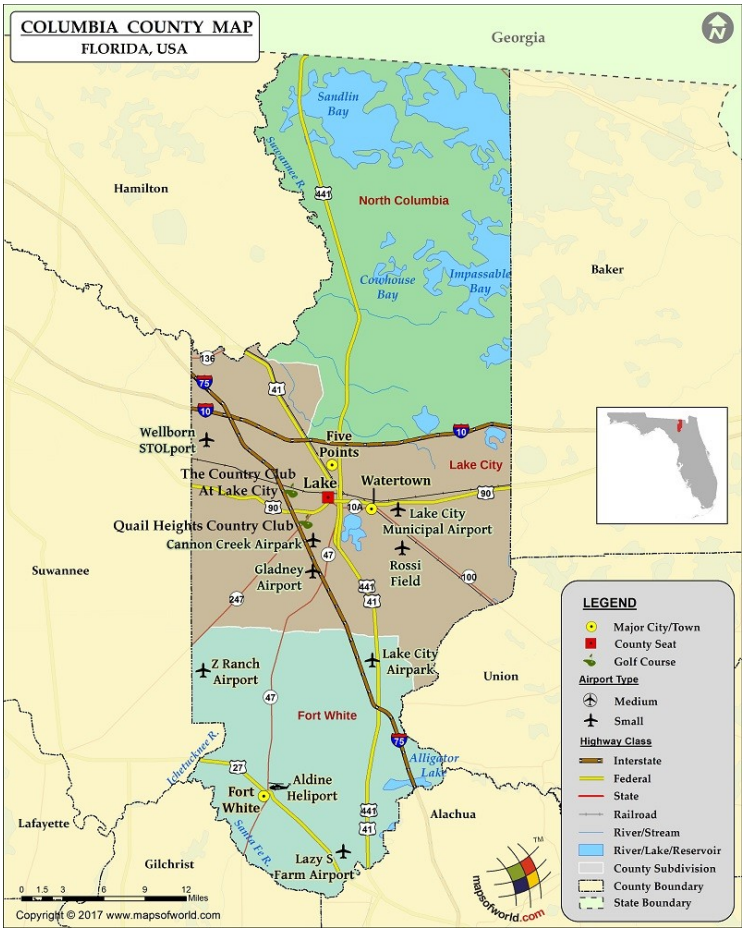
Columbia County ARES/NF4CA

Simulated Emergency Test

October 2, 2021

After Action Report/Improvement Plan

WRITTEN October 2021



HANDLING INSTRUCTIONS

1. Points of Contact:

Columbia County ARES(R):

Name:	Richard Heston. Emergency Coordinator
FCC License:	KE4BQI

Name:	Brad Swartz Asst. Emergency Coordinator
FCC License:	N5CBP

CONTENTS

This page is intentionally blank.

EXECUTIVE SUMMARY

The Amateur Radio Emergency Service (ARES®) typically organizes at the County Level and upward. There are two amateur radio clubs in Columbia County that support the ARES® mission, the Columbia Amateur Radio Society, and Columbia County ARES.

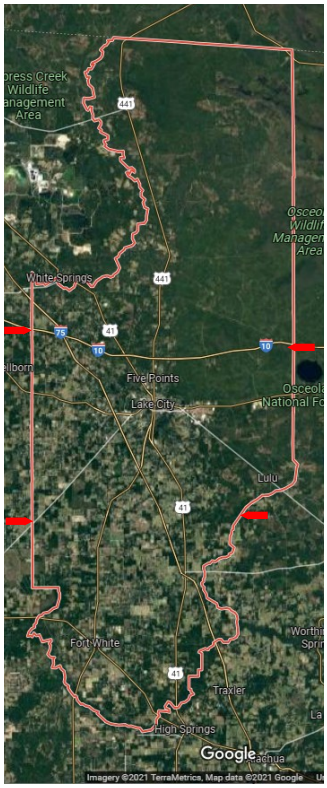
Columbia County "Hams" have a history of working with Columbia County Emergency Management. This exercise had four that have worked with them before and three as their first time with this group.

For the purpose of this Exercise, we will divide the county in three sections.

The top red arrows point to Interstate 10 and above I-10 will be considered North County.

The bottom red arrows approximately point to county road 240. Below CR 240 will be considered South County.

In between the two lines will be considered Mid County.



An unknown hacker or group of hackers have unleashed software that damages both DNS and router systems so significantly that most Internet or public switched telephone systems are down. In addition, electrical power systems and cell phone systems are failing. Local Emergency Operations Centers have called for amateur radio volunteers to staff backup communications and establish some form of radio communications to the State EOC and take structured reports from dispersed volunteers as to status. The disaster has been in progress for some significant length of time, and energy resources are rapidly dwindling without resupply. Participants are called on to successfully deploy unusual radio assets to take advantage of unusual sources of electrical power beyond the usual generator, or pre-wired vehicular mobile radio.

The operations based exercise commenced at 900 Local on Saturday October 2nd, and the ARES team were cleared completely by 1200 Local..

Major Strengths

The major strengths identified during this exercise are as follows:

- Seven ARES members volunteered to support the exercise.
- Five operators checked in on the resource net to begin the exercise.
- Simplex net was established and one station in south county successfully relayed through another station to the EOC.
- Two of the team created and sent an ARRL RadioGram survivor message for the first time.
- Four stations transmitted SHARES Spot Report via voice simplex net to EOC.
- All stations used appropriate ICS forms for the exercise.
- New operators gained valuable experience and training by participating in this exercise.
- The EOC operators acted as net control handling traffic from participants and aggregated information to send to the state EOC.
- When one station dissapered from the net, Net Control called roll to establish stations still on the net. Since we were on simplex another station was asked to call the missing station to determine if he needed a relay was necssary to reach the EOC.
-
-
-
-
- New leadership gained experience.

Primary Areas for Improvement

- Antennas at the EOC are in need of major improvements. HF was virtually unusable for intrastate traffic.
- Better understanding on which method to pass traffic based on different levels of importance and type.
- Still need a way to get more people to better understand the need to work during emergencies.
- Training with ARES volunteers with ICS forms and Winlink..

This document is prepared in order to help our group improve our emergency communications deployment abilities even more, and to assist those who will be volunteering for the next exercise.

Section 1: Exercise Overview

Exercise Details

Exercise Name
Columbia ARES SET 2021

Type of Exercise
Operations-based exercise

Exercise Start Date
October 2, 2021

Exercise End Date
October 2, 2021

Duration
2 hours

Location
Columbia County Emergency Operation Center radio room, Ham Radio Operators Home.

Sponsor
Columbia County ARES, a component of the American Radio Relay League (ARRL)..

Program
Amateur Radio Emergency Service

Mission
Communications Support

Capabilities
VHF local and HF local, state and national communications, analog voice,

Radio Email peer to peer, via WINLINK

Scenario Type
Natural disaster

Exercise Planning Team

Brad Swartz, N5CBP

Participating Organizations

Columbia County, Florida
Emergency Operations Center

Number of Participants

- Players - 7

SECTION 2: EXERCISE DESIGN SUMMARY

Exercise Purpose and Design

For scores of years, the American Radio Relay League has sponsored an annual "Simulated Emergency Test" in October, encouraging individuals and groups to practice emergency type communications. ARRL's annual Simulated Emergency Test (SET) is a nationwide exercise that focuses on the amateur radio community's commitment to being prepared and practicing how to respond before, during, and after a communications emergency. This is a great time to check readiness for yourself, as well as your home station and portable radio equipment, antennas, and accessories in a simulated emergency-like deployment. The ARRL SET is an invitation to get involved, and practice your skills.

Locations

The EOC radio room was Net Control, and five stations operated from their homes.

Call sign utilized was

NF4CA

which is the call sign of the Columbia County ARES Club. During the exercise, we used tactical calls (Columbia EOC, Winfield Shelter, Westside Shelter, and FT White Shelter) for local communication and NF4CA on HF when communicating with the Nth Florida ARES Emergency Net and the Tallahassee HF Skywarn Net.

Incident Command System / Leadership

We organized our effort using Incident Command System principles, and primarily using ICS forms 204, 205, 213, 213rr, 214, and 309. Volunteers were recruited by Richard Heston and Brad Swartz. The Incident Commander was Shane Morgan, Director, Columbia County Emergency Management. ARES leaders were Richard Heston, EC and Brad Swartz AEC.

OBJECTIVES[1]

No.	Item
1	Serve Columbia County Emergency Management by providing reliable communication between the EOC and stations located remotely in the county.
2	Volunteers to gain experience using alternate power for equipment.
3	Be able to provide their GPS coordinates and grid square.
4	Increase the familiarity of our volunteers with Radiograms and SHARES SpotRep
5	Become familiar with using Simplex frequencies and relay when necessary.
6	Use Winlink peer to peer to pass traffic when necessary.
7	Establish communications via HF bands with simulated State Emergency Operations
8	
9	

Timeline Summary

September 14, 2021 Began planning the October Simulated Emergency Test.

0800 October 2, 2021: Brad Swartz and Matt Haywood arrived at the EOC and began to prepare for the exercise.

0900 October 2, 2021: Stations began checking onto the local resource net.

0915 October 2, 2021 Repeater declared off line for the exercise, stations moved to planned simplex frequency.

0920 October 2, 2021: Stations began sending local SHARES SpotRep traffic..

0955 October 2, 2021 Stations began sending Survivor messages.

1050 October 2, 2021 Stations began securing to end exercise.

1110 October 2, 2021 EOC station sent Situation Report to simulated State EOC.

1

Section 3: Analysis of Objectives / Results

No.	Item	Outcome	Recommendations
1	Serve Columbia County Emergency Management by providing reliable communication between the EOC and the open shelters.	**N/A**	
2	Volunteers to gain experience using alternate power.	**S** Some stations were able to use battery power.	Try to get even more operators to develop sources of alternate power. Need to prepare for longer power outages to have radio communications.
3	Be able to provide their GPS coordinates and grid square.	**S**	
4	Increase the familiarity of our volunteers with Radiograms and SHARES SpotRep	**S** Some confusion as to how to fill in some of the blanks in the standard forms.	Adapt some of the headings to be more applicable for local use.
5	Become familiar with using Simplex frequencies and relay when necessary.	**P** South County station was able to pass traffic via relay.	Be prepared to move longer relay message traffic off the main frequency.
6	Use Winlink peer to peer to pass traffic when necessary.	**U** Unable to pass traffic using VHF peer to peer Winlink	Need to improve antenna situation at the EOC and provide more peer to peer training with Winlink
7	Establish communications via HF bands with State Emergency Nets	**S/U** The current HF antenna could only be tuned on 40 meters and not on other bands	Schedule with EOC staff a time to install the new antennas

Ratings Definitions:

Performed without Challenges (P): The targets and critical tasks associated with the core capability were completed in a manner that achieved the objective(s) and did not negatively impact the performance of other activities. Performance of this activity did not contribute to additional health and/or safety risks for the public or for emergency workers, and it was conducted in accordance with applicable plans, policies, procedures, regulations, and laws.

Performed with Some Challenges (S): The targets and critical tasks associated with the core capability were completed in a manner that achieved the objective(s) and did not negatively impact the performance of other activities. Performance of this activity did not contribute to additional health and/or safety risks for the public or for emergency workers, and it was conducted in accordance with applicable plans, policies, procedures, regulations, and laws. However, opportunities to enhance effectiveness and/or efficiency were identified.

Performed with Major Challenges (M): The targets and critical tasks associated with the core capability were completed in a manner that achieved the objective(s), but some or all of the following were observed: demonstrated performance had a negative impact on the performance of other activities; contributed to additional health and/or safety risks for the public or for emergency workers; and/or was not conducted in accordance with applicable plans, policies, procedures, regulations, and laws.

Unable to be Performed (U): The targets and critical tasks associated with the core capability were not performed in a manner that achieved the objective(s).

VOL HOURS ESTIMATED			
Preparation	Creating Exercise Plan	8 vol-hrs	N5CBP
	Registration forms	1 vol-hrs	N5CBP
	Assembling alt power	10 vol hrs	7 particiants
	Set up at EOC	4	N5CBP & KN4YGT
Briefing on the repeater	7 persons x .25hr	1.75 vol hrs	Going over last minute assignments
S.E.T.	10/2/21	14 vol hours	N5CBP, KI4QVL, WA5RKR, KN4DCJ, KO4MSF, KN4YGT, KK4KSM
Hot Wash		7 vol hours	
TOTAL		45.75 vol-hours	

MODES USED FOR THE exercise		
CW	We did not use this for this exercise.	
PHONE	HF was used at the EOC to keep in contact with the Simulated Florida State EOC. The WA4ZFQ repeater was used for the first 15 minutes only for last minute adjustments. Rest of the SET was simplex.	The “State EOC” used 3970 . 146.420
Digital	We did set up to use VHF Winlink Peer to Peer.	KN4YGT and NF4CA

Section 4: Conclusion

Our first ARRL S.E.T with this team was a success. We demonstrated professional effort, and improved operator skill..

Our team gained valuable experience in supporting Emergency Operations during an operations based exercise. We gained new operators and provided more experience in ways to become involved in this wonderful hobby as well as in our volunteer community service.

Significant Advances as a result of this effort:

- Thinking more about alternate power sources.
- Being able to know a locations GPS coordinates and Grid Square.
- Plans being developed to increase training.
-
-
-

Appendix A
Improvement Plan

No.	Item	Corrective Action	Volunteer rising to champion	Comments / Completion
1	Encourage other Hams to become involved in emergency operations			Aim for 4 hour shifts
2	Columbia ARES team to be more proficient in using ICS and Winlink	Hold training sessions in the use of the different forms and how to send them using voice and Winlink		Have training sessions in a non-emergency format
3	Increase the ability to establish communications both Local and to State wide Nets.	(stated)		Repeaters, simplex, new antennas
4	Advance planning and notice of a pre-event Zoom call			
5	Hold more exercises			
6	Determine how the interaction between radio room staff and Emergency Management personel	What information is needed and to whom is it delivered		
7	Hard copy of ICS form instructions, Net procedures, radio use cheat sheet and typical HF ARES net time and frequencies.	Printed and placed at the radio desk in the EOC Radio Room	leadership	
8	Formal briefings at beginning of operations and at scheduled times during, and at end of operation.			

9	Provide pre-incident training that works for non-retired persons also.			
10	Encourage Hams to take the most current basic FEMA courses releated to ICS, NIMS and EOC support			IS100, IS200, IS700, IS800, IS802
11	Take ARRL EMCOMM 001	http:// www.arrl.org/ online-course-catalog		
12				
13				
14				
15				
16				

APPENDIX B
ICS PLANNING DOCUMENTATION

INCIDENT RADIO COMMUNICATIONS PLAN (ICS 205)

1. Incident Name:	2. Date/Time Prepared:	3. Operational Period:
TS Elsa	Date: 7.6.21 Time: **1400**	Date From: 7/6/21 Date To: Time From: 2400 Time To:

4. Basic Radio Channel Use:

Zone Grp.	Ch #	Function	Channel Name/Trunked Radio System Talkgroup	Assignment	RX Freq N or W	RX Tone/NAC	TX Freq N or W	TX Tone/NAC	Mode (A, D, or M)	Remarks
		Primary	WA4ZFQ Repeator		146.940	None	146.340	123.0	A	South County
		Secondary	NF4CQ Repeator		145.490	None	144.890	None	A	North County
		Tertiary	Columbia ARES		146.420		146.420		A	Columbia ARES Simplex
			SARNet		444.900		449.900	110.9	A	
		80 Meters	Fla ARES 1		3.950 LSB					
		40 Meters	Fla ARES 2		7.242 LSB					
		Email VHF	N5CBP-10		145.070					Local in Lake City , as long as we have power.
		Email HF	Winlink HF		TBD USB					Per WINLINK RMS Channels / Propagation.

5. Special Instructions:

Use Channel Name to identify frequencies if moving due to malicious interference.

HF frequencies will be monitored based on conditions/propagation.

6. Prepared by (Communications Unit Leader)**:** Name: Brad Swartz, N5CBP Signature: _____

ICS 205	**IAP Page** _____	Date/Time: 7/9/21 1400

APPENDIX C

FULL DOCUMENTATION

WHAT WENT WELL!

Item#	Submit-ter	Things that worked well		Comments
LOGISTICS				
1		Alternate power worked for most		
OPERATIONS				
1		Simplex traffic worked		
2		Relays went well		
3		Net Control called roll often		
4		SHARES SpotRep worked		

FINANCE & ACCOUNTING				
PLANNING AFTER exercise				