

REPEATER
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Repeater

The Official Newsletter of the Carolinas Amateur Radio Emergency Service

The Carolinas Amateur Radio Emergency Service is Operational!

Coastal Carolinas Health Alliance (CCHA) and the CARES Team are proud to announce that the Carolina Amateur Radio Emergency Service is operational.

Begun in 2002, CARES is an emergency communication system designed to allow hospitals on the coast of North and South Carolina to communicate with one another in case of disaster. Through a system of five Repeaters (communication devices that amplify and rebroadcast the transmission distance of radio signals) and antennas located on each of the facilities; participating hospitals will be able to communicate with one another and emergency service agencies via ham radio when all other forms of communication fail.

Led by the hospitals of Coastal Carolinas Health Alliance (CCHA) and ham operators local to coastal North and South Carolina,

CARES covers an area of approximately 25,000 square miles and provides a lifeline for those in need.

CARES operates on the 1.25 meter (222 MHz) band. The seldom used band was chosen because it is a quiet band. Radio traffic, manmade interference and atmospheric interference are all almost non-existent on the 1.25 meter

band.

CCHA and the CARES team are always in need of additional volunteers and licensed ham radio operators to provide assistance in a crisis. If you or anyone you know are interested in joining this worthwhile effort please contact Michael Smith of CCHA at 910-332-8014 or msmith@coastalalliance.org.



Paul Magnabosco installing the electrical tie-in for the CARES Repeater 1000 feet up the antenna tower.

The History of CARES

CARES began in 2001 after the terrorist attacks of September 11th. Dr. Bill Atkinson, then CEO of New Hanover Health Network, had read in a newsletter for hospital administrators how ham radio operators had handled communications for hospitals in lower Manhattan after the collapse of the World Trade Center towers. In addition to the tragic loss of human lives, the towers had contained automated relay stations for area hospitals. Until the telephone company could restore

service three days later, ham radio operators supplied most medical communications in the southern half of New York City. This impressed Dr. Atkinson, and he thought our region needed an amateur radio network dedicated to public health communication in times of disasters. He believed that the Coastal Carolinas Health Alliance (CCHA) was the right organization to coordinate the creation of such a system.

However, discussion of a dedicated public health

amateur radio system for the eastern Carolinas had been going on for years. Rev. Jim MacLeod (W4NHV) of Lumberton, Gary Pittman (K4TH) of Fairmont and Charles Brady (WB4DVN) of Southeastern Regional Medical Center had already been talking about a dedicated amateur radio network for regional public health emergency traffic, and had already had several meetings on the subject.

With CCHA staff member Jennifer Erdmann coordi-

The History of CARES (continued)

nating the project, the first meeting to discuss a network that would tie together CCHA member hospitals met at Columbus Regional Hospital in Whiteville, N.C. in April of 2002. In attendance were hospital administrators and many of the county Emergency Coordinators (ECs) for ARES™, Amateur Radio Emergency Services™. By the second meeting a month later, the name Carolinas Amateur Radio Emergency Service, or CARES, was adopted. With Danny Hampton, one of the leading experts on amateur radio in North Carolina, providing technical guidance the long journey that led us to where we are today began. CARES has been met with numerous obstacles over the years but the perseverance of people like Mr. Hampton, Paul Magnabosco (Lead Engineer), Bill Morine (Former Executive Committee Chairperson), Mark Hudson and the entire CARES Executive Committee have brought the project to where it is today.

CARES is now a reality and is unusual in several ways. First, it is CCHA's only volunteer based project, and the only one with non-medical personnel outside of member hospitals. CARES is also unique in that all the labor from the amateur radio community is 100% volunteer. By law, amateur radio operators cannot re-

ceive compensation for their services (hence, the meaning of the word "amateur"). This savings means that CARES network design and installation costs about one third that of a professionally installed system. Don't mistake the volunteer nature of CARES for lack of quality. Many of the amateur radio operators designing and building the equipment for CARES are electrical engineers. In fact, the quality of equipment, installation and network design exceed the standards of many professional systems.

CARES connects fourteen hospital campuses in North and South Carolina:

1. Betsy Johnson Regional Hospital - *Dunn, N.C.*
2. Bladen County Hospital - *Elizabethtown, N.C.*
3. Brunswick Community Hospital - *Supply, N.C.*
4. Columbus Regional Healthcare System - *Whiteville, N.C.*
5. Conway Medical Center - *Conway, S.C.*
6. Doshier Memorial Hospital - *Southport, N.C.*

7. Duplin General Hospital - *Kenansville, N.C.*
8. Loris Healthcare System - *Loris, S.C.*
9. Seacoast Medical Center - *Little River, S.C.*
10. New Hanover Regional Medical Center - *Wilmington, N.C.*
11. Cape Fear Hospital - *Wilmington, N.C.*
12. Pender Memorial Hospital - *Burgaw, N.C.*
13. Sampson Regional Medical Center - *Clinton, N.C.*
14. Southeastern Regional Medical Center - *Lumberton, N.C.*

When CARES was created in 2002, there were two other known dedicated public health amateur radio emergency systems in the United States; today there are an estimated three to four dozen. With a common signal that will blanket a 25,000 square mile territory, CARES will be one of the largest amateur radio networks in the country.

How we got Licensed and how you can to

In order to operate the CARES radio located in each of the participating hospitals you must obtain your technician class amateur radio license. The license certifies that you have the basic knowledge necessary to operate an amateur radio and remains valid for ten (10) years. Upon becoming the Project Manager of CARES, I, Michael Smith - Administrative Director of CARES, thought it was necessary for me to be able to operate the system I was tasked with making a reality. Upon learning of my decision, Larry Matheny, President of Coastal Carolinas Health Alliance decided to get licensed also. Not having been involved with ham and/or amateur radio prior to taking on this project; our journey to licensure is a good example of how the layperson can

easily navigate this process, become licensed, and assist in a time of need via CARES.

Once we decided to get licensed the first thing we had to figure out was what type of license to obtain. There are three license classes: technician class, general class, and extra class. Luckily the CARES system only requires a technician class license to operate the radio. Now knowing the type of license needed; we had to figure out how to best prepare ourselves for the licensing exam.

We found that there are several ways to obtain the knowledge needed to pass the technician class licensing exam. Here are a few.

- There's the ARRL's (The National Association for Amateur Radio) \$69.00 online course <http://www.arrl.org/cce/courses.html#ec010>. Those taking this course would have to sit for the licensing exam when it is given locally.
- CCHA and local amateur radio clubs sponsor various classroom style trainings. These trainings typically occur on two consecutive Saturdays at a designated location with the licensing exam given after the second and final session.
- www.hamtestonline.com is a self-directed online study tool. Those

How we got Licensed and how you can to...(continued)

wishing to use www.hamtestonline.com can do so at CCHA's discounted price of \$39.95/person. Those using this method of test preparation would have to sit for the licensing exam when it is given locally.

All in all there are several ways to prepare. With our busy schedules Larry and I decided to primarily use hamtestonline.com to prepare for the licensing exam. After hours and hours of self study we decided we were ready for the licensing examination.

The Azalea Coast Amateur Radio Club typically holds testing sessions in Wilmington, N.C. on the second Saturday of even numbered months. We found days convenient for each of us and went to take the exam, making sure to bring the required materials needed to be able to sit for the session:

- \$14.00 cash, and
- A Picture ID (or two other official forms of identification).

We took our seats, took a few deep breaths and prepared for the worst. Thanks to our preparation the test was a breeze. The content we covered during our study was the content that appeared on the exam. We both completed the exam in about thirty (30) minutes, turned it in, and waited for the exam to be scored. After a few minutes we got our results...we passed on our first try! About a month or so later we received our licenses and our call signs - KI4UFM (Michael Smith), and KI4WLJ (Larry Matheny).



At 965 feet above ground, the CARES Wilmington repeater transmit antenna provides excellent signal coverage.

CARES Needs You

The CARES repeater system becoming operational is certainly a momentous occasion. Having the system on the air represents six years of hard work and dedication on behalf of a core group of dedicated and hard working individuals who sacrificed of themselves to make this system a reality. However, the work of making CARES fully operational and effective is far from over.

We have the hardware in place now we need the manpower to go along with it. Now that the system is on the air we need people with the capability to utilize it. The CARES Executive Committee is in search of four (4) types of people to fill this capacity:

1. Member hospital personnel willing to become licensed to use the CARES System and provide assistance in a disaster.
2. Member hospital personnel already licensed to use ham radios willing to lend a hand.
3. Community members willing to become licensed and provide assistance to CARES facilities in a crisis.
4. Ham radio operators local to our CARES facilities willing to provide assistance during a crisis.
4. Columbus Regional Healthcare System - *Becky Smith*
5. Conway Medical Center - *TBD*
6. Doshier Memorial Hospital - *Joanne Turzer-Comnesso*
7. Duplin General Hospital - *Jim Nichols*
8. Loris Healthcare System - *Ken Boren*
9. Seacoast Medical Center - *Ken Boren*
10. New Hanover Regional Medical Center - *Mark Bennett*
11. Cape Fear Hospital - *Mark Bennett*
12. Pender Memorial Hospital - *Mike Jones*
13. Sampson Regional Medical Center - *Jack Pawlowski*
14. Southeastern Regional Medical Center - *Charles Brady*

By the 2009 Hurricane season the goal of the CARES Executive Committee is to have at least three employees of each CARES facility licensed and trained to use the CARES system. Additionally, the Executive Committee would like each CARES facility assigned a local ham operator who would also be available to assist the facility if need be.

If you would like to volunteer to assist us in achieving this goal we want to hear from you. Please contact Michael Smith, Administrative Director of CARES at (910)332-8014. If you are a CARES hospital employee you can also contact your hospital's CARES representative:

1. Betsy Johnson Regional Hospital - *Lisa Patterson*
2. Bladen County Hospital - *Richard Bryan*
3. Brunswick Community Hospital - *Stephanie Herron*



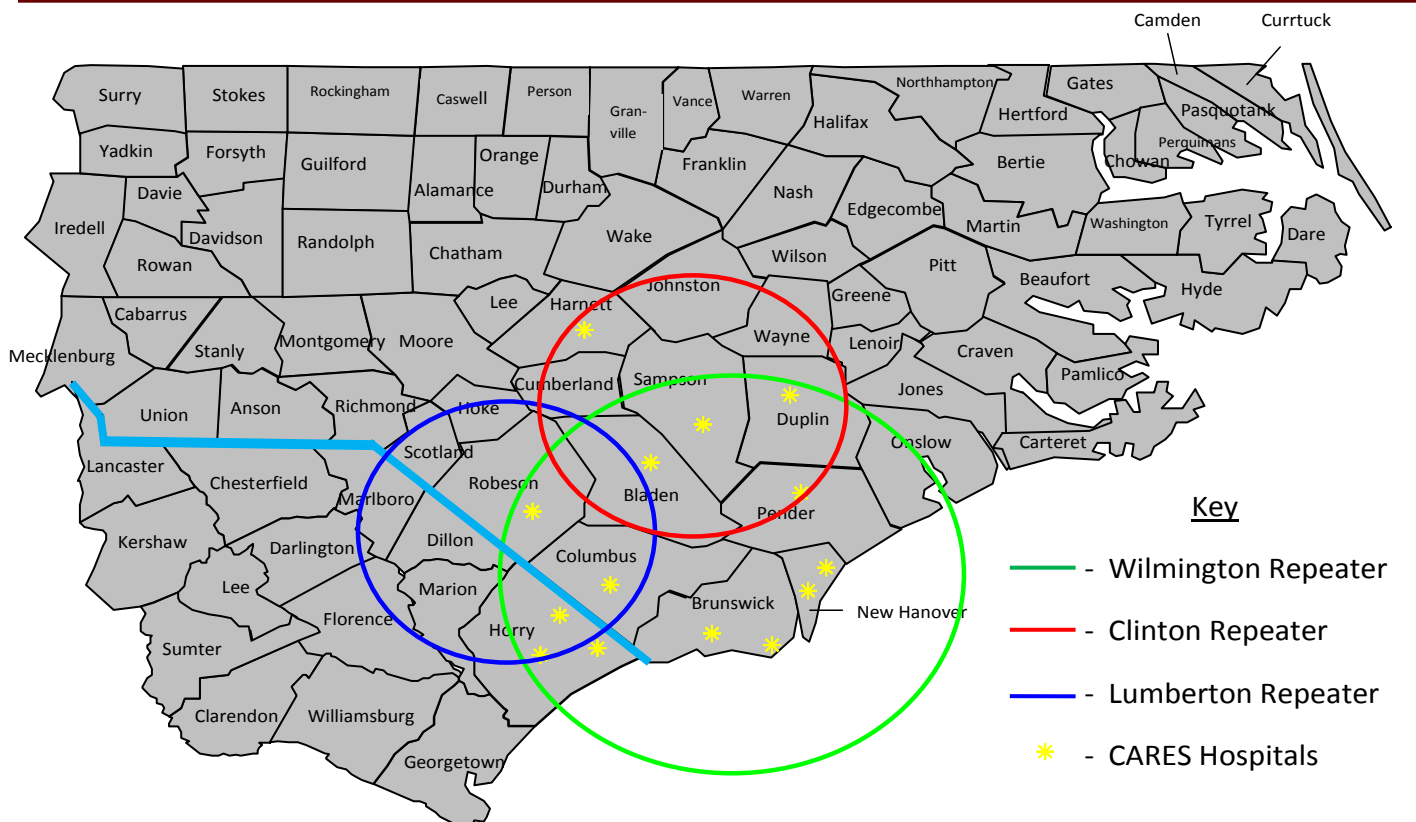
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- Ken Boren
- Charles Brady
- Danny Hampton
- Mark Hudson
- Paul Magnabosco
- Bill Morine
- John Naylor
- Michael Smith, Administrative Director of CARES

Carolinas Amateur Radio Emergency Service Coverage Area*



*Approximate Coverage Area Nov. 2008