.2.d-e.
   e. Expansion to four position Emergitech access (2015)
   f. Expansion to four position Telex access (2016)
   g. Expansion to four position Zuercher access (2017)
4. The following outlines the capabilities of the PDC:
   a. Direct access to XSC42EMG school alert MARCS radio
   b. Direct access to VHF Multi-frequency LAW radio
   c. Direct access to VHF Multi-frequency FIRE radio
   d. Access to door control system for Knox County Service Center, Knox County Sheriff's Office and EOC, Mount Vernon Police Department, Mount Vernon City Hall.
   e. Five position access to Knox County 9-1-1 Telex Network which includes:
      1) Access to all channels and frequencies listed in Tab 1
      2) Access to all channels and frequencies listed in Tab 2
   f. Five position access to the Knox County 9-1-1 Emergitech InterCAD network which includes access to the following software systems
      1) InterCAD (Information Management System)
      2) InterBADGE (Law Enforcement Reporting System)
      3) InterFIRE (Fire/EMS Reporting System)
      4) MediaWorks (Audio Recording Archive)

5) Protect X (Camera Recording System)
6) AccuGlobe (Mapping System)
7) Law Enforcement Automated Data System (LEADS)
8) Direct Internet Access via fiberoptic network with 10mbps download x 10mbps upload allowing access to PowerDMS document management system and any other needs.

g. Five position access to the Knox County 9-1-1 Zuercher call-taking network providing access to all telephone communications lines outlined in VII.2.d-e.
h. Expansion to seven position Emergitech access (2015)
i. Expansion to seven position Telex access (2016)
j. Expansion to seven position Zuercher access (2017)

9-1-1 TROUBLE REPORTING

CENTURYLINK Network Management Center
E-911 Trouble Reporting   (877) 433-1989 (follow options)

Public Safety Account Manager
NAME: Maria Stockwell   (419) 226-6236 (office)

ZUERCHER   (800) 987-0911 Option 3   (24/7)

TAB B – RADIO FREQUENCIES AND CHANNELS

MARCS TALKGROUPS

In addition to all standard State of Ohio and federal MARCS interoperable talk groups, the following are the MARCS talk groups assigned to Knox County.

- COEMA42 – County EMA
- FD42DISP – County Fire and EMS Dispatch
- FD42EMS – County EMS Assignments
- FD42OPS1 – Countywide Operations
- FD42OPS2 – Countywide Operations
- FD42OPS3 – Countywide Operations
- FD42OPS4 – Countywide Operations
- FD42RESC – Fire and EMS Emergency
- FD42RPT1 – Fire/EMS Vehicle Repeater
- FD42RPT2 – Fire/EMS Vehicle Repeater
- FD42RPT3 – Fire/EMS Vehicle Repeater
- FD42RPT4 – Fire/EMS Vehicle Repeater
- HOS-4201 – Knox Community Hospital
- KNOXCO – Knox County Health Department
- LE42OPS – Countywide Detective
- PD42DISP – Mount Vernon Police Dispatch
- PD42MV1 - Mount Vernon Police Detective
- PD42MV2 - Mount Vernon Police Emergency Services Unit
- PD42RPTR - Mount Vernon Police Vehicle Repeater
- PD42DPD – Danville Police
- PD42FPD – Fredericktown Police
- SO42DISP - Danville Police, Fredericktown Police, Knox County Sheriff Dispatch
- SO42TAC1 – Knox County Sheriff Detective
- SO42TAC2 - Knox County Sheriff Emergency Response Team
- SO42RPTR - Danville Police, Fredericktown Police, Knox County Sheriff Vehicle Repeater

VHF

CHANNEL NAME	RX FREQ.	RX TONE	TX FREQ	TX TONE
1 Knox Fire Primary	154.325	162.2	153.890	162.2
2 Knox Fire T/A	154.325	162.2	154.325	162.2
3 Tac 1	151.160	77.0	159.195	77.0
4 Tac 1 T/A	151.160	77.0	151.160	77.0
5 Tac 2	159.2925	77.0	153.800	77.0
6 Tac 2 T/A	159.2925	77.0	159.2925	77.0
7 Tac 3	154.295	162.2	155.115	77.0
8 Tac 3 T/A	154.295	162.2	154.295	162.2
9 Tac 4	159.045	77.0	154.385	77.0
10 Tac 4 T/A	159.045	77.0	159.045	77.0
11 Tac 5	151.250	162.2	155.115	162.2
12 Tac 5 T/A	151.250	162.2	151.250	162.2
13 TAC 6	154.0475	D032	150.790	D032
14 TAC 6 T/A	154.0475	D032	154.0475	D032
15 Fireground 1	154.265	162.2	154.265	162.2
16 Fireground 2	154.295	162.2	154.295	162.2
17 Fireground 3	153.830	77.0	153.830	77.0
18 State Mutual Aid	154.280	CSQ	154.280	162.2
19 Hospital	155.340	CSQ	155.340	CSQ
20 Disaster/EMA	155.805	CSQ	155.805	162.2
21 Knox County Sheriff	159.330	107.2	153.845	107.2
22 Mount Vernon Police	154.740	77.0	155.970	77.0
23 LEERN	154.935	CSQ	154.935	CSQ
24 Stateband	155.370	CSQ	155.370	CSQ
25 City Services				
26 County Engineer				
27 Kenyon Security				

TAB C – INFRASTRUCTURE INFORMATION

Secured Document Notice

Tab C of this Annex of the Knox County Emergency Operations plan is a secure document and not for public distribution. This annex contains confidential and or privileged information. The unauthorized use, disclosure, or distribution is strictly prohibited. To obtain specific information concerning infrastructure information contact the Knox County Office Homeland Security and Emergency Management at 740-393-6772.