

AMATEUR RADIO EMERGENCY SERVICES PLAN FOR GUERNSEY COUNTY OHIO



Guernsey County Amateur Radio Emergency Service
KD8MHB

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EMERGENCY COMMUNICATIONS PLAN FOR GUERNSEY COUNTY

[ARES, RACES, SKYWARN]



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GUERNSEY COUNTY

Emergency Communications plan of the Guernsey County ARES

Call Sign: KD8MHB

Functioning under the following organizations:

(**FCC**) FEDERAL COMMUNICATIONS COMMISSION
(**ARES**) AMATEUR RADIO EMERGENCY SERVICE
(**RACES**) RADIO AMATEUR CIVIL EMERGENCY SERVICE
(**NWS**) SKYWARN WEATHER RADIO EMERGENCY SERVICE
(**EMA**) GUERNSEY COUNTY EMERGENCY PLAN
(**OSSBN**) OHIO SINGLE SIDEBAND NET
(**MARS**) MILITARY AMATEUR RADIO SERVICE

I. INTRODUCTION

Guernsey County ARES, purpose is to assist the residents of Guernsey and surrounding counties with supplementary radio communications for public events and civil emergencies. Our organization is a long-standing member of the Guernsey County Emergency Management Agency (EMA), and works closely with all public and emergency organizations of Guernsey County.

Descriptions:

- A. The Amateur Radio Service, (**HAMS**), is composed of radio operators who volunteer their communications skills and equipment to provide supplementary communications in time of public need. Radio Amateurs are licensed by the Federal Communications Commission (FCC) after passing a written examination on their knowledge of telecommunications and operational radio equipment skills. In accordance with international treaties, radio frequencies are allocated to the amateur radio service providing the capability to communicate locally, statewide, throughout a geographical region or around the world. The amateur radio service is provided these radio frequencies because of its ability to immediately respond in time of need and provide communications where none may exist or is overloaded. Under the FCC rules, amateur radio operators may not be compensated for providing radio communications and are also prohibited from providing communications that further the conduct of any commercial business.

- B. The Amateur Radio Emergency Service (**ARES**) was developed by the American Radio Relay League (ARRL), a national amateur radio organization, to provide supplementary/emergency communications for local emergency service organizations. This function is lead by the ARRL appointed Amateur Radio Emergency Coordinator (EC) and the County EC's appointed Assistant Emergency Coordinators. Local Amateur Radio operators will provide supplementary radio communications to all emergency organizations at their request. This includes the following agencies: **Emergency Management Agency**, American Red Cross, Civil Air Patrol, Salvation Army, Police, Sheriff, Fire departments and local civic groups. However, upon activation of the Emergency Operation Center /Emergency Management Agency the ARES communications group will then fall under the direct control of the EMA director.

- C. The Radio Amateur Civil Emergency Service (RACES) was developed by the Congress of the United States for Civil Defense (CD) communications during periods of local, regional, or national civil emergencies. This function is lead by the Guernsey County EMA's appointed RACES County Coordinator. These operations typically are, but not limited to, major emergencies under time of national disasters, or Emergency War Powers Act. Local Amateur Radio operators can only provide supplementary radio communications under the direction of the Guernsey County Emergency Management Agency.
- D. The (**SKYWARN**) emergency service was developed by the National Weather Service (NWS), to assist in reporting from the field, local weather information in times of emergencies. Local Radio Amateurs function as trained weather spotters and provide weather information to the National Weather Service via amateur radio. This service is an ongoing function to providing detailed local information, to assist the NWS in informing the public of impending severe weather.
- E. The National Traffic System, (NTS), is sponsored by the American Radio Relay League to provide an all encompassing radio network of local, state, regional, and transcontinental radio network of radio operators to provide transmission of non-commercial messages in support of the public interest. This system operates on pre-determined schedules though-out the United States on a 365-day schedule.
- F. Military Affiliate Radio System, (MARS), is a radio communications service of licensed amateurs who are affiliated with the Department of Defense military services, (Army, Navy, and Air Force) as an adjunct to military communications.

II. PURPOSE OF PLAN:

The purpose of this plan is to provide guidelines for the authorization and mobilization of volunteer Amateur Radio operators when needed in communications emergencies and to define the proper operating procedures. These procedures will encompass any emergency requirements of the general public under the guidelines of the Emergency Management Agency and as defined in the Guernsey County Emergency Plan. An emergency is described as any situation posing a threat to the safety of life or property such as tornadoes, floods, fires, weather storms, Hazmat operations, civil disorders and any declared emergency by a competent authority. The Guernsey County Emergency Coordinator is responsible for the revision of this plan on an as needed basis.

III. ORGANIZATION: (definitions)

- A. Amateur Coordination, A communications circuit among various officials, agencies or services

not normally having radio contact with each other to supplement any communications circuit that is overloaded and develop additional communication circuits as deemed necessary to support the emergency conditions.

- B. **Amateur Relay**, The radio relay of important information provided by an Emergency agency, (primarily EMA), to other agencies or individuals. Said information is to be written in a formal message format, ARRL or EMA, and filed for future reference.
- C. **Amateur Point-to-Point Communications**, Direct communication between any two or more points, even in remote areas not served by other communications facilities.
- D. **Amateur Observation Net**, Spotters may be positioned in strategic locations to report observations of local conditions back to public officials.
- E. **Amateur Back-Up and Supplementary Communications**, Where a public safety radio system may be lost or overloaded, amateurs are capable of providing necessary communications, literally replacing the primary system.

IV. INFORMATION FOR EMERGENCY OFFICIALS:

- A. **Amateur Radio Operators** are trained communicators. When acting in that capacity they are not interpreters, evaluators or field commanders. Their purpose is to transmit messages given to them by responsible officials. Under no circumstances will an ARES/RACES operator perform any function without being requested to do so by a responsible agency representative.
- B. **Communication Capabilities:** GCARES is an organization of approximately 40 radio operators formally trained to perform local emergency communications. Also, formal communication plans are in place to facilitate communications with state, national, or international emergency agencies. Local **communication facilities** include:
 - (1) High-band repeater systems, (1) 146.850 Mhz located on the water tower on Larrick Ridge Road near Center with a complete coverage of Guernsey County and other facilities within 30 Miles of the repeater site. (2) 147.000 Mhz located at the communication center east of Byesville and linked to additional repeater systems in Zanesville, Newark and New Lexington. This system has complete coverage of Guernsey, Muskingum, and Licking Counties. (3) Also, a Digital High-band 145.090 Mhz repeater packet system located at Old Washington linked nationwide for communicating via wireless amateur radio computer modem units throughout the United States providing hard-copy communications. These systems have backup power sources in the event of AC power failures.
 - (2) Radio Amateurs have High-band handheld radios and mobile radio systems in their automobiles capable of communicating with the High-band repeater systems. Additionally the Hand-held units have a simplex range of about five miles and the mobile units a simplex range of ten to fifteen miles.
 - (3) Most Amateur radio operators have fixed communication systems in their homes capable of operating on the various Short-Wave bands with reliable ranges up to 2500 miles using Voice, Morse code, or Wireless Digital Computer Systems. Many of the home systems have emergency back up power.

(4) Additionally there are two portable wireless television systems available with a range of about ten miles. These systems can provide live pictures transmitted to the EOC facility on Wheeling Ave from any incident command center within the county.

(5) Amateur communication systems with antennas located on the roof of the alternate EOC and the SEORMC hospital facilities have been installed for immediate usage as needed.

- C. Identification: Each ARES member is issued a national ARES ID card, (ARRL FSD-224). This card is part of the national ARES program, and is recognized by most law enforcement agencies. Members are also issued a Guernsey County EMA picture ID card. Also, all ARES members should carry a copy of their FCC radio license at all times. Additionally, most of the ARES members have been issued a bright yellow Vest and Ball Cap indicating that they are a member of the ARES radio communications group.
- D. Formal messages must be written and signed by name and title of the responsible official, particularly when the message is requesting any call to action. Informal communications can be performed, but the ARES/RACES operator must keep a written log of all such communications.
- E. Limitations: By this plan, amateur radio ARES/RACES operator's primary function is to provide only radio communications. Also they are prohibited from transmitting personal observations or opinions, unless they are specifically requested to do so by a responsible official. This will avoid any misinterpretation by citizens who may be listening in on scanners. However, some members of GCARES have completed the national **CERT** medical training course and could also provide search & rescue and medical leadership roles as deemed necessary.

V. MOBILIZATION:

A. Upon request for communication assistance to:

- One of the designated radio amateurs
- Amateur Radio Emergency Coordinator, Asst. Emergency Coordinator,
- Telephone call-up tree

From the following authorities:

- County Emergency Representative
- An alert or warning is issued on NOAA, (National Weather System),
- EAS, (Emergency Alert System).
- A.R.E.S. District Coordinator

All radio amateurs will immediately establish communications on:

- 146.85 or 147.00 repeaters systems
- 147.54 Simplex
- Or other frequencies as established by the Net Control Station (NCS).

Typically, an emergency communications net will be called on the 146.85 system..

B. Other radio stations that should be monitored in this area are:

Camb. Fire	154.355 Mhz	Camb. Police	154.755 Mhz	St Clairsville	145.210 MHz
County Fire	33.90 MHz	Sheriff	155.725 MHz	Cadiz	146.655 MHz
WCMJ-FM	96.7 MHz	NOAA	162.475 MHz	Zanesville	146.610 MHz
WILE-AM	1270 KHz	WHIZ-FM	102.5 MHz	Coshocton	145.230 MHz
WILE-FM	97.7 MHz	WWKC-FM	104.9 MHz	N. Philly	146.730 MHz
WMCO-FM	90.7 MHz	WBIK-FM	92.1 MHz	EMA	151.055 MHz

VI. MOBILIZATION PROCEDURE:

- A. If telephone service is available, the telephone-calling tree is activated by EC, Asst. EC, or designated operator. Upon receipt of call-up, the emergency communication net will be activated.
- B. Upon awareness or notification that a communication emergency exists, members of the Guernsey County ARES/RACES will call into the Guernsey County Emergency Net on the 146.85 FM repeater, with 147.000 FM repeater as first alternate and 147.54 simplex as second alternate frequency. The frequency of 146.85 MHz Simplex is to be used if the 146.85 repeater has failed. The NCS will give instructions as what frequencies to use. **Reference Appendix IX for frequency usage plan.**
- C. Base net control, mobile units, and portable units will be activated and dispatched as deemed necessary by the Guernsey County EC or Asst. EC's.
- D. The EC, Asst. EC or designated operator will assume net control to take check-ins until a radio station at the County EOC is activated. At such time the EOC station will become the Net Control Station, Control will be from the Guernsey County EMA office or other locations designated by the EC or Asst. EC or EMA director.
- E. Radio Operators will be assigned to agencies requiring communication and will meet at the staging area designated by the EC, Asst EC's or NCS. Additionally, they may be assigned by radio on the Net frequency to report directly to the agency representative.
- F. When severe weather occurs or a watch or warning from the NWS has been issued, any GCARES member can and should activate a Skywarn weather net on the W8VP repeater system to monitor and inform the NWS of weather conditions. (reference section XIII of this document).

VII. ACTIVATION REQUIREMENTS:

- A. Activation will be requested by the Emergency Management Director, or other responsible agency representative. The use of a Telephone Call Up tree is available for this purpose.
- B. The requesting official, or his delegate, must define his communications needs. This is necessary for the ARES/RACES group to call up the proper equipment and operators.
- C. The ARES/RACES Emergency Coordinator, Asst EC, or their appointed alternate will design, organize and staff the communications networks to fill those needs.
- D. SKYWARN activation is normally called by the EC, or Asst EC, but any GCARES member can

activate the local weather net when watches or warnings are released by the NWS. Additionally any GCARES member can activate the Skywarn weather net when local weather conditions warrant it. Weather nets should be kept to a minimum and activated when necessary.

VIII. TESTING AND TRAINING:

- A. An annual exercise will be held in conjunction with the national ARRL Simulated Emergency Test (SET). This involves proper operations of nets and traffic handling.
- B. Various tests and drills may be held at times throughout the year, to upgrade operators, and functions. The National ARRL Field Day is one of the most important operations in training for message handling and setting up of an emergency communications center.
- C. The ARES/RACES group shall participate, as requested, in any Guernsey County EMA test exercises to provide communications or assist in Emergency Operations Center activities.
- D. The Emergency ARES/RACES group meets weekly at 8:15 p.m. Tuesdays on the 146.85 repeater system to exchange news and information and release any new or changes to their operations. Additionally at 8:00 p.m. on Tuesdays, a practice SKYWARN training session is held to improve weather reporting skills and net operations.
- E. An annual meeting of the Ohio Section of the ARRL Amateur Radio Emergency Service (ARES) is held to train and discuss communications tactics to refine the amateur radio operators skills. The Guernsey County EC & Asst. EC should always attend this meeting.
- F. The National ARRL Certification and Continuing Education Program host's formal Emergency Communication courses for those wishing to further understand the basic and advanced techniques of Emergency Communications. ARRL recommends all ARES members at least take the level one course. Many of the GCARES members have been through the level one communication course. A refresher course is planned on a two-year basis. All A.R.E.S. members will complete the NIMS level courses as required..
- G. On a regular basis a meteorologist from the Pittsburgh NWS presents a weather spotter-training course in Guernsey Co and all members of GCARES and of the Cambridge Amateur Radio Assn are encouraged to attend.
- H. Several members of GCARES have completed the national **CERT** emergency medical training program and can provide assistance with search and rescue and local medical leadership roles as needed.
- I. A majority of GCARES members have completed **ICS 100 & 200** and **NIMS 700 & 800** training.

IX. FORMAL CONTROLLED EMERGENCY NET OPERATIONS:

- A. A Net Control Station, (NCS), will establish a direct net on the 146.85 or 147.00 repeater systems and receive check-ins from responding amateurs. You should check in by giving your amateur radio call sign. The NCS will instruct you to (1) Stand-by, (2) Report to a staging area with

appropriate equipment or (3) Report to a public official or agency at a specified location.

- B. To avoid congestion in operating, stations do not transmit unless invited to do so by the Net Control Station. The exception is for a station having true Emergency traffic.
- C. Think about what you need to say before keying the microphone. Time can be critical. Talk like a **telegram**, rather than like a long letter, be as brief as possible. Follow the NCS's instructions explicitly and promptly. The NCS station will make all final decisions on net operations only.
- D. If you are directed to cover an official or agency, report directly to the person in charge, identify yourself and briefly explain the capabilities of the amateur net and answer any questions they may have. Be proactive and professional as possible.
- E. All formal traffic should be written and signed by the responsible official who originates the message. Use message precedences as defined by the originator. The use of the Standard ARRL traffic form, or alternate as designated by the EMA director, should be used for all written traffic. Always time and date stamp all formal traffic.
- F. The Net Control Station expects a response to any and all communications directed to any remote location. The NCS only knows when radio communications are successful when they receive an **answer back** advising that it has been received and understood.
- G. Never quit your post without authorization from the Net Control Station. The Net Control Station will plan for additional and relief operators as needed.
- H. If using a repeater and it fails, go to the designated alternate frequency, 147.54 simplex. As a back up to this frequency, the use of the 146.85 as a simplex frequency may be used. The NCS will advise you of back up procedures as necessary.
- I. If using the ARRL traffic form, message precedents of EMERGENCY, Priority, Welfare and Routine as defined on the ARRL form FSD-3, shall be used on all messages.
- J. The use of Tactical Calls will be at the discretion of the EC or AECs in charge of the ARES/RACES communications. Tactical Call signs allow the flexibility of having different operators assigned to the same location and allows the NCS to know where the station is calling from during the operation. **However, remember to identify with your FCC assigned call sign every ten minutes and at the completion of each communication to be compliant with the FCC rules and regulations.**
- K. When using the highband repeater systems, always pause at least 2 to 3 seconds between each transmissions to allow time for stations that might have emergency traffic the ability to break in.
- L. All ECs and AECs must maintain a log of emergency operations including major event traffic messages, any major milestones, and timetables, etc that was supported by the ARES involvement. At the end of operations, a report must be generated and sent to the DEC.

X. DUTIES OF NET CONTROL STATION:

- A. The Guernsey County ARES/RACES/SKYWARN net will be called to order by the NCS.

- B. Members of the Guernsey County ARES/RACES are checked into the net and are requested to wait for further instructions. Maintain a log on amateur radio operators available for duties and possible future placement.
- C. Depending on the situation, liaison stations may be sent to the National Traffic Nets or Severe Weather Nets, or to Local Emergency Nets.
- D. Operators with Mobiles, Portable, or remote Base stations are to be dispatched as needed to agencies and areas which needs communication capabilities.
- E. After placement of stations, the Net Control Station's main function is to control and coordinate all radio traffic on the emergency net. Attempt to keep all transmissions as brief as possible. Always time and date stamp all formal traffic for tracking purposes.
- F. It is of the utmost importance to Maintain Net DISCIPLINE and to direct an orderly flow of traffic. The NCS must keep all unnecessary traffic to a minimum to assure proper communications of emergency traffic can be handled effectively. When necessary the NCS station must be forceful to maintain order.
- G. The Net Control Station should keep written records of all critical communications for evaluation after the event is over. A communication logbook should be available for this purpose.
- H. The Net Control Station shall always expect a radio acknowledgement to **all** traffic exchanges with the **all** stations. If you do not receive one, **request it**. An unanswered exchange may indicate the station you are trying to communicate with did not receive the traffic.

XI. DUTIES OF ARES/RACES FIELD PERSONNEL:

- A. Members of the Guernsey County ARES/RACES are to check into the net and will be given directions to wait for further instructions. At this time you should prepare to depart to a remote location. Always have your communication equipment and support gear ready to go.
- B. If you are directed to cover an official or agency, report directly to the person in charge, identify yourself and briefly explain the capabilities of the amateur net and answer any question they may have. Advise them that your primary function is to provide radio communications capabilities.
- C. When working with the person in charge at your location, always conduct yourself in a professional manner. Always adhere to directions given to you by the agency person in charge. Do not proceed to perform a function without the approval of the person in charge.
- D. When you have established your communication location, contact the NCS and advise them, you are in place, your actual location and communications capabilities..
- E. When sent to a remote location, never quit your post without authorization from the Net Control Station. Always advise the NCS if you will be away from your post for a short period, give reason, and always inform the NCS when you have returned.
- F. To avoid congestion in the operations, remote stations do not transmit unless invited to do so by the Net Control Station. The exception is for a station having True Emergency traffic.

- G. Think about what you need to say before keying the microphone. Time can be critical. Talk like a **telegram**, rather than like a long letter, be as brief as possible. Follow the NCS's instructions explicitly and promptly.
- H. All formal traffic must be written and signed by the responsible official who originates the message. Use message precedence as defined by the originator. The use of the Standard ARRL traffic form, or alternate as designated by the EMA director, should be used for all written traffic. Always time and date stamp your formal message. Informal /Tactical (non-written), traffic should be kept to a minimum, but when sent the ARES/RACES operator should keep a written log of all such communications.
- I. If you become aware of an unrecognized need, notify NCS, advise them of the possible need and wait for instructions from the NCS. Never transmit your own observations or opinions, unless asked to do so by competent authority in charge.
- J. If using a repeater and it fails, go to the designated alternate frequency **147.54 simplex**. As a back up to this frequency, the use of the 146.85 as a simplex frequency may be used. The NCS will advise you of back up procedures as necessary.
- K. If using the ARRL traffic form, the message precedents of EMERGENCY, Priority, Welfare and Routine as defined on the ARRL form FSD-3, shall be used on all messages.
- L. The use of Tactical Calls will be at the discretion of the EC or AEC's in charge of the ARES/RACES communications. Do not develop your own, unless asked to do so.
- M. It is of the utmost importance to Maintain Net DISCIPLINE and to direct an orderly flow of traffic. Therefore, always limit your use of radio communications to aid in the flow of critical information.
- N. Always, Always, **acknowledge** any and all communications with the station you are talking with. It is their only way of knowing that you received and understood the traffic.
- O. As a field radio operator make sure that when performing your function not to place yourself into a **dangerous** situation or a restricted area. Make a complete review of your surroundings and find a safe location for your operation.

XII. ARES EMERGENCY PREPAREDNESS: (Reference Appendix, section II for detailed Information.)

- A. Have two types of Get'N'Go bags; (1) Have all of your Radio Communications Equipment, Handheld, Batteries, spare Antennas, basic Electronic Tools, Maps and Identification. (2) Have basic Survival Equipment, Flashlight, Seasonal Clothing, Raincoat, Food/Water, First Aid, Etc.
- B. Have all local County, Regional, and State frequencies programmed in you communication equipment. Be familiar on programming your radio equipment and be prepared to change to back up frequencies. Be sure to include equipment manuals. Understand all local net procedures.
- C. Be knowable on the location of the EOC, Alternate EOC, Sheriff, Police Departments, all County and City Fire Departments, Red Cross, Salvation Army, Hospital, Etc.

- D. Each ARES member should have Local County and City Maps. Be knowledgeable of all of the State, County roads and City streets. Know alternate road and streets in case major routes are not usable.

XIII. SKYWARN WEATHER NET PROCEDURES:

Presently the system of reporting weather information gathered from the Guernsey County Skywarn nets to the National Weather Service in Pittsburgh, Pa. is by telephone or via the two meter FM repeater systems. As Guernsey County is outside the two-meter coverage area of the National Weather Service, a system of relaying weather information will be accomplished by use of the St. Clairsville two-meter repeater system. The following is a set of guidelines in performing that function:

- A. When the National Weather Service issues a Watch or Warning for Guernsey County or surrounding counties, any GCARES member **should activate** the FILE 3 on the W8VP repeater. This will remove all time delay functions and change the courtesy tone to the Morse Code function, sending WX, which indicates that a weather watch or warning is in effect.
- B. Skywarn Weather Nets are activated when weather condition warrants it, including National Weather Service, (NWS), **Watches and Warnings**. Any GCARES member can call the weather net and proceed to obtain weather conditions within Guernsey county and surrounding counties. Again, the Net Control Station, (NCS), can be any GCARES member, which is in a position to perform that function.
- C. The **Skywarn Net Control Station** should request a roll call of radio operators, requesting their location and their Skywarn Identification number. Then proceed to obtain current weather reports from the trained Skywarn observers from various locations within the county. The Net Control operator, with assistance from other Skywarn members, should make the determination whether any weather reports should be relayed to the Pittsburgh Weather Service
- D. If a Skywarn net indicates that weather information should be relayed to the National Weather Service in Pittsburgh preparations should be taken to place a **liaison operator** on the Primary relay station 145.210 MHz two-meter repeater in St Clairsville, Oh.
- E. The Net Control Station should request a reporting Skywarn member, or an operator designated as the liaison station, to transfer their operations to the St Clairsville, 145.210 MHz (open) repeater, to act as **liaison** to the National Weather Service in Pittsburgh. The NWS periodically monitors the St.Clairsville repeater for weather reports from Belmont, Guernsey, Muskingum, and Noble counties. A back up system is the Cadiz repeater on 146.655 MHz, (PL 114.8), if the St Clairsville machine is not available. The Cadiz system is used primarily for reporting weather information from Coshocton, Harrison and Tuscarawas counties to the National Weather Service.
- F. The radio operator that is acting as the NWS liaison station will **stand-by** on the St.Clairsville repeater and monitor for the NWS station WX3PIT, which at times will check for weather information. If the weather information indicates immediate action, the liaison station should attempt to call WX3PIT to deliver it. The liaison station will handle all weather traffic to and from Guernsey or surrounding counties and the National Weather Service. The liaison station will **briefly** move to the other repeater systems to deliver or obtain information for the NWS and then return to the St Clairsville repeater system as soon as possible.

- G. If a Belmont County Skywarn Weather Net is already in progress on the St. Clairsville repeater the **liaison station** will become a reporting station to the Belmont County Skywarn net control operator. The liaison operator will follow the protocol of the Belmont County Net and input information needed to be sent to the NWS. Anytime the Belmont ARES group wants to activate their weather net, the liaison station will turn over the Net control duties to the Belmont County group and follow their instructions. If the St. Clairsville repeater is busy and your weather information needs immediate action, politely request use of the machine to contact the Pittsburgh National Weather Service and wait for release of the repeater. Remember it is their machine.
- H. During Net operations, the trained Skywarn operators should observe the weather conditions in their immediate area and be prepared to relay that information to the Net Control Station. Only report conditions of **concern** to the NCS or advise your weather information upon request of the Net Control Station.
- I. The Net Control Station should try to keep written records of all critical Skywarn weather communications that are forwarded to the National Weather Service for evaluation after the event is over.
- J. It is of the utmost importance to Maintain Net DISCIPLINE and to direct an orderly flow of traffic. The NCS must keep all unnecessary traffic to a minimum to assure proper communications of emergency traffic can be handled effectively. When necessary the NCS station must be forceful to maintain order.
- K. It is important to keep unnecessary communications to a minimum and to use the **Skywarn Guidelines** on what weather information should be reported to the National Weather Service. The NWS only wants weather conditions that may be used to determine or issue watches and warnings.
- L. Skywarn observers should not request weather information be transferred to the liaison station unless conditions meet the NWS guidelines for severe weather conditions. Local weather conditions, as a matter of information, can and should be discussed but should be kept brief and to the point. Do not just talk about the weather, but report conditions that could be of interest to the NWS and might be considered dangerous.
- M. Alternate reporting methods include the use of the telephone to report weather conditions to the NWS. Trained Skywarn members have these telephone numbers for that purpose. Also, other communication systems are under development to aid in quick and reliable communications to the National Weather Service and will be added to this document when available.
- N. Important **Skywarn Weather Guidelines** to report as outlined by the National Weather Service: *(If possible, Use the Pittsburgh National Weather Service Skywarn weather report form.)*
- (1) ID NUMBER: Report your Skywarn Identification number with your report.
 - (2) LOCATION OF WEATHER EVENT: Advise location, reference it to nearest Town, Highway Intersections, Landmarks, Etc.
 - (3) SNOWFALL: After 2 inches of new snow and then at 4 inches, 6 inches, and every 3 inches thereafter.
 - (4) FREEZING RAIN: As soon as you observe the occurrence of freezing rain and starts

to collect on objects. Call again if the glaze accumulation exceeds ¼ inch.

- (5) **WIND SPEEDS:** Report wind speeds greater than 40 MPH.
- (6) **RAINFALL:** Report any rainfall in excess of ¾ inch in an hour.
- (7) **FUNNEL CLOUD:** A “rotating” appendage descending from the base of a cumulonimbus cloud, but **not touching** the ground. Check beneath the funnel cloud for flying debris. If flying debris is observed it is a tornado.
- (8) **TORNADO:** Violently “rotating” column of air descending from a cumulonimbus cloud and **touching** the ground. Look for flying debris. If possible, report any injuries or fatalities.
- (9) **HAIL:** Report any size hail. Specify Hail size as: pea size, small marble, dime, nickel, quarter, half dollar, golf ball, baseball, softball, etc.
- (10) **FLOODING:** Report any flooding you observe, including basement, road, stream, creek, etc. Report the name of the stream/creek, road number and name, and depth.

O. Important NWS weather definitions:

- (1) **Watch:** Conditions are favorable for the weather event in or near the watch area.
- (2) **Warning:** The weather event is imminent or occurring in the warned area.
- (3) **Advisory:** The weather event will be an inconvenience, use caution.
- (4) **Flash Flood:** A flood caused by heavy rainfall in a short period of time, under 6 hrs.
- (5) **Funnel Cloud:** A “rotating” funnel shaped cloud extending from the base a thunderstorm and is NOT in contact with the ground.
- (6) **Tornado:** A violently “rotating” column of air which extends from a thunderstorm and IS IN CONTACT with the ground.
- (7) **Downburst:** A strong downdraft with an out rush of damaging wind on or near the ground, Macrobust is damage more than 2.5 miles wide and a microburst is damage less than 2.5 miles wide.
- (8) **Thunderstorm:** A locally active storm cloud which can product heavy rain, wind, and lightning. Sometimes these storms can be serve producing high winds, heavy lightning and hail.
- (9) **Front:** A boundary between two weather systems, (warm or cold). Changing weather conditions normally will occur and storms can develop.

XIV. STATE-WIDE COMMUNICATIONS: (A.R.E.S. Ohio Section Emergency Response Plan) Description:

- A. This plan is designed to assure an orderly and effective communications system between Various county to county and the Ohio State EMA and the National Traffic System via Amateur Radio. The OSERP provides information to activate the Ohio Section A.R.E.S. and the National Traffic System (NTS) and to set up whatever operations an emergency would require. Typically three net control stations should be set up for large emergency operations; A Local **NCS** station for handling internal county communications, A **CCS** station to interface with a State administrative net, and a **OTS** station to interface with State emergency or routine traffic nets.
- B. For administrative purposes groups of counties are grouped together into nine districts. Each district has a District Emergency Coordinator (DEC) and each county has an Emergency Coordinator (EC). Guernsey, Belmont, Coshocton, Harrison, Jefferson,

Monore, Morgan, Muskingum, Noble, and Washington Counties are in District Nine and G. Sonny Alfman, W8FHF is the DEC.

- C. The Emergency Coordinator is responsible for all ARES activities within their county and to provide proper planning and direction to all functions of ARES involvement. The District Emergency Coordinator will oversee activities of the ARES within his/her district and assist as deemed necessary. The District Emergency Coordinator is responsible to assist the county EC with his or her administrative needs and provide coordination of communications to the state and national nets.
- D. When operations have proven the need for wide area administrative net to the State EOC, The County EC will request the DEC to make arrangements to develop the statewide communications net. The Administrative State-wide Frequency is 3.875 Mhz with 7.240 Mhz as the alternate. The DEC can also arrange for additional communication nets as needed. Emergency communication net frequency is 3.9870 Mhz, and Routine traffic communication net frequency is 3.9725 Mhz.

A.R.E.S. Operating System:

- A. The basis for this statewide system is at the County Level. During any emergency, the county EC will establish a County Control Station (**CCS**), which will act as the contact station to the statewide administration net. For handling of formal statewide traffic each county will designate one or more Official Traffic Stations (**OTS**), which will communicate only with the Emergency or Routine traffic nets.
- B. The DEC of each district will maintain operations on the administrative net during all communications emergencies within his/her District. The DEC will maintain communications with each county CCS station involved in the emergency and also maintain communications with the State Emergency Coordinator (SEC).
- C. The County EC should contact his/her DEC when they need additional help, advising the number of operators required, how they should be equipped, where to send them and how long they will be needed. The DEC will then decide where to get the help from and will contract EC's in these areas to get the required personnel and route them directly to their operating assignments. The DEC will oversee intra-district communications and aid the local EC's where needed.

A.R.E.S Station requirements: (Recommended)

- A. County Control Stations (CCS) should, be located on high ground, have emergency power, and have sufficient space for three operators to operate simultaneously. These stations must be able to operate on 3.875 Mhz and at least two VHF frequencies. they should have a complete set of maps of the area and adjoining areas plus other emergency supplies deemed necessary. The CCS station should be located outside of the disaster area to facilitate easy access and insure the safety of the operators.
- B. County Net Control Stations (NCS) should be set up at the headquarters of each served agency and at the local command posts (ICS) in the affected areas. These stations should be capable of operating on at least two VHF frequencies. One of these frequencies will be used as a link to the CCS and other Control Stations. While the other frequency will be

used to communicate with operators assigned to the served agency.

- C. Official Traffic Station's (OTS) should be existing stations that are not in the immediate disaster area. These stations should be adequately staffed and able to operate on emergency power and must be capable of operating on 80 meters and all active VHF frequencies. They will maintain communications with the CCS and other agencies CS stations as well as other local amateurs who can handle health and welfare traffic. One of the main purposes of these OTS stations is to act as direct links to the Sections Traffic Nets and should handle ALL incoming and out going formal traffic.
- D. The District Level Station (DEC) should be an existing station that can operate on HF and should be able to operate at full legal power. They should be able to operate on all HF frequencies and VHF/UHF frequencies in their area. Wherever possible there should be a back up of equipment for all bands and modes. This station should be manned as each situation requires and capable of 24-hour operation for extended periods if required.
- E. Logging: All **fixed** stations operating during an emergency must maintain a complete log of their operations. This log will contain the TIME (UTC), the CALL of the contacted station and MESSAGE CONTENT. A copy of all FORMAL TRAFFIC will be kept and become part of the log. Each log sheet will contain the OPERATING CALL SIGN, the location of the station, and the call of the operator and be signed by the control operator. All EC's, AEC's must maintain a log of emergency operations including major traffic messages and any major milestones, timetables, etc that was supported by the ARES involvement.

XV. EMERGENCY COORDINATOR OBJECTIVES:

- A. Maintain a complete and accurate County Communication Plan. Keep open contacts with the County EMA and other Emergency Agencies. Maintain a trained staff of Amateur Radio communicators. Develop training opportunities, provide simulated emergency drills, and send **monthly** reports on non-emergency activities to the State Emergency Coordinator and the district nine District Emergency Coordinator.

Provide leadership, direction and oversee ARES activities during any emergency operations. Additionally, during an emergency operation, each EC will stay in their county and be ready and available to provide assistance. Also, no EC will leave their respective county without the express consent of their DEC or SEC.

The Present Guernsey County E.C. is Dick Wayt WD8SDH.

B. EC's will be responsible for the following:

1. When there is an emergency in their county each EC is responsible for:

- a. Determine the extent of the problem and evaluating their manpower needs.
- b. Establish operations based on the guidelines in the County Communications plan.
- c. Contact your AEC's and place them into critical control functions.
- d. Notify your DEC and or SEC of the emergency.
- e. Establishing operating schedules and request assistance from the DEC if required.
- f. Keep your DEC and the SEC up to date on the situation in your county.
- g. Keep logs and lists of involved amateurs.
- h. When operations are over, be sure all amateurs are notified and return home.

2. When notified of an emergency in another County, ARES District or Section:

- a. Be ready to assemble assistance from your county if requested.
- b. Notify your AEC's of the possible need to provide assistance to another area.
- c. Maintain communications with your DEC and/or SEC.
- d. Notify your DEC/SEC of any changes in your location.
- e. Notify your DEC/SEC of any changes that would effect contacting you. Advise Pager numbers, Cell phone numbers, Fax numbers, or Frequencies being used within your county.

3. When operations in your area are concluded be sure the following are accomplished prior to securing:

- a. Make sure all ARES personnel are accounted for.
- b. Pass along our appreciation to all participants.
- c. Be sure all amateurs are notified that operations have concluded.
- d. Collect reports and logs from your AEC's and Control stations.
- e. Follow up with an evaluation and critique of the total operation for improvements.
- f. Make recommendations for certificates.
- g. File a report with your DEC and the SEC.

XVI. APPENDIXES:

There is a complete set of appendixes that covers various areas of the Guernsey County Communication plan. Section II **Emergency Preparations**, Section III **ARRL Ohio Emergency Response Plan**, Section IV **GCARES Communications and Net Preambles**, Section V **Traffic Handling and Procedures**, Section VI **Skywarn forms and Weather information**, Section VII **Multi-County Coalition**, Section VIII **Frequencies, Signals and Codes**, and Section IX **Miscellaneous and Technical Information**.

These appendixes are available to ARES, RACES, SKYWARN and members of the Cambridge Amateur Radio Assn. upon request.

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