

# Simulated Emergency Test (SET) – 2019

## Boone County, MO Amateur Radio Emergency Services (BCARES)

### November 9, 2019

At 9:00 AM, Saturday November 9, 2019, BCARES deployed 19 amateur radio operators in pursuit of the Information Packets that had been created and distributed to 29 Red Cross designated shelters throughout the county by the Boone County Office of Emergency Management (OEM) on the day before. The Information Packets contained instructions and data for the creation of an ICS213 message to be sent from each of these shelters to the ECC. These shelters are located in the communities of Hartsburg, Ashland, Hallsville, Centralia, Sturgeon, Columbia, and the Red Cross office in Jefferson City. See Map. The SET concluded at 12:00 PM with all stations being cleared off net by 12:15 PM. The SET was designed to strain the capabilities of BCARES to pass ICS213s from all ends of the county back to the ECC.



Figure 1 Information Packets

Two operators were dispatched to the Emergency Communications Center (ECC) to operate Net control and collect incoming ICS213s utilizing the amateur radio station (WX0BC) located inside the county 911-Dispatch Center. Sixteen operators (including one pair) were assigned to two shelters each to cover the 30 sites in the test. One operator was operating RELAY in the adjacent county (Callaway) from the Callaway Public Health Department amateur radio station to aid in communications from the southern end of Boone County. A portable UHF repeater was deployed to assess the effectiveness of its portability and area of coverage. Winlink email was the preferred mode of passing the ICS213 traffic to the ECC. This would have relieved operators at ECC from the burden of copying traffic in real time which compromised other functions. Eight operators were equipped for Winlink mobile operations. The Amateur Radio facility at the ECC provided VHF Packet and HF-ARDOP Winlink nodes (K0SI-10). Five operators provided APRS capabilities in their vehicles and five BCARES stand-alone Trackers were deployed on other vehicles. These were displayed on the APRS map at the ECC.



Figure 2 BCARES Trackers for APRS

#### RESULTS:

Voice communications were established with all 29 shelters utilizing a collection of five repeaters

(146.610, 146.76, 147.315, 444.175, 444.425-DMR) and two VHF Simplex frequencies. Twenty-six ICS213s were created and passed. Ten of these were directly passed using Winlink to the ECC inbox. Eight were



Figure 4 Mobile deployed to Shelter



Figure 3 Mobile deployed to Red Cross - JC.

relayed from the Callaway RELAY, and the rest were received by voice directly at the ECC. The portable UHF repeater was contacted by five operators over a 7-mile radius at each of its two deployed locations.

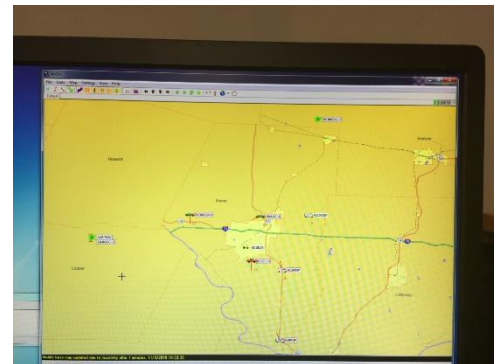


*Figure 5 Deployed Portable UHF repeater*

**PROBLEMS:**

As in real-life, things don't always work as planned, especially when the plan intends to strain the capabilities of the players. First 3 of the Information Packets were not found by the deployed radio operator at the assigned shelter. At least one of these had been removed before the ham arrived. The other two were not visible from the parking lot where the ham was to be. Nevertheless, voice communications were confirmed from those shelters with no ICS213.

Second, not all of the Winlink mobiles worked as planned. Some because the propagation to the ECC was not good enough. Some equipment failed. This created more voice delivered ICS213s to be received at ECC. Third, not all APRS trackers worked when deployed on that day.



*Figure 6 APRS mapping at ECC (File)*

Too many messages were passed by voice to the ECC for the capacity we had deployed there, clogging up the voice channels for all. At least one more operator is needed at ECC for a deployment this large.

Received ICS213s were printed for review, however, we did not direct the operators to include the shelter name or number, nor the radio operator call-sign on the form. So, we couldn't tell which shelter was associated with each ICS213 in review. We need to include shelter name and radio operator in the subject line of the form. The ICS 309 created in Winlink Express is a great summary of activity but only the subject line of the message is displayed.

**CONCLUSIONS:**

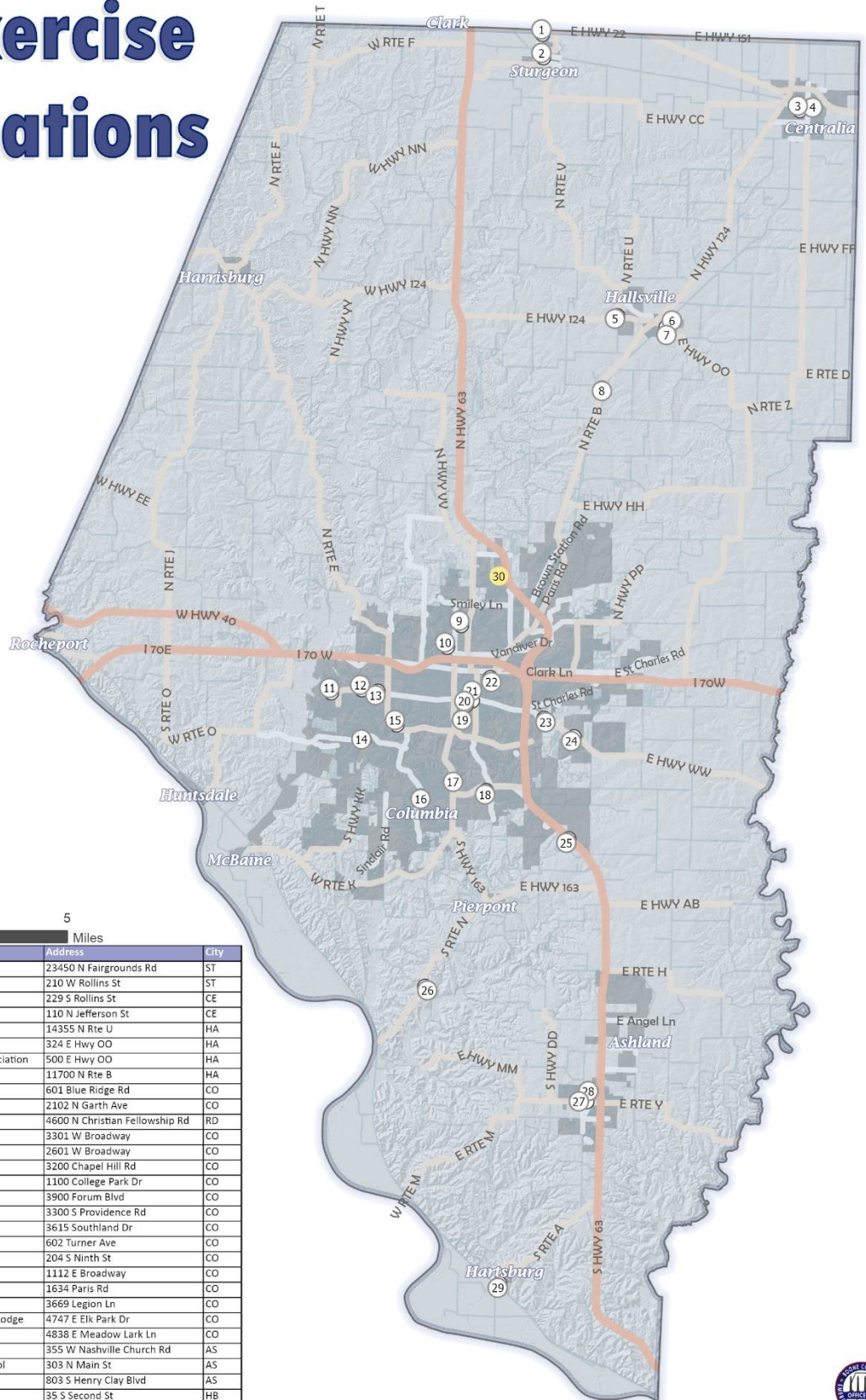
Communications were successfully established with all 30 sites in the three-hour SET (29 Shelters and one Red Cross office). This covers the major communities in the 691 Square miles of Boone County Missouri. Nineteen Amateur Radio Operators donating their time and equipment made this happen in cooperation with the Boone County Office of Emergency Management. Twenty-six ICS213s were passed to the ECC utilizing Winlink where possible, and by voice where necessary.

More practice and exercises throughout the year should improve our capabilities while raising expectations for the next SET.



# SET Exercise Destinations

- Exercise Locations
- Regular Roads
- Interstates
- Ramps
- State Highways
- Cities
- Boone County



Point	Name	Address	City
1	Sturgeon R-V High School	23450 N Fairgrounds Rd	ST
2	Sturgeon R-V Middle School	210 W Rollins St	ST
3	First Christian Church	229 S Rollins St	CE
4	Centralia R-V Middle School	110 N Jefferson St	CE
5	Red Top Christian Church	14355 N Rte U	HA
6	Hallsville Community Center	324 E Hwy OO	HA
7	Hallsville Community Development Association	500 E Hwy OO	HA
8	Hallsville United Methodist Church	11700 N Rte B	HA
9	Grace Bible Church of Columbia	601 Blue Ridge Rd	CO
10	Parkade Baptist Church	2102 N Garth Ave	CO
11	Christian Fellowship Church	4600 N Christian Fellowship Rd	RD
12	Community United Methodist Church	3301 W Broadway	CO
13	Broadway Christian Church	2601 W Broadway	CO
14	Fairview United Methodist Church	3200 Chapel Hill Rd	CO
15	Seventh Day Adventist Church	1100 College Park Dr	CO
16	Forum Baptist Church	3900 Forum Blvd	CO
17	Christian Chapel	3300 S Providence Rd	CO
18	The Crossing	3615 Southland Dr	CO
19	Newman Center - MU	602 Turner Ave	CO
20	Missouri United Methodist Church	204 S Ninth St	CO
21	First Baptist Church of Columbia	1112 E Broadway	CO
22	Memorial Baptist Church	1634 Paris Rd	CO
23	American Legion Post 202	3669 Legion Ln	CO
24	Columbia Benevolent Organization/Elks Lodge	4747 E Elk Park Dr	CO
25	Open Door Baptist Church of Columbia	4838 E Meadow Lark Ln	CO
26	Nashville Baptist Church	355 W Nashville Church Rd	AS
27	Southern Boone County R-I Middle School	303 N Main St	AS
28	Primary School	803 S Henry Clay Blvd	AS
29	American Legion Post 424	35 S Second St	HB
30	Emergency Communications Center	2145 E County Dr	CO

