# Low Country Regional Amateur Radio Emergency Communications Plan

(Berkeley, Charleston, & Dorchester Counties)

June 1, 2011

The Objectives for the document are on Page 4.

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Distribution within Area of Responsibility (AOR):

County and Municipality Emergency Preparedness Departments (EPDs) County and Municipality Law Enforcement County and Municipality Emergency Medical Service County and Municipality Fire Service National Weather Service South Carolina Department of Health & Environmental Control (DHEC Low Country Red Cross Salvation Army Hospitals

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## **1. OBJECTIVES**

In signing the 2007 Appropriations Act on October 4, 2006, President Bush signed into law the 21st Century Emergency Communications Act. This act provides that radio amateurs are among the entities with which a Regional Emergency Communications Coordination Working Group (RECC Working Group) must coordinate its activities. This group is Included within newly formed Department of Homeland Security's Office of Emergency Communications. RECC Working Groups are attached to each regional Department of Homeland Security office and are to advise federal and state homeland security officials.

Amateur Radio Operators are more popularly referred to as Hams. This plan has been prepared to provide participants and served agencies within the Berkeley, Charleston, and Dorchester Counties with a general guideline of how the Tri-County Hams, working together, can provide communication assistance in an emergency or disaster situation.

This plan can act as a reference appendix to Emergency Support Function (ESF) 2 within the individual County Emergency Operation Plan, providing points of contact, operating procedures and types of assistance available.

An emergency is defined as a situation or an impending situation that by its nature or magnitude, affects the health, safety, welfare and property of a community, and requires a controlled and co-coordinated response.

This document will be reviewed and updated annually before 1 June. For current edition of this plan, see Emergency Services at www.wa4usn.org. See Appendix A for references.

# 2. PARTICIPANTS

The Tri-County area of Berkeley, Charleston, and Dorchester Counties is served by a cadre of interested individuals, trained and federally licensed Hams, who have a sincere interest in supporting their community by utilizing their skills as communicators to provide region-wide emergency communications. There are several hundred Hams in the Tri-County Area.

Hams are allocated a portion of the radio spectrum for experimentation and public service. Ham radio has a long history of service in natural and man-made disasters. Unlike most radio services, Hams have thousands of frequencies open to them, and numerous methods to use them. This flexibility can be indispensable in an emergency. Their technical qualifications and strict operating standards complement this flexibility.

Participating Ham Radio Groups:

- (1) Berkeley County ARES/RACES
- (2) Charleston County ARES/RACES
- (3) Dorchester County ARES/RACES
- (4) Charleston Amateur Radio Society, Inc.
- (5) Trident Amateur Radio Club
- (6) Hospital Emergency Amateur Radio Team System (HEARTS)
- (7) South Carolina Healthcare Emergency Amateur Radio Team (SCHEART)
- (8) National Weather Service Charleston SKYWARN

The approximately 12 repeaters Charleston County, 2 in Berkeley County, and 6 in Dorchester County in combinations are used for regional communications. Wide area repeaters in Walterboro and Greeleyville as well as other SCHEART linked repeaters provide coverage state wide on VHF and UHF. See Appendix B for a detailed list of available VHF/UHV repeaters from http://www.wa4usn.org/. Monitoring stations on HF provide national and world wide communications.

### 3. LIMITATIONS

- a. The information contained in this plan is to be used as a guide. It is not the intent of this plan to limit the actions of an operator who is on site and best able to assess the prevailing conditions.
- b. Hams are trained to provide communications services only. Hams on duty under this plan are not expected to serve any other function.
- c. This plan is subject to alterations and/or revisions as required.
- d. Hams may be called to render public service when a competent official: (1) recognizes that an emergency condition exists, and (2) requests that such service be rendered.
- e. Hams participating in non-emergency events do so at their own risk.
- f. Hams provide their services as volunteers, and as such they are under no obligation to participate and there is no guaranteed response level. Members are asked to provide assistance based on their interests, abilities, and personal commitments. Should we experience a local disaster, many of our own members can be victims and they must ensure the safety of their loved ones and their own property. The Emergency Coordinator or designee will endeavor to the best of his or her ability to fulfill the needs of the communities served under this plan.

## 4. DEFINITIONS/ABBREVIATIONS

- ARES Amateur Radio Emergency Services, ARRL
- **ARRL** American Radio Relay League (National)
- **DEC** District Emergency Coordinator (Several Counties), ARRL/ARES
- EC Emergency Coordinator (County), ARRL/ARES
- EOC Emergency Operations Center
- FEMA Federal Emergency Management Agency
- ICS Incident Command System
- NIMS National Incident Management System
- NTS National Traffic System
- RACES Radio Amateur Civil Emergency Service, FEMA & State
- SEC Section Emergency Coordinator (State), ARRL/ARES
- SM Section Manager (State), ARRL

# **5. POSSIBLE EMERGENCIES IN THE LOW COUNTRY**

Normally, when the Police, Fire or Public Works Supervisor at the emergency site considers the situation, or potential situation, is of a serious nature beyond the capability of the emergency services to manage or support without outside assistance, he/she will begin the process to activate the County/Municipality Emergency Operations Plan (EOP) using the ICS procedures under the NIMS.

This is done by advising the respective Agency/Department Head who will make notification to the County/Municipal Emergency Management/Preparedness Director. The Director will determine if activation of the EOC is required and make the necessary notifications.

### 6. EMERGENCY OPERATIONS CENTER

As soon as it is evident that there is an emergency, the county\municipality will initiate a notification of the members of the EOC according to their Emergency Operation Plan. This normally includes Head of the County Council, Chief Administrative Officer, Police and Fire Chiefs, Public Works, Health and/or Ambulance representative, Social Services Representative, Transit representative, Emergency Planning Officer, and Public Information Officer. They will meet at the Emergency Operations Centers for their respective county. Ham radio should be included in the initial notifications in these plans.

# 7. AMATEUR RADIO IN EMERGENCY PLANS

The general role of Ham radio is usually described as follows:

"The Amateur Radio provides a volunteer group of individuals trained and federally licensed as communicators and trained using ICS. They are prepared to establish emergency radio communications between area hospitals, EOCs, Shelters, staging areas, etc. and to supplement public safety communications resources. A control station will be activated at each county Emergency Operations Center for a major emergency at the request of local officials. Contacts for the Ham Radio community are listed in the appendix."

# 8. CLIENT AGENCIES

- a. The Counties of Berkeley, Charleston, and Dorchester including all municipalities and townships
- b. Local Fire, Law Enforcement and EMS Agencies
- c. DHEC
- d. Local Hospitals
- e. American Red Cross
- f. Salvation Army

In addition, an Emergency Coordinator or his designee may activate this emergency plan on his own authority in anticipation of a request for emergency communications by a client agency when it is apparent that an emergency situation exists or is imminent. As well, activation for non-disaster situations can take place at the request of the client agencies.

# 9. TYPES OF ASSISTANCE

The Ham Radio networks in the area can supply communication services where no established links exist, or supplement existing system(s) if they are overloaded or disabled. Appendix C shows possible station locations. Ham radio networks may be organized to accommodate any need such as:

- a. Communications among various hospitals not normally in contact with one another.
- b. Communications among various officials, agencies or services not normally in contact with one another. This includes a communications link to the Emergency Operations Centers or between EOC's of various counties/municipalities.
- c. Provide communications personnel to support communications within served hospitals.
- d. Back-up or supplemental communications where a public-safety radio system or telephone service may be lost, out-of-range, or overloaded.
- e. Observations of local conditions (weather, traffic, etc.) relayed back to public officials.
- f. Health and Welfare communications to the general public through the American Red Cross.
- g. A direct link with the Charleston National Weather Service office.
- h. A communications network at the outer perimeter of an evacuated area.

# **10. NOTIFICATION**

Once the county/municipality or other served agency determines Ham assistance is required, the following procedure is to be used to alert Ham Radio volunteers:

- a. Requesting agency calls the respective EC and other key members, through their notification system.
- b. The members meet on the predetermined Repeater System. The EC or most appropriate alternate contacts the requesting agency. Phone calls are made to all other key volunteers.
- c. A net controller is appointed by the EC or alternate and takes control of the repeater for a Resource Net. Once more details are available, he/she would indicate the nature and severity of the situation.
- d. Check-ins would be solicited and volunteers would be asked to provide information on equipment and capabilities. In most cases, they would be asked to standby until our role is clarified. They would be asked to gather necessary equipment and await further instructions. Staging areas may be established to avoid congestion in critical areas.
- e. One person would be designated to do a call on all area linked repeaters to announce the Emergency Net(s).
- f. A full callout may be initiated from the CARS and TARC club directories depending on the scale of the event.
- g. The Tri-County ECs will provide coordination of the operation. They would not normally be net control.
- h. Other nets on other repeaters may be established to meet the needs of the emergency.
- i. Additional resources would be requested, via the DEC, from other areas such as upstate South Carolina, if required.

# **11. COMMUNICATION PRIORITIES**

All communications services provided by Ham Radio will be prioritized on the following basis

- a. **Emergency** Any communications situation having life and death urgency to any person or group of persons, which is transmitted by Ham Radio in the absence of regular commercial facilities.
- b. Priority Any important communications that have a specific time limit, official messages not covered in the emergency category, media releases and emergency-related traffic not of the utmost urgency. This includes messages of welfare agencies during emergencies requesting supplies, materials, or instructions vital to relief to stricken populace in emergency areas.
- c. **Welfare** Communications relating to either an inquiry as to the health and welfare of an individual in the disaster area or an advisory that indicates all is well. Welfare traffic is handled only after all emergency and priority traffic is cleared.
- d. **Routine** Most communications in routine situations will bear this designation. In disaster situations, messages labeled Routine should be handled last, or not at all when circuits are busy with higher- priority traffic.

# **12. TYPES OF NETWORKS**

The response to a request would depend on the nature of the event. Appendix D outlines how the repeaters could be configured to meet most requirements. It shows how the repeaters could be configured into a regionally linked system to support a pending weather event in support the National Weather Service with a SKYWARN Net. It also shows how the repeaters could be linked to support the individual counties for the EOCs and other agencies, including a separate linked system for Hospitals. Other nets would be established as necessary. County by county Networks can be found on the frequencies listed in Appendix E.

### **13. Establishing Tactical Communication Nets**

The establishment of Tactical Communications Nets is vital to the orderly and efficient flow of communications in an event or disaster. An important element to this is that there be consistency in how these nets are established. This consistency ensures that all ARES/RACES stations know what is expected based on the level of the event/disaster. It is the intent of this plan that all ARES/RACES stations in the Low Country Region will comply with guidance set forth in the: "SC ARES/RACES Tactical Communications Guide" in the establishment of Tactical Nets. (See Appendix A Item 6)

# **14. RESPONSIBILITIES**

There shall be the following leadership positions and responsibilities (See Appendix F):

#### a. District Emergency Coordinator (DEC) (Multiple Counties)

The DEC will assume overall authority and responsibility for emergency response and performance by the Network Personnel.

#### b. Emergency Coordinator (EC) (County)

Appointed by the DEC to supervise the efforts of local volunteer Hams located in the defined district. EC shall be the primary contact for emergency services organizations and municipal officials.

In an emergency or exercise, the EC will move about the operational area, providing guidance, direction, and recommending changes as necessary. He/she will evaluate the communications needs of the served agencies and respond guickly to those needs.

The EC responsibilities include:

- 1. Coordinate the training, organization and participation.
- 2. Make local decisions through coordination with the County Emergency Operations Center concerning the allotment of available Hams and equipment during an emergency.
- 3. Coordinate the interrelationship between local emergency plans and between communications networks within their jurisdiction.
- 4. Establish a viable working relationship with area government officials, including police, fire, ambulance and other emergency services.
- 5. Interface with municipal emergency Planning Officers and agencies.
- 6. Provide direction in the handling of emergency communications of either formal or tactical nature.
- 7. Coordinate the reporting and documenting of Ham Radio activities.
- 8. Act as a model communicator as evidenced by dedication to purpose, reliability, and understanding of emergency communications.
- 9. Have a thorough understanding of the locale and role of all vital government and volunteer agencies that could be involved in an emergency.
- 10. Act as backup for local areas without an Emergency Coordinator, or in the absence of an EC.
- 11. Initiate policy and procedural changes, both within the Ham Radio field organization as well as the served agencies, required to facilitate the activities of Ham Radio in its support role.

#### c. Technical Advisor

- provide liaison between the Engineers of the CARS and TARC clubs for technical dialog and interface,
- ensure the readiness of all repeaters and radios associated with the network to handle an emergency situation,

### 15. SKYWARN

The SKYWARN program at NWS Charleston utilizes the vast 2 meter amateur radio network across southeast South Carolina and adjacent southeast Georgia to obtain severe weather reports. In the event of severe weather, and at the discretion of the forecaster-incharge, a net controller will be called in to initiate a severe weather net. Although this will occur primarily with large outbreaks, sometimes reports will be solicited for smaller, less organized weather events. (See Reference 7)

In case of severe weather, NWS Charleston will monitor the following repeaters:

South Carolina 146.760 MHz...Awendaw SCHEART repeater

Additional repeaters include:

- 1) 146.715 MHz...White Hall SCHEART repeater
- 2) 147.105 MHz...Charleston SCHEART repeater
- 3) 146.790 MHz...USS Yorktown CARS repeater
- 4) 146.910 MHz...White Hall CARA repeater
- 5) 147.345 MHz...Adams Run TARC repeater

<u>Georgia</u> 146.970 MHz...Savannah Additional repeaters include: 1) 147.330 MHz...Savannah

When a severe weather net is activated, the call sign for NWS Charleston is: WX4CHS When calling net control, simply call "Charleston Weather." It is not the intent of the net to provide the latest conditions and forecasts. <u>The net is set up to receive reports, not give them</u>. Please remember this so that the net will be successful.

#### Low Country SKYWARN Net (Charleston)

All amateurs are cordially invited to check in to the Low Country Storm Spotter/SKYWARN<sup>™</sup> Net every Tuesday night at 9 PM on the CARS and SCHEART repeater systems. The net is sponsored by the National Weather Service in Charleston. The purpose is to practice calling a SKYWARN<sup>™</sup> net and to encourage hams to relay weather information to the National Weather Service in Charleston if a net is activated. If severe weather is occurring or imminent at the weekly net time, the net will be cancelled for that week. You'll be asked your name, call sign, spotter number (if you have one), location, and a brief description of current weather conditions at your location. We look forward to hearing from you!

#### Southwest South Carolina SKYWARN Net (Walterboro)

This net uses the146.715 MHz. White Hall SCHEART repeater which may be linked into the Low Country SKYWARN Net if the need arises.

#### What kind of severe weather reports are we looking for?

(Download complete Quick Reference Guide at http://www.erh.noaa.gov/chs/misc/SpotterQuickRef.pdf)

- 1. Tornadoes, waterspouts, funnel clouds or rotating wall clouds
- 2. Hail (Any size)
- 3. Estimated or measured wind speeds of 50 mph or greater
- 4. Flooding
- 5. Rainfall amounts greater than 1 inch per hour
- 6. Damage by wind or lightning
- 7. Downed trees and/or power lines

When reporting any of these events, it's very important to tell us WHEN and WHERE they occurred. If it's a second or third hand report, please give us the source of the original report, along with all the applicable information in #1-7 above.

#### **Reporting Criteria**

Hail Sizes

0.25 inch - Pea 0.50 inch - Dime 0.75 inch - Penny 0.88 inch - Nickel

#### \*\*\*SEVERE\*\*\*

- 1.00 inch Quarter
- 1.25 inches Half dollar
- 1.50 inches Ping pong ball
- 1.75 inches Golf ball
- 2.00 inches Hen egg
- 2.50 inches Tennis ball
- 2.75 inches Baseball
- 3.00 inches Tea cup
- 4.00 inches Grapefruit
- 4.50 inches Softball

Report the size of the largest hailstones as they cause the most damage. Also, do not use the term "marble size" or "ice cube" since these items come in many different sizes.

#### Wind Speeds

- 25-31 mph: Large branches in motion; whistling heard in telephone wires and power lines.
- 32-38 mph: Whole trees in motion; inconvenience felt walking in the wind.
- 39-55 mph: Twigs break off trees; wind generally impedes progress.

#### \*\*\*SEVERE\*\*\*

- 56-72 mph: Damage to chimneys and TV antennas; shallow-rooted trees pushed over.
- 73-112 mph: Surface of roofs peeled away; windows broken; mobile homes pushed or overturned; moving cars pushed off roads.
- 113-157 mph: Roofs torn off; weak buildings and mobile homes destroyed; large trees snapped and uprooted.
- 157+ mph: Severe damage; cars lifted off the ground.

# Appendix "A" - REFERENCES

- 1. Federal Communications Commission Rules and Regulations, Part 97. (FCC.GOV/)
- 2. Public Service Communications Manual. (www.arrl.org/)
- 3. ARRL Emergency Coordinator's Manual. (www.arrl.org/)
- 4. MOU State of South Carolina and SCARES. (www.scemd.org)
- 5. MOU The ARRL, INC. and the American Red Cross. (www.arrl.org/FandES/field/mou/redcro.html)
- 6. SC ARES/RACES Tactical Communications Guide (http://www.ares-sc.org)
- 7. Low Country SKYWARN (http://www.erh.noaa.gov/chs/skywarn)

# Appendix "B" - LOCAL REPEATERS BY FREQUENCY

A colorized version can be found at www.wa4usn.org.

Charleston Amateur Radio Society

#### **Repeaters by Frequency**

|            | Freq.               | Tone      |  | Location   | Antenna               | Height | Callsign                          | Link        |
|------------|---------------------|-----------|--|--|-----------------------|--------|-----------------------------------|-------------|
|            | 145.230-            | 123.0     | Greeleyville                             |  |                       |        | W4APE                             | Р           |
|            | 145.390-            | None      | Walterboro                               |  |                       |        | KG4BZN                            | L           |
|            | 145.410-            |           | Seabrook Island                          | N 32° 34' 50"  | W 80° 09' 35''        | 150    | WA4USN                            | Κ           |
|            | 145.450-            | 123.0     | Rutledge Tower (MUSC)                    | N 32° 47' 03"  | W 79° 56' 42''        | 160    | W4HRS                             | т           |
|            | 145.490-            | 103.5     | Moncks Corner EOC                        |  | W 80° 00' 25''        | 150    | W4HRS                             | W           |
|            | 146.685-            | 91.5      | Florence (SCETV Tower)                   | N 34° 16' 48''                                       | W 79° 44' 34''        | 480    | WR4SC                             | Link *      |
|            | 146.700-            | 123.0     | Georgetown Mem. Hospital                 | N 33° 22' 46"  | W 79° 17' 05''        | 60     | W4HRS                             | W           |
|            | 146.715-            | 91.5      | Columbia (I-77 & I-20)                   | N 34° 07' 07"  | W 80° 56' 13''        | 825    | WR4SC                             | Link *      |
|            | 146.715-            | 162.2     | Conway (SCETV Tower)                     | N 33° 56' 59"  | W 79° 06' 31''        | 480    | WR4SC                             | Link *      |
|            | 146.715-            |           | Whitehall (SCETV Tower)                  | N 32° 42' 43"  | W 80° 40' 54''        | 835    | WR4SC                             | Link *      |
|            | 146.730-            |           | Trident Medical Center                   |  | W 80° 04' 24''        | 94     | W4HRS                             | W           |
|            | 146.760-            |           | Awendaw (Chan. 5 Tower)                  |  | W 79° 41' 58''        | 855    | WR4SC                             | Link *      |
|            | 146.790-            |           | USS Yorktown                             |  | W 79° 54' 29''        |        | WA4USN                            | ĸ           |
| Off<br>Air | 146.835-            |           | Summerville (I-26)                       |  | W 80° 09' 16''        |        | KT4YW                             |             |
| -11        | 146.880-            |           | Orangeburg                               |  | W 80° 49' 27''        | 380    | WR4SC                             | Link *      |
|            | 146.910-            |           | Whitehall (SCETV Tower)                  |  | W 80° 40' 54''        |        | WA4SJS                            | L           |
| ew         | 146.940-            |           | Knightsville                             |  | W 80° 16' 12''        | 280    | WA4USN                            | ĸ           |
| eq         | 146.985-            |           | Summerville Med. Center                  |  | W 80° 09' 27''        | 65     | W1GRE                             | Ŵ           |
|            | 147.045+            |           | St. George                               |  | W 80° 34' 26''        | 00     | K4ILT                             | ĸ           |
|            | 147.1045+           |           | Wallace (SCETV Tower)                    |  | W 80° 01' 25''        | 380    | WR4SC                             | Link        |
|            | 147.105+            |           | Walterboro                               | N 52 48 08   | W 00 01 25            | 300    | KG4BZN                            | L           |
|            | 147.135+            |           | Moncks Corner                            |  |                       |        | WD4NUN                            | L           |
|            | 147.150+            |           |  | N 228 081 241  | M 000 041 021         | 200    |                                   |             |
|            |                     |           | Dorchester                               | N 33 06 31   | W 80° 21' 03''        | 280    | W4HNK                             |             |
|            | 147.195+            |           | Florence                                 |  |                       |        | W4APE                             | Р           |
|            | 147.210+            |           | Moncks Corner                            |  |                       |        |                                   |             |
|            | 147.225+            |           | Santee                                   |  |                       |        | W4DTW                             | -           |
|            | 147.270+            |           | S'ville (Dorchester EOC)                 |  |                       |        | W4ANK                             | T           |
|            | 147.300+            |           | Awendaw (Chan. 5 Tower)                  | N 32° 55' 28"  | W 79° 41' 58''        | 1500   | N7GZT                             | Ľ           |
|            | 147.345+            |           | Adams Run                                |  |                       |        | W4ANK                             | т           |
|            | 147.375+            |           | Georgetown                               |  |                       |        | K4SHP                             |             |
|            | 441.450+            |           | Knightsville                             |  | W 80° 16' 12''        | 260    | WA4USN                            | ΗК          |
|            | 441.575+            |           | Florence (SCETV Tower)                   |  | W 79° 44' 34''        | 500    | WR4SC                             | Link '<br>H |
|            | 441.575+            |           | Wallace (SCETV Tower)                    |  | W 80° 01' 25''        | 400    | WR4SC                             | Link        |
|            | 441.675+            |           | Conway (SCETV Tower)                     |  | W 79° 06' 31''        | 500    | WR4SC                             | Link<br>H   |
|            | 441.675+            |           | Whitehall (SCETV Tower)                  |  | W 80° 40' 54''        | 815    | WR4SC                             | Link *<br>H |
|            | 441.725+            |           | Awendaw (Chan. 5 Tower)                  |  | W 79° 41' 58''        | 950    | WR4SC                             | Link *      |
|            | 441.725+            |           | Columbia (I-77 & I-20)                   |  | W 80° 56' 13''        | 800    | WR4SC                             | Link<br>H   |
|            | 441.750+            |           | Orangeburg                               | N 33° 32' 35"  | W 80° 49' 27''        | 400    | WR4SC                             | Link T<br>H |
|            | 442.050+            |           | Florence                                 |  |                       |        | W4APE                             | HI          |
|            | 442.150+            |           | Trident Medical Center                   |  | W 80° 04' 24''        | 94     | W4HRS                             | H.          |
|            | 443.800+            | 123.0     | Dorchester                               | N 33° 08' 31"  | W 80° 21' 03''        |        | W4HNK                             |             |
|            | 444.075+            | 156.7     | Whitehall (SCETV Tower)                  | N 32° 42' 43"  | W 80° 40' 54''        |        | KG4BZN                            | н           |
|            | 444.550+            | 156.7     | Walterboro                               |  |                       |        | KG4BZN                            | L           |
|            | 444.750+            |           | Greeleyville                             |  |                       |        | W4APE                             | Р           |
|            | 444.775+            |           | St. Francis Hospital                     | N 32° 48' 30"  | W 80° 02' 31''        | 40     | W4HRS                             | W           |
|            | 444.825+            |           | Rutledge Tower (MUSC)                    |  | W 79° 56' 42''        | 160    | W4HRS                             | W           |
|            | 444.850+            |           | Colleton County Medical                  |  | W 80° 40' 30"         | 60     | W4HRS                             | W           |
|            | 444.925+            |           | Georgetown                               |  |                       |        | K4SHP                             |             |
|            | N ALL POINTING THEY | part of H | IEART system<br>H = repeater linking HUB | GREEN text = repeat<br>K = link via Knightsville Hub | ter part of SCHEART s |        | ink to another<br>ink code; 73 to |             |

Last modified Tue., Mar. 15, 111

000330

# Appendix "C" - POSSIBLE STATION LOCATIONS

- Berkeley County EOC
- Charleston County EOC
- Dorchester County EOC
- Medical University of South Carolina Hospital
- St. Francis Hospital
- Roper Hospital
- East Cooper Medical Center
- Trident Medical Center
- Summerville Medical
- National Weather Service
- Red Cross Headquarters
- Red Cross Shelters (As Required) (See Appendix G)
- DHEC Communications Containers (See Appendix H)
- Others as required by the event.

# Appendix "D" – Regional Repeater Configurations

For a complete and current list of available repeaters, please see www.wa4usn.org.

| Net                  | Area                 | Primary Repeater                         | Alternate Repeater                       | State Wide Access (2)                        |
|----------------------|----------------------|--|--|--|
| EOC and<br>Red Cross | Berkeley<br>County   | 147.150                                  | 145.490                                  | 146.76 Repeater linked to Main Reflector (3) |
|                      | Charleston<br>County | 146.790 tone123 (1)                      | 147.345                                  | 146.76 Repeater linked to Main Reflector (3) |
|                      | Dorchester<br>County | 147.180                                  | 443.800                                  | 146.76 Repeater linked to Main Reflector (3) |
| Hospital             | Tri-County           | All linked to 441.575<br>Wallace Hub (2) | All linked to 441.725<br>Awendaw Hub (2) | Hub linked to Back-Up<br>Reflector (3)       |
| Skywarn              | Tri-County           | 146.760 (2)                              | CARS System                              | 146.76 Repeater linked to Main Reflector (3) |
| Routine<br>Traffic   | Tri-County           | TARC System                              |  | 146.76 Repeater linked to Main Reflector (3) |

(1) CARS System could be linked to SCHEART through Awendaw UHF if agreed to by both Net Controls. See Note (3)

(2) SCHEART/ÉTV Assets

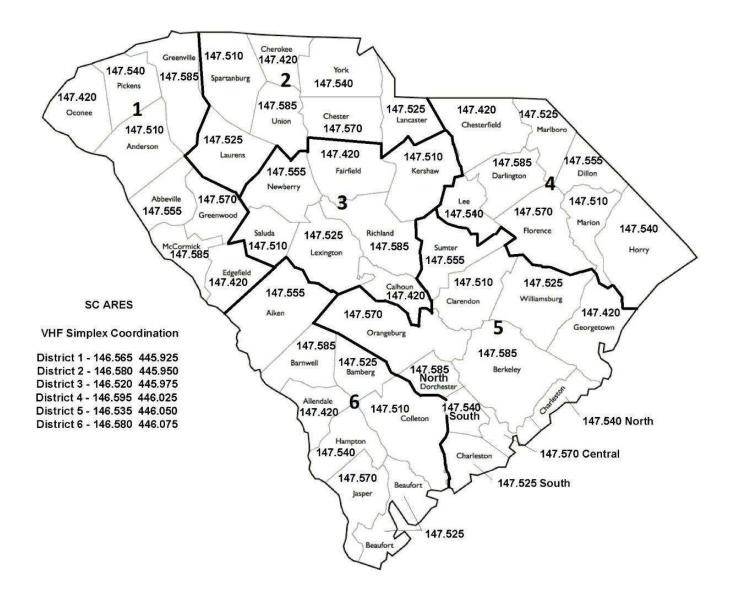
(3) Temporarily linking of any local SCHEART Repeater to another SCHEART Repeater or Reflector by local operators will be on an as needed basis and will be authorized by the appropriate EC or DEC.

# Appendix "E" – SC District/County Frequency Plan

This is a list of the primary repeater/simplex frequencies to be used by County ECs for communications. If the repeater listed is down, use simplex on the same frequency and other simplex frequencies listed. Developed by Brian Fletcher, K6NWS.

| ARRL District<br>and County | District VHF<br>Simplex<br>Coordinating<br>Frequency | District UHF<br>Simplex<br>Coordinating<br>Frequency | County VHF<br>Simplex<br>Coordinating<br>Frequency         | SCHEART<br>Wide<br>Area<br>Repeater | Local<br>Wide<br>Area<br>Repeater | Local County<br>Repeater                    |
|-----------------------------|--|--|--|-------------------------------------|-----------------------------------|---|
| District 1                  | <u>146.565</u>                                       | 445.925  |  |                                     |                                   |   |
| Abbeville                   |  |  | 147.555  |                                     | 146.610                           |   |
| Anderson                    |  |  | 147.510  |                                     | 146.610                           |   |
| Edgefield                   |  |  | 147.420  |                                     |                                   |   |
| Greenville                  |  |  | 147.585  |                                     | 146.610                           |   |
| Greenwood                   |  |  | 147.570  |                                     |                                   | 147.165                                     |
| McCormick                   |  |  | 147.585  |                                     |                                   |   |
| Oconee                      |  |  | 147.420  |                                     | 146.610                           |   |
| Pickens                     |  |  | 147.540  |                                     | 146.610                           |   |
| District 2                  | 146.580  | 445.950  |  |                                     |                                   |   |
| Cherokee                    |  |  | 147.420  |                                     |                                   |   |
| Chester                     |  |  | 147.570  |                                     |                                   |   |
| Lancaster                   |  |  | 147.525  |                                     |                                   |   |
| Laurens                     |  |  | 147.525  | 145.370                             | 146.865                           | 146.865                                     |
| Spartanburg                 |  |  | 147.510  | 145.370                             |                                   |   |
| Union                       |  |  | 147.585  | 145.370                             |                                   |   |
| York                        |  |  | 147.540  |                                     |                                   |   |
| District 3                  | 146.520  | 445.975  |  |                                     |                                   |   |
| Calhoun                     |  |  | 147.420  | 146.715                             | 147.330                           |   |
| Fairfield                   |  |  | 147.420  | 146.715                             | 147.210                           |   |
| Kershaw                     |  |  | 147.510  | 146.715                             | 147.330                           |   |
| Lexington                   |  |  | 147.525  | 146.715                             | 147.330                           |   |
| Newberry                    |  |  | 147.555  | 146.715                             | 147.210                           |   |
| Richland                    |  |  | 147.585  | 146.715                             | 147.330                           |   |
| Saluda                      |  |  | 147.510  | 146.715                             | 147.210                           |   |
| District 4                  | 146.595  | 446.025  |  |                                     |                                   |   |
| Chesterfield                |  |  | 147.420  | 146.685                             |                                   |   |
| Darlington                  |  |  | 147.585  | 146.685                             |                                   |   |
| Dillon                      |  |  | 147.555  | 146.715                             |                                   |   |
| Florence                    |  |  | 147.570  | 146.685                             |                                   |   |
| Horry                       |  |  | 147.540  | 146.715                             |                                   |   |
| Lee                         |  |  | 147.540  | 146.685                             |                                   |   |
| Marlboro                    |  |  | 147.525  | 146.725                             |                                   |   |
| Marion                      |  |  | 147.510  | 146.715                             |                                   |   |
| District 5                  | 146.535  | 446.050  |  |                                     |                                   |   |
| Berkeley                    |  |  | 147.585  | 146.760                             | 145.490                           | 147.150<br>For shelter and<br>local EOC use |
| Charleston                  |  |  | 147.540<br>north<br>147.570<br>central<br>147.525<br>south | 146.760                             | 146.790                           | 146.790<br>For shelter and<br>local EOC use |

| ARRL District<br>and County | District VHF<br>Simplex<br>Coordinating<br>Frequency | District UHF<br>Simplex<br>Coordinating<br>Frequency | County VHF<br>Simplex<br>Coordinating<br>Frequency | SCHEART<br>Wide<br>Area<br>Repeater | Local<br>Wide<br>Area<br>Repeater | Local County<br>Repeater                    |
|-----------------------------|--|--|--|-------------------------------------|-----------------------------------|---|
| Clarendon                   |  |  | 147.510  | 146.685                             |                                   |   |
| Dorchester                  |  |  | 147.585<br>north<br>147.540<br>south               | 146.760                             | 147.180                           | 147.180<br>For shelter and<br>local EOC use |
| Georgetown                  |  |  | 147.420  | 146.760                             | 147.375                           | 146.700                                     |
| Orangeburg                  |  |  | 147.570  | 146.880                             |                                   |   |
| Sumter                      |  |  | 147.555  | 146.685                             |                                   |   |
| Williamsburg                |  |  | 147.525  | 146.760                             |                                   |   |
| District 6                  | <u>146.580</u>                                       | <u>446.075</u>                                       |  |                                     |                                   |   |
| Aiken                       |  |  | 147.555  |                                     |                                   |   |
| Allendale                   |  |  | 147.420  |                                     |                                   |   |
| Bamberg                     |  |  | 147.525  |                                     |                                   |   |
| Barnwell                    |  |  | 147.585  |                                     |                                   |   |
| Beaufort                    |  |  | 147.525  | 146.715                             |                                   |   |
| Colleton                    |  |  | 147.510  | 146.715                             |                                   |   |
| Hampton                     |  |  | 147.540  |                                     |                                   |   |
| Jasper                      |  |  | 147.570  | 146.715                             |                                   |   |



### Appendix "F" - Key Personnel

#### **EMERGENCY COORDINATORS:**

BERKELEY COUNTY - Vince Lombardo - K4AOC

Home: N/A Business: N/A Cell: 843- 452-8011

#### CHARLESTON COUNTY - Bill Pennekamp - WA4WGP

Home: 843-763-1316 Business: N/A Cell: 843-324-5707

#### DORCHESTER COUNTY - John Place - W4HNK

Home: N/A Business: 843-832-0256 Cell: 843-200-7008

#### TECHNICAL ADVISOR

Bryce Myers - K4LXF Home: 843-747-2324 Business: N/A Cell: 843-697-4109

#### **DISTRICT EMERGENCY COORDINATOR** - Brian Fletcher - K6NWS

(Berkeley, Charleston, Clarendon, Dorchester, Georgetown, Orangeburg, Sumter, & Williamsburg Counties)

Home: N/A Business: 843-792-7752 Cell: 843-224-7513 (Alternate 843-810-3663)

If we have an incident of significance, Brian will automatically go to the 146.760 Awendaw VHF Repeater and standby. As a backup Brian will use the 147.105 Wallace VHF and if both are out, will use the District SIMPLEX frequency 146.535.

#### SECTION EMERGENCY COORDINATOR - Charlie Miller - AE4UX

(South Carolina)

Home: 803-663-9442 Business: N/A Cell: 803-221-6422

### Appendix "G" - RED CROSS SHELTERS

\* Type

SN - Special NeedsV - Opened when Voluntary Evacuation is ordered by Governor.

M – Opened when Mandatory Evacuation is ordered by Governor.

R – Reserve, opened as needed.

| Type * | Shelter   |  |  |  |  |
|--------|---|--|--|--|--|
|        | Berkeley County   |  |  |  |  |
| SN     | Berkeley Intermediate School<br>777 Stony Landing Road<br>Moncks Corner, SC 29461 |  |  |  |  |
| V      | Berkeley High School<br>406 W. Main Street<br>Moncks Corner, SC 29461             |  |  |  |  |
| V      | Goose Creek High School<br>1137 Red Bank Road<br>Goose Creek, SC 29445            |  |  |  |  |
| V      | St. Stephen Elementary School<br>1053 Russellville Road<br>St. Stephen, SC 29479  |  |  |  |  |
| V      | Hanahan Middle School<br>5815 Murray Drive<br>Hanahan, SC 29406                   |  |  |  |  |
| м      | Cane Bay High School<br>1624 State Road<br>Summerville, SC 29483                  |  |  |  |  |
| м      | Cainhoy Middle/Elementary School<br>2424 Cainhoy Road<br>Huger, SC 29450          |  |  |  |  |
| М      | Cross Elementary School<br>1325 Ranger Drive<br>Cross, SC 29436                   |  |  |  |  |
| м      | Cross High School<br>1325 Old Highway 8<br>Cross, SC 29436                        |  |  |  |  |
| м      | Macedonia Middle School<br>200 Macedonia Foxes Circle<br>Moncks Corner, SC 29461  |  |  |  |  |
| м      | Sangaree Elementary School<br>1460 Royle Road<br>Summerville, SC 29483            |  |  |  |  |
| м      | Stratford High School<br>951 Crowfield Boulevard<br>Goose Creek, SC 29445         |  |  |  |  |
| R      | Berkeley Elementary School<br>715 Hwy. 6<br>Moncks Corner, SC 29461               |  |  |  |  |
| R      | Devon Forest Elementary School<br>1127 Dorothy Street<br>Goose Creek, SC 29445    |  |  |  |  |

| Type * | Shelter                       |
|--------|-------------------------------|
|        | Sedgfield Middle School       |
| R      | 131 Charles B. Gibson Blvd.   |
|        | Goose Creek, SC 29445         |
|        | Westview Elementary School    |
| R      | 100 Westview Drive            |
|        | Goose Creek, SC 29445         |
|        | Westview Middle School        |
| R      | 101 Westview Boulevard        |
|        | Goose Creek, SC 29445         |
|        | Whitesville Elementary School |
| R      | 324 Gaillard Road             |
|        | Moncks Corner, SC 29461       |
|        |                               |
|        | Charleston County             |
|        | Alice Birney Middle School    |
| SN     | 7750 Pinehurst Street         |
|        | N. Charleston, SC 29420       |
|        | Midland Park Elementary       |
| V      | 2415 Midland Park Road        |
|        | N. Charleston, SC 29418       |
|        | Morningside Middle School     |
| V      | 1999 Singley Lane             |
|        | N. Charleston, SC 29405       |
|        | North Charleston High School  |
| V      | 1087 East Montague Ave.       |
|        | N. Charleston, SC 29405       |
|        | Stall High School             |
| V      | 7749 Pinehurst Street         |
|        | N. Charleston, SC 29420       |
|        | A.C. Corcoran Elementary      |
| М      | 8585 Vistavia Road            |
|        | N. Charleston, SC 29406       |
|        | Garrett Academy of Technology |
| М      | 2731 Gordon Street            |
|        | N. Charleston, SC 29405       |
|        | Jerry Zucker Middle School    |
| М      | 6401 Dorchester Road          |
|        | N. Charleston, SC 29418       |
|        | Ladson Elementary School      |
| М      | 3321 Ladson Road              |
|        | Ladson, SC 29456              |
|        |                               |
| М      | 3300 Creola Rd.               |
|        | N. Charleston, SC 29420       |
| М      | Pepperhill Elementary School  |

| Type * | Shelter                                       |
|--------|---|
|        | CC Blaney                                     |
| R      | 7184 Highway 162                              |
|        | Hollywood, SC 29449                           |
|        | E.B. Ellington Elementary School              |
| R      | 5600 Ellington School Rd.                     |
|        | Ravenel, ŠC 29470                             |
|        | Lambs Elementary School                       |
| R      | 6800 Dorchester Road                          |
|        | N. Charleston, SC 29418                       |
|        | Matilda F. Dunston Elementary                 |
| R      | 1825 Remount Rd.                              |
|        | N. Charleston, SC 29406                       |
|        | Minnie Hughes Elementary School               |
| R      | 8548 Willtown Road                            |
| -      | Hollywood, SC 29449                           |
| _      | Ronald E. McNair Elementary                   |
| R      | 3795 Spruill Ave.                             |
|        | N. Charleston, SC 29405                       |
|        | Dorchester County                             |
|        | Dorchester Senior Inc.                        |
| SN     | 312 N Laurel Street                           |
|        | Summerville, SC 29483                         |
|        | Ashley Ridge High School                      |
| V      | 4800 Delemar Highway                          |
|        | Summerville, SC 29485                         |
|        | Fort Dorchester High School                   |
| V      | 8500 Patriot Boulevard                        |
|        | North Charleston, SC 29420                    |
|        | Harleyville Ridgeville Elementary             |
| V      | 1650 East Main Street                         |
|        | Dorchester, SC 29448                          |
| V      | Summerville High School<br>1101 Boone Hill Rd |
| v      | Summerville, SC 29483                         |
|        | Woodland High School                          |
| V      | 4128 US Highway 78                            |
| v      | Dorchester, SC 29430                          |
|        | Beech Hill Elementary School                  |
| М      | 1001 Beech Hill Rd.                           |
|        | Summerville, SC 29485                         |
|        | Summerville Elementary                        |
| М      | 835 South Main Street                         |
|        | Summerville, SC 29483                         |
|        | Alston Middle School                          |
| R      | 1101 Boone Hill Rd                            |
|        | Summerville, SC 29483                         |
|        | Dubose Middle School                          |
| R      | 1000 Dubose School Road                       |
|        | Summerville, SC 29483                         |
|        | Flowertown Elementary School                  |
| R      | 20 King Charles Circle                        |
|        | Summerville, SC 29485                         |

| Type * | Shelter  |
|--------|--|
| R      | Fort Dorchester Elementary<br>5201 Old Glory Lane<br>Summerville, SC 29485 |
| R      | Gregg Middle School<br>500 Greenwave Blvd.<br>Summerville, SC 29483        |
| R      | Knightsville Elementary<br>847 Orangeburg Road<br>Summerville, SC 29483    |
| R      | Oakbrook Middle School<br>4704 Old Fort Road<br>Ladson, SC 29485           |
| R      | Rollings School of Arts<br>815 South Main Street<br>Summerville, SC 29483  |
| R      | Spann Elementary School<br>901 John McKissick Way<br>Summerville, SC 29483 |
| R      | St. George Middle School<br>600 Minus Street<br>St. George, SC 29477       |
| R      | Windsor Hill Elementary<br>8600 William Moultrie<br>Summerville, SC 29483  |

# Appendix "H" - DHEC COMMUNICATIONS CONTAINERS

| <b>Operational Area</b> | Location   | Contact                             |  |  |  |  |
|-------------------------|--|-------------------------------------|--|--|--|--|
| Berkeley County         |  |                                     |  |  |  |  |
| Goose Creek             | Medic 1 Station<br>907 Red Bank Road<br>Goose Creek, SC 29455                    | 843-764-4600                        |  |  |  |  |
| Saint Stephens          | Medic 5 Station<br>336 Ravenel Drive<br>Saint Stephen, SC 29479                  | 843-567-7367                        |  |  |  |  |
| Summerville             | Medic 2 Station<br>137 Farmington Road<br>Summerville, SC 29483                  | 843-871-1519                        |  |  |  |  |
|                         | Charleston County  |                                     |  |  |  |  |
| Charleston              | Fire Station 9<br>1451 King Street Ext.<br>Charleston, SC 29401                  | Tom Obrien<br>843-724-3777          |  |  |  |  |
| Daniel Island           | Daniel Island Fire Department<br>235 Seven Farm Drive<br>Daniel Island, SC 29492 | Tom Obrien<br>843-724-3777          |  |  |  |  |
| Hollywood               | St. Paul's Fire Station<br>6488 Hwy. 162<br>Hollywood, SC 29449                  | Chief Doc Mathews<br>843-889-6450   |  |  |  |  |
| James Island            | Fire Station 7<br>1174 Fort Johnson Road<br>Charleston, SC 29412                 | Tom Obrien<br>843-724-3777          |  |  |  |  |
| Johns Island            | St. Johns Fire Station 5<br>4550 River Road<br>Johns Island, SC 29457            | Chief Karl Ristow<br>843-556-8951   |  |  |  |  |
| Lincolnville            | Lincolnville Fire Department<br>143 West Pine Street<br>Lincolnville, SC 29483   | Chief Charles Gantt<br>843-873-6845 |  |  |  |  |
| Mount Pleasant          | Fire Station 4<br>1153 Six Mile Road<br>Mt. Pleasant, SC 29464                   | Rob Wronski<br>843-534-6587         |  |  |  |  |
| North Charleston        | Fire Department Admin Facility<br>2536 4th Street<br>North Charleston, SC 29406  | Major Coyle Kinard<br>843-740-2881  |  |  |  |  |
| West Ashley             | St. Andrews Fire Station 3<br>1775 Ashley River road<br>Charleston, SC 29407     | Chief Mark Schrade<br>843-556-8951  |  |  |  |  |
|                         | Dorchester County  |                                     |  |  |  |  |
| Givans                  | Old Fort Station 6<br>1475 Highway 61<br>Givans, SC 29472                        | Chief Ed Genthert<br>843-873-5620   |  |  |  |  |
| Harleyville             | Police Department<br>119 South Railroad<br>Harleyville, SC 20448                 | Chief Neal Dye<br>843-462-7676      |  |  |  |  |

| Operational Area           | Location                     | Contact               |
|----------------------------|------------------------------|-----------------------|
| North Charleston           | Ashley River Fire Department | Chief Scott Inabinett |
|                            | 8045 Dorchester Road         | 843-552-2425          |
|                            | North Charleston, SC 29428   |                       |
| Saint George               | Saint George Armory          | Chief Anthony Britt   |
|                            | 601 South Parler Avenue      | 843-563-3643k ext 11  |
|                            | Saint George, SC 29477       |                       |
| Summerville (2 containers) | Fire Station 1               | Chief Marc Melfi      |
|                            | 1101 Yancy Street            | 843-873-5107          |
|                            | Summerville, SC 29483        |                       |

### Appendix "I" - REVISIONS

6/1/10 Changed dates on Pages 1 and 3 and Added Appendix I – REVISIONS to pages 3 and 25.

- 7/27/10 Updated Pages 1,21, 22, and 25. Made changes to Red Cross Shelter List. Berkeley County: Deleted Westview Primary, Sedgfield Intermediate, St. Stephen Middle, and Hanahan Elementary. Added Cross High and Cane Bay High. Charleston County: Deleted Brentwood Middle. Added North Charleston High and Jerry Zucker Middle. Dorchester County: Added Ashley Ridge, Alston Middle, Gregg Middle, Spann Elementary, and Woodland High.
- 9/6/10 Updated pages 1, 21, 22, and 25. Corrected Rev Date on Pages 21 and 22. Changes date of revision from 7/23/10 to 7/27/10 on page 25.
- 1/10/11 Updated pages 1, 19 and 25.
- 1/6/11 Updated pages 1, 2, 3, 5, 10, 13 thru 27. Changes "Planning" to Preparedness" Page 2, Corrected numbering on table of contents Page 3, added NWS Charleston SKYWARN to Participants Page 5, added new paragraph 13 on new SC ARES/RACES Tactical Communications Guide Page 10, added new paragraph on SKYWARN Pages 13 and 14, added Low Country SKYWARN to References Page 15, added Summerville Medical to Appendix C Page 17, includes latest repeater list Page 16, changed primary and alternate frequencies for Dorchester County Pages18 and 20, changed Bill Pennekamp's Cell Number, and updated information Brian Fletcher Page 22, renumbered all pages after Page 12.