1 June 2021



Alachua County ARES Volunteers (ACAV) Emergency Operations Plan (EOP)

Record of Changes

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As the Alachua County Section Emergency Coordinator for the Amateur Radio Emergency Services (ARES®), a part of the Amateur Radio Relay League (ARRL), I am very proud to present what may be the first of its kind; an Emergency Operations Plan (EOP) for a volunteer group of amateur radio operators. The EOP is written specifically for the members engaged with the Alachua County emergency operations center (EOC). We are the Alachua County ARES Volunteers (ACAV); radio operators that have specifically volunteered to assist with emergency communications (EMMCOM) at the Alachua EOC at the direction of the County Emergency Management Program Coordinator or their designated Incident Commander.

ACAV, ARRL, ARES[®], North Florida Amateur Radio Club, and Alachua County EOC Radio Club are not authorities; we are **volunteers**. As such our plans do not carry legal weight, but are statements of the skills, assets, and strategies that we bring to the table to serve local authorities at their pleasure and similarly other groups that may have need of our efforts.

This is directly in line with the Mission Statement released by the Amateur Radio Relay League (ARRL) in their document, ARRL ARES Plan¹ wherein it is stated,

"The Amateur Radio Emergency Service, a program of the ARRL, offers to its partners at all levels, trained Amateur Radio Service licensees who are skilled in the use of a wide range of emergency and disaster communications techniques and who are committed to supporting our partners' missions in service to the public. "

The ARRL wisely encourages the polices of best practices and continuous improvement.² This document is in keeping with our local volunteer groups working toward those goals.

Jeff Capehart Alachua County Section Emergency Coordinator

¹ See: <u>http://www.arrl.org/files/file/Public Service/ARES/ARES Plan - rev 01-30 -19.pdf</u> Reviewed on May 25, 2021.

² See para. 3, page 1, oaf the ARRL ARES Plan.

Table of Contents

Section 1. Purpose, Scope, Situation, Assumptions

- 1.1 Purpose
- 1.2 Scope
- 1.3 Situation Overview
- 1.4 Assumptions
- Section 2. Hazard and Threat Summary
- Section 3. Mission Essential Functions
- Section 4. Concept of Operations.
- Section 5. Organization and Assignment of Responsibilities
- Section 6. Direction, Control, and Coordination
- Section 7. Information Collection, Analysis, and Dissemination
- Section 8. Communications
- Section 9. Administration, Finance, and Logistics
 - 9.1. Administration
 - 9.1.1. Plan Development and Maintenance
 - 9.1.2. Documentation
 - 9.1.3. After-action Report
 - 9.2. Finance
 - 9.3. Logistics
- Functional Annex A: Warning

Functional Annex B: Financial Management

Functional Annex C: Mutual Aid/Jurisdictional Coordination

Functional Annex D: Worker Safety and Health

Functional Annex E: Training and Exercise

Support Annex A: EOC Augmentation

Support Annex B: Fire/Law Enforcement Augmentation

Support Annex C: Shelter Support

Support Annex D: Augmentation to Other Agencies

Hazard Specific Annex A: Hurricanes/Severe Storms

Hazard Specific Annex B: Wildfire

Hazard Specific Annex C: Cyber/Infrastructure Attack

Hazard Specific Annex D: Civil Unrest

Hazard Specific Annex E: EMP/CME

Appendix A: Authorities and References

Appendix B: List of Acronyms and Glossary

Appendix C: ICS-205 Communications Plan

List of Figures

Fig 1. ACAV THIRA Top 5 Results Fig 2. Strategic, Operational, Tactical Level Diagram

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Purpose, Scope, Situation, Assumptions

Purpose

This Emergency Operations Plan (EOP) is designed to provide guidance for the Alachua County ARES® Volunteers (ACAV) during an emergency activation requested by an Authority Having Jurisdiction (AHJ) in our area, typically the Alachua County Emergency Manager.

This document outlines skills, assets, and strategies that local amateur radio communications volunteers possess or are striving toward, in service to their community. It is an attempt to provide documentation in a format compatible with most recent FEMA-suggested documentation of such plans.

Scope

This EOP discusses the contingencies that ACAV cadre may likely be called to assist. It is in no way limiting upon any AHJ, nor upon non-governmental organizations, but does lay out presumed areas of service, for which the group is manned, trained, and equipped.

This plan is a guideline for leadership of any and all volunteer communications groups who seek to serve Alachua County, and is freely available for others to utilize. It was developed in the context of joint meetings of Alachua County ARES® and a primary supporting group, North Florida Amateur Radio Club, which has been meeting and working on volunteer communications issues for approximately four years. Modifications of this plan are expected, roughly annually, as required, and will be accomplished at similar meetings of Alachua County ARES® and the North Florida Amateur Radio Club. Membership in ARES® has specific but basic requirements, and membership in the North Florida Amateur Radio Club is open to all amateur radio operators who seek to serve and grow amateur radio volunteer capabilities, such as those advanced by the ARRL. There are no dues at the time of this writing, for the North Florida Amateur Radio Club, and new members are typically voluntarily inducted at the January meeting. Any amateur radio operators wishing to join in these efforts are welcome and can begin participation at any time. We welcome and appreciate the support of other fine local amateur radio groups and clubs and appreciate their shared interests in the furtherance of volunteer service to our community.

This Emergency Operations Plan is separate from any volunteer communications efforts that local citizens, ARES® volunteers, or others may spontaneously provide, such as in preparations for a hurricane, which is not an activity requested specifically by the Emergency Manager or other AHJ. Such volunteer local communications are a normal part of citizen volunteers engaged in ARES® and other volunteer groups, and are perfectly normal in their volunteer, helpful, informative, service-related and non-authoritative efforts. The scope of this document is more limited to communications efforts that are requested and carried out at the direction of the Emergency Management Program Coordinator or another AHJ.

Situation Overview

There are many situations that may cause a communications black-out; intentional or accidental, human or natural caused scenarios. The ACAV cadre is manned, trained, and equipped to augment an organization with digital and voice communications during any emergency maintain continuity of government (COG) or continuity of operations (COOP) of the supported entity.

Assumptions

- 1. Alachua County EOC/EM/ESF2 has requested support from the badged Alachua County ARES volunteers.³
- 2. The environment may be generally unsafe, but inhabitable. For example, the roads may be damaged, city power may not be available, but no chemical, biological, radiological or nuclear (CBRN) hazard is present.
- 3. The emergency or disaster has not affected the Alachua County ARES® Volunteers to an extent that no members are able to respond. (For example, there are not safety situations present on normal routes of travel, or otherwise specific protection is provided the volunteers.)

Hazard and Threat Analysis Summary

The ACAV cadre conducted a threat hazard identification and risk assessment (THIRA) in May 2021 and will perform an annual review thereafter.

The group reviewed the results of the most recent Florida State and Alachua County assessments to determine how the hazards and threats will affect the ACAV cadre's ability to lend support during an emergency as well as identifying the most likely scenarios that the Volunteers would be requested to support. The outcome of the THIRA does not emulate the state or county's results; the focus is specific to those hazards most likely to cause a need for emergency or auxiliary communications.

Florida has a long-recorded history of hurricanes, wildfires, sinkholes, and multiple causes of communications blackouts. We are aware of events where amateur radio operators have been deployed to fire stations, shelters and other locations, and even of instances where the State EOC has had fiber-optic wire cut resulting in severe degradation of communications.

³ This document is primarily written with respect to volunteer efforts in conjunction with Alachua County Emergency Management and its ESF2 but may provide useful information for other agencies requesting assistance, possibly by way of the Alachua County Emergency Management.

Hazard/Threat Analysis:

No.	Hazard or Threat
1	Hurricane/ Tropical Cyclone
2	Wildfire
3	Cyber/ Infrastructure Attack
4	Mass Civil Unrest
5	Electromagnetic Pulse (EMP)/ Coronal Mass Ejection (CME)

Fig 1. ACAV THIRA Top 5 Results

Mission Essential Functions (MEF)

The primary purpose of the Alachua County ARES ® Volunteers (ACAV), when serving as volunteers to the Emergency Management Department of Alachua County, is to serve as directed to augment communications that need backup or assistance. This supports continuity of governance and continuity of operations.

The following mission essential functions (MEF) are listed in priority with number one being the most important mission to fulfill.

- 1. Alachua County EOC Augmentation. See Appendix A.
- 2. Fire/LE Augmentation. See Appendix B.
- 3. Shelter Augmentation. See Appendix C.
- 4. Augmentation to other agencies as requested by Alachua EOC. See Appendix D.

Concept of Operations (CONOP)

The concept of operations for the Alachua County ARES Volunteers (ACAV) is simple yet broad; to assist the Alachua County Government at their request, when other forms of communication are not available.

Training.

The individual members of ACAV are trained and equipped to support as requested by the Alachua County emergency operations center (EOC). The ARES® program of the American Radio League provides certification standards⁴ for holding volunteer and leadership positions within the ARES® program and encourages extensive training and exercising of volunteers. There are certain standards for becoming badged (credentialed) by Alachua County⁵ for the purposes of serving in any deployed position, and our group keeps a record of the badged cadre.

⁴ See : <u>http://www.arrl.org/files/file/Public Service/ARES/ARES Strategic Plan - final - PSC.pdf</u>, page 6 and following. Also see the Florida-specific Taskbook, <u>https://arrl-nfl.org/wp-content/uploads/2020/01/Florida-ARES-Training-Task-Book-2020-R1.pdf</u>

⁵ The requirements are listed here: <u>https://qsl.net/nf4rc/2021/Welcome-ARESRequirements2020.pdf</u>

Our local ARES® group, in conjunction with multiple local clubs, has tackled these challenges with enthusiasm, holding regional Conferences, HSEEP-exercises, and publishing over a dozen texts in paperback/Kindle format.

Organization and Assignment of Responsibilities

The ACAV cadre located at the EOC serves as the hub at the Operational level. The individual ACAV members are at what is known as the Tactical level.



Fig 2. Strategic, Operational, Tactical Level Diagram

This CONOP borrows from the military parlance; Operational Control (OPCON) and (Tactical Control (TACON). The Alachua County EOC maintains Operational Control over the individual ACAV radio operator by placing them where they will be most effective for the Strategic (state and national) plan. The agency the individual volunteer is assigned to (e.g. ESF 6) now has tactical control of the radio operator. For example, the EOC will not tell the agency where the radio operator is to set up their station. The EOC may determine that the radio operator will be better utilized at a different location and move the individual. This concept is asset allocation.

The Emergency Manager, in conjunction with Alachua County ARES(R) leadership, chooses which individuals are assigned to which locations and functions. Training and qualification must be taken into account. Another very important consideration is aligned with the American Disabilities Act (ADA). Individual volunteers with conditions that fall under ADA must be accommodated properly. For example, a volunteer with a mobility challenge should not be assigned to support a plane crash in the Everglades; rather, this volunteer may be better suited to support EOC operations.

Every effort will be made, as much as possible within the need for service, as the need becomes

recognized, to provide ADA Compliance in assignments, such as accommodating volunteers with disabilities or service animals.

Alachua County volunteer communications may, at the discretion of the Emergency Manager, be assigned to:

- Provide backup communications to the State EOC, over voice or data, using Amateur or DHS/SHARES frequencies
- Submit ICS forms, such as ICS-213 / ICS-213RR etc., or other forms, to the State or other designated recipients.
- Gather information from public and radio sources to assist with situational awareness.
- Provide backup communications to local shelters.
- Assist with any other public service communications needs as directed.
- Assist with providing humanitarian communications from the public to loved ones when normal communications systems are non-functional or overloaded, and at a lower priority than official communications.⁶
- As directed by the Emergency Manager, maintain tactical or logistical communications with surrounding counties via backup communications systems.

<u>Credentialing</u>. Alachua County volunteer communicators are credentialed after having the appropriate background checks performed⁷, and the required training completed.⁸

<u>Notification of Activation</u>. For most disasters, normal telecommunications systems will be utilized for activations (telephone, text messaging, email). ESF2 maintains communications systems and is kept apprised of current leadership within the volunteer organization. The special case where normal telecommunications systems have been overwhelmed or destroyed by the disaster itself (e.g., cyberattack on communications systems, communications-targeted civil unrest, EMP) these alerting systems will be less useful or non-functional. The ICS-205 presented within the Appendices provides means to reach volunteers. Specific EMP-resistant communications are present within the EOC backup systems, and training and strategies for reaching volunteers will be developed for that instance.

⁶ DHS/SHARES has requested that these "health and welfare" communications not move across the DHS/SHARES network.

⁷ For further information, see: <u>https://qsl.net/nf4rc/StateVolunteerRequirements.pdf</u>

⁸ Established training requirements can be found here: <u>https://qsl.net/nf4rc/2021/Welcome-ARESRequirements2020.pdf</u>

Direction, Control, and Coordination

Our communications volunteers serve at the direction, control and coordination of the Emergency Manager, who may delegate portions of responsibilities to suitably credentialed and trained assistants or volunteers.

The National Incident Management System (NIMS) provided by the U.S. Department of Homeland Security, sets the expectation that emergency responders will organize according to a national standard, making it possible for all participants to work effectively together in all aspects of an incident. Consequently, all ACAV cadre will adopt an emergency organization structure, minimum training standards, credentialing, and any other related standards that conform as closely as possible to NIMS guidance, particularly following any guidance offered by the Alachua County Emergency Manager.

When not serving under unity of command under the Emergency Manager, our group (or those remaining) will endeavor to work as much as possible in conjunction with the ARRL Northern Florida Section / Section Emergency Communication Plan, as amended.⁹ ¹⁰

Information Collection, Analysis, and Dissemination

ACAV cadre should maintain situational awareness by monitoring news and broadcasts for information regarding emergencies and by communicating with other EMCOMM volunteers using the amateur radio network.

ACAV cadre provide input and analysis of the communications network to the Incident Commander or AHJ. For example, the ACAV member may learn that a certain area still has internet. The Incident Commander then may request messages be sent to that location for dissemination through the internet.

ACAV cadre pass message traffic at the direction of the Incident Commander. As messengers (not originators), the ACAV members must not alter the content of the message traffic.

Communications

ACAV cadre are trained and skilled in providing voice communications. A weekly VHF voice net is carried out at 8PM local time, on the 146.820W repeater. This frequency is typically utilized for voice net operations during local activations; for further information consult Appendix C, for the Alachua County default amateur radio ICS-205.

ACAV also has a significant number who are trained and skilled at data communications including, but not limited to:

⁹ Current version of NFL Communications plan: <u>https://archive.arrl-nfl.org/wp-content/uploads/2016/03/NFL-Section-Comm-Plan-FINAL-May-1-2016.pdf</u>

¹⁰ NFL Interoperability Frequency List: <u>https://archive.arrl-nfl.org/wp-content/uploads/2019/08/Florida-Interoperability-Frequencies.pdf</u>

- Winlink radio email communications
- NBEMS (FLDGI) point-to-point communications
- JS8 and other low-signal communications.

Our cadre are trained to participate in established amateur radio and SHARES voice tactical and traffic network operations.

Administration, Finance, and Logistics

Administration

This section describes administrative protocols used during an emergency operation.

Documentation is an administrative process used by a jurisdiction to document the response to and recovery from a disaster.

During activations, credentialed volunteers will keep records of activities on ICS forms including the ICS-214 and if appropriate, the ICS-309. These will be turned into the Emergency Manager following the activation.

The *after-action report (AAR)* results from an administrative process used by the jurisdiction to review and discuss the response in order to identify strengths and weaknesses in the emergency management and response program. The local volunteer group may, at its discretion, create its own AAR/IP of its communications efforts in order to improve them.

Examples of After-Action Reports created by this volunteer group include:

https://qsl.net/nf4rc/FBDR/2021/WhirlwindBoomAARIP.pdf

https://qsl.net/nf4rc/2020/AlachuaCountyARES2020FIELDDAYAfterActionReport.pdf https://qsl.net/nf4rc/2020/FormattedCombinedPowerOutAARIP.pdf

https://qsl.net/nf4rc/2018/FinalVersion2.pdf

https://qsl.net/nf4rc/2018/FinalVersion2.pdf

https://www.qsl.net/nf4rc/2018/2018%20AlachuaCounty%20Waccasassa%20Wildfire%20Excersize.pdf

http://qsl.net/nf4rc/2017AlachuaCountyCreateSpaceAfterActionReport.pdf

http://qsl.net/nf4rc/2017AlachuaCountyCreateSpaceSteinhatcheeAAR.pdf

Plan Development and Maintenance

This plan will be reviewed annually by the ACAV.

Finance

Alachua County badged volunteers will generally have very few expenses. If there are significant items that need to be purchase, the purchases will be discussed with the chain of command; appropriate receipts, etc., will be handled.

Logistics

This section describes the logistics and resource management mechanisms used to identify and acquire resources in advance of and during emergency operations, especially to overcome gaps possibly identified in a capability assessment.

The major logistical challenge expected in most activations is the transport of the bulky and heavy go-boxes to assigned shelters. The Alachua County Sheriff's office and Emergency Manager's office will arrange for transport where possible. Additionally, volunteers are encouraged to bring their own backup equipment provided that it will not be in the way or create a safety hazard at the assigned location.

Functional Annex A

Warning

<u>Primary</u>: The primary means of notification of ACAV activation will be through cell phone or land line.

<u>Alternate</u>: An alternate means of communication of ACAV activation will be through the use of the Alachua County emergency messaging system; Everbridge.

<u>Contingency</u>: In the event of an EMP or similar situation that renders normal telecommunications warning unavailable, a designated frequency for voice or data alerting, typically the NFAN frequency (see Appendix C) will be monitored by participants for situational awareness information emanating from the EOC, where a specific transceiver will be maintained at the ready for such transmissions and training will be provided to the EOC personnel as to how to activate it in such an emergency.

<u>Emergency</u>: In the event of a total communications black out, any *badged* member of the Alachua County EOC should travel to the EOC and initiate emergency communications in accordance with Annex C or the current ICS-205 communication plan.

Volunteers are encouraged to use good judgment and remain in their homes without specific guidance from the normal chain of command.

Functional Annex B

Financial Management

In the event that there is any purchase directed by the Emergency Manager or their designee by any volunteer, appropriate receipts will be maintained and turned in for reimbursement. This is considered an unlikely occurrence.

Functional Annex C

Mutual Aid/Multi-jurisdictional Coordination

The Emergency Management Program Coordinator is the appropriate contact person for outside jurisdictions to request aid; for requests being handled from the State, specifically for amateur radio operators, the request may be handled within the established system of the Section Emergency Coordinator/s, as documented here: https://arrl-nfl.org/wp-content/uploads/2020/05/Request-Procedures-Guide.pdf

Functional Annex D

Worker Safety and Health

Alachua County Emergency Management handles their internal procedures for worker safety and health during incident response and recovery. Each volunteer is encouraged to seek further information from County resources for any questions.

Ultimately, the safety of the individual is the responsibility of the individual. This is a volunteer position and if an ACAV member feels that the request places their health and safety in jeopardy, it is reasonable to decline the request. Additionally, ACAV members should not take risks the AHJ has expressly prohibited.

Functional Annex E

Training and Exercise

ACAV typically holds one HSEEP-based exercise every spring, and often a regional Emergency Conference; participation by badged volunteers is expected other than extenuating circumstances. A Fall Exercise is typically created by the Section Emergency Coordinator (SEC) and again, participation by badged volunteers is expected in general. On-going training occurs monthly in highly informative meetings that are well announced with written agenda and multiple speakers. A pattern of lack of involvement in such training will be possible grounds for adjustment in the approval of badged volunteers. Volunteers are expected to achieve Florida ARES® Taskbook Level I within 6 month of joining, and Level II prior to deployment. Leadership, according to the ARRL, are required to achieve Level III¹¹.

¹¹ See the requirements listed within this document: <u>http://www.arrl.org/files/file/Public Service/ARES/ARES</u> <u>Strategic Plan - final - PSC.pdf</u>

Support Annex A

Emergency Operations Center (EOC) Augmentation

<u>Background</u>. The Emergency Operational Center requires backup communication capabilities to further ensure communications both to local shelters and to the State EOC.

The first location the Emergency Manager is likely to request to be staffed is the EOC radio room. After years of cooperative growth between local volunteers, the Alachua County Emergency Management Department and the Alachua County Sheriff, this is a very capable backup communications facility with:

- 3 tower-mounted VHF/UHF communications antennas
- 4 VHF/UHF transceivers, two set for voice communications, and two set for data communications
- 3 different HF transceivers, to provide redundancy and one transceiver which is expected to be fully EMP-invulnerable¹² (based on U.S. government testing documented in the 1980's). All three transceivers are capable of voice or data communications, three within the amateur radio (FCC-controlled) spectrum under Part 97, and two within the DHS Federal SHARES¹³ program, using frequencies approved by the DHS/NTIA.
- Multiple HF antennas.
- Significant capability to operate without any utility or even generator power, tested during recurring exercises.

County-approved volunteer communicators have the skills and strategies available to maintain voice and/or data connections from the EOC to Shelters and to the State Emergency Operations Center via amateur radio frequencies and/or SHARES or other frequencies so directed to utilize by the EOC. A combination of radios and antennas provided by the County and by volunteers provides the EOC with multiple transceivers on high frequency (HF), very high frequency (VHF) and ultra-high frequency (UHF) bands, including capabilities for Morse code, voice, and data communications of many types, including WINLINK and other communications, and including licensed operation as part of the Department of Homeland Security (DHS) SHARES high frequency system. Multiple suitable antennas and feedlines have been provided by coordinated efforts of the County and volunteers.

<u>Concept of Operations</u>. When requested by the Emergency Manager or their designee, local approved and badged volunteers may staff the "radio room" of the Emergency Operations Center and attempt to provide any communications requested by the Emergency Manager, as well as performing routine monitoring of available information sources from a variety of systems.

Communications may include voice, Morse code, or data communications and when making

¹² See: <u>https://www.qsl.net/nf4rc/SB100Specifications.pdf</u>

¹³ See: <u>https://www.cisa.gov/shared-resources-shares-high-frequency-hf-radio-program#:~:text=and public health.-,SHARES Program Information, and cellular communications are unavailable.</u>

communications "in the name of the Alachua County EOC" will always present the exact information requested by the Emergency Manager. At the request of the Emergency Manager, desktop applications may be provided so that the Emergency Management Staff may more easily send or receive such messages with minimal interruption of their workflow.

Typically, the EOC radio room will maintain a significant presence on a local volunteer communications net provided by the local ARES® volunteers. The EOC radio room may present informal and non-authoritative communications on such a communications net, but will be careful not to represent that those communications are "in the name of the Alachua County EOC."

Should the Alachua County Emergency Manager conclude that emergency operations require more direct control of volunteer communications, the operation may shift to a specifically RACES operation and a RACES net operation.

<u>Assumptions</u>. The Emergency Operations Center maintains control of all volunteers working in its communications capacity unless those volunteers are assigned to other Agencies by arrangements agreeable to all involved.

Activation.

- a. <u>Authority to Activate</u>. Activated on request by the Emergency Management Program Coordinator or their designate.
- b. <u>Occasions for Activation</u>. At the discretion of the Emergency Management Program Coordinator.

<u>Implementation</u>. ACAV members will arrange their own travel to the EOC unless such travel is deemed dangerous in which case public service conveyance may be arranged or the volunteers may attempt to serve the communications needs of the EOC from alternate locations.

ACAV members will conduct themselves to their assigned location (chosen by the Emergency Management Program Coordinator or their designate, who may be a member of the volunteer group, such as an ARRL Emergency Coordinator, for example) by their own private means, unless the situation is so dire or dangerous that assistance from public service is necessary.

<u>Command and Control (C2)</u>. Volunteers will conduct themselves at the direction of the Emergency Manager or their designate, which may be a Unit Leader or other such ICS designate by the Emergency Manager.

Authorization to Secure. At the request of the Emergency Manager or their designate.

<u>Redeployment/Recovery</u>. As requested by the Emergency Manager.

<u>Training and Exercise</u>. Training and Exercise will be conducted on a continual basis, as directed or assisted by the Emergency Manager or their designate, or by any local ARES® group or any

other club or group of volunteers who wish to make themselves better prepared to serve as volunteers under the direction of the Emergency Manager¹⁴.

¹⁴ Please see additional training information in our volunteer Integrated Preparedness Plan document.

Support Annex B

Fire/Law Enforcement (LE) Augmentation

<u>Background</u>. Amateur radio operators often have specific skills, radio assets, and strategic experience that might be of service in assisting the augmentation or reconstitution of public service communications in the event of disaster damage to such facilities.

<u>Concept of Operations</u>. Some of our volunteers have taken specific state- or county- approved training to be of assistance with advanced State communications assets such as the MARC unit. In the case of disastrous damage to public service repeater or other communications, the Emergency Manager may request advice and/or assistance from trained and credentialed volunteers in assisting that unit, or in reconstituting or ad-hoc repairing of other facilities as they deem suitable. These may include, but are not limited to, assistance providing replacement repeater systems on other frequencies or bands; replacement antenna or feedline systems, patching systems, provision of cached transceivers that may substitute for previous equipment; assistance to MARC units in providing replacement repeaters or tower facilities, or cached transceivers and patching systems. The assistance offered may include unconventional methods of providing suitable antenna heights to obtain sufficient performance as to increase public safety. It is emphasized that these decisions to initiate such activities are made by the Emergency Manager/Authority Having Jurisdiction in view of the balance of risks and benefits given the gravity of the disaster situation, not our volunteer group.

<u>Assumptions</u>. The assumption is made that these activities would be at the direction of the Emergency Manager or their designee, and in the setting of actual disaster or emergency, with the significant risk of imminent loss of property, life, or limb, such that the Emergency Manager is well within reason to exercise the emergency communications clauses of FCC regulations, present in all known radio services.

Activation.

- a. <u>Authority to Activate</u>. The Emergency Manager or their Designate.
- b. <u>Occasions for Activation</u>. Disaster or Emergency situations during which normal public service communications are severely degraded.

<u>Implementation</u>. Volunteers, working in coordination with remaining professionals in the disaster or emergency setting, would endeavor to provide backup repeater systems or any required portion of such systems, and assist in providing suitable transceivers.

Command and Control (C2). At the direction of the Emergency Manager or their designee.

Authorization to Secure. From the Emergency Manager or their designee.

<u>Redeployment/Recovery</u>. At the direction of the Emergency Manager.

Training and Exercise. Training and Exercise will be conducted on a continual basis, as directed

or assisted by the Emergency Manager or their designate, or by any local ARES® group or any other club or group of volunteers who wish to make themselves better prepared to serve as volunteers under the direction of the Emergency Manager. Such training and exercise would NOT include operation in unlicensed manners or by unlicensed operators since no emergency would exist, but might well include deployment of suitable radio assets in safe manners and with permission from applicable property owners or authorities. An example might be to deploy a portable amateur radio repeater to the rooftop of a tall building, with the permission of the management of the building, as a part of a training, measurement effort, or exercise. For further details, please consult our Integrated Preparedness Plan.

Support Annex C

Shelter Augmentation

<u>Background</u>. The Florida State Comprehensive Emergency Management Plan requires that County emergency plans provide for adequate methods of communications, generally including backup communications, and it appears would encompass shelters ¹⁵.

1. County has back-up/redundant communication systems with federal, state and local partners and can disseminate information including but not limited to Weather Forecast Office (WFO) information and alerts.

2. County has the capability to communicate with municipalities, state, federal agencies, and other local agencies by utilizing and testing more than one method or with redundant methods of communication.

3. Communication can be established with shelters, staging areas, and other critical response/recovery functions within the county in order to improve inter-agency coordination and communications.

At the discretion of the Emergency Manager, badged volunteers may be deployed to one or more County Shelters, to provide backup communications capabilities between the Shelters and the EOC, and also to assist public service personnel when so requested. In the 2019-2021 period, the County, has provided 14 Shelters with fixed communications antennas allowing VHF/UHF communications, and also 800 MHz public service communications¹⁶, as well as providing a pass-thru to allow a possible local- or longer-distance HF communication capability, should the normal repeaters be out of service and simplex communications be inadequate.

Equipment: Additionally, the County has provided 14 ruggedized "go-boxes" with uniform VHF/UHF amateur radio type transceivers, and 800-MHz public service transceivers. A small number of the amateur radio VHF/UHF transceivers have been further equipped for data communications in addition to voice communications, since our volunteers are often trained in data communications.¹⁷Several of our volunteers posses privately owned portable "go-boxes" and can add additional communications to a shelter if appropriate, including HF communications.

The EOC maintains a stock of storage batteries to provide power for these backup

¹⁵ See: Emergency Management Capabilities Assessment Checklist, CEMP-002, <u>https://www.floridadisaster.org/contentassets/a6feaf321ad74943a76524e8b064cf48/capabilities-assessment-criteria-2012_cemp002.xlsx</u> as part of <u>https://www.floridadisaster.org/dem/preparedness/natural-hazards/comprehensive-emergency-management-plan/</u>

¹⁶ The purpose of the 800MHz public service communications is to assist Law Enforcement officers who typically have great difficulty even on a "good day" making radio connections from inside the heavily steel-reinforced school buildings. Our volunteers are provided training in the operation of these radios, used only when absolutely appropriate to assist law enforcement.

¹⁷ An option we may pursue is to obtain SHARES licensure for VHF frequencies that are not part of the amateur radio Part 97 spectrum, and would allow more secure communications to/from the EOC, if the Emergency Manager wishes to pursue those options.

communications go-boxes even if the Shelter utility power and generator power systems fail.

<u>Health and Welfare Messages</u>: With the approval of the Emergency Manager or ESF2 and Mass Care Services (ESF 6), our volunteers are often able as a secondary service, to provide means for outbound communications from persons wishing to notify distant persons of their status in short, non-guaranteed, non-confidential communications via Amateur Radio. This is a traditional service¹⁸ of the amateur radio service under Part 97 and training for such service has been an integral part of the American Radio Relay League for over 75 years. It would always be on a secondary, time-permitting, priority compared to official communications.

Personnel: Historically, trained volunteers with amateur radio equipment have been utilized to provide such backup communications from the Emergency Operations Center to/from the Shelters. Recently, this process has been further structured to better comply with State statutes¹⁹, with background-check and vetted volunteers who have completed a course of study prescribed by the ARRL Amateur Radio Emergency Service (ARES®). ²⁰

Equipment: The County has provided a number of radio "go-boxes" as well as fixed antennas for multiple frequency bands. Volunteers are also expected to be knowledgeable and innovative to provide replacement or additional equipment and/or antennas as needed to accomplish the communications directed by the Emergency Operations Center.

<u>Concept of Operations</u>. When directed by the Emergency Manager or their designee, approved volunteers will be assigned to the desired Shelters as requested by the Emergency Manager, who may designate a local volunteer coordinator to assign volunteers if they do not wish to direct that themselves.

These volunteers will attempt to maintain continual radio connection to the Emergency Operations Center, except for such breaks as required for rest, etc.

Assumptions. The volunteers serve under the direction of the Emergency Manager.

Activation.

- a. <u>Authority to Activate</u>. Via the Emergency Manager.
- b. <u>Occasions for Activation</u>. Times when the shelters will be implemented.

¹⁸ See for example, the requirement that ARRL ARES(R) Emergency Communicator leaders to "Establish an emergency traffic plan, with welfare traffic inclusive, utilizing the National Traffic System (NTS) as one active component for traffic handling. Establish an operational liaison with local and section nets, particularly for handling welfare traffic in an emergency situation. " p. 10, the ARRL ARES(R) District Emergency Coordinator to "Provide direction in the routing and handling of emergency communications of either a formal or tactical nature, with specific emphasis being placed on welfare traffic." p. 11, and the ARRL ARES Section Emergency Coordinator to "Cooperate and coordinate with the Section Traffic Manager (STM) so that emergency nets and traffic nets properly route welfare traffic in disasters and emergencies." p. 13 in the ARRL ARES Strategic Plan, http://www.arrl.org/files/file/Public Service/ARES/ARES Strategic Plan - final - PSC.pdf

¹⁹ See: https://qsl.net/nf4rc/StateVolunteerRequirements.pdf

²⁰ See: https://qsl.net/nf4rc/2021/Welcome-ARESRequirements2020.pdf

Implementation. The County currently has 14 go-boxes with VHF/UHF amateur radio transceivers as well as 800 MHz public service transceivers. These go-boxes are heavy and bulky. The plan is to have them delivered to the appropriate locations at shelters for us, perhaps by the law enforcement personnel also assigned to the shelter. Our volunteer assigned to the shelter will unpack the go-box and connect the various radios. We will maintain a VHF tactical shelter net and command net on an announced frequency (see the ICS-205 for the incident) when shelters are in operation.

Assisting Law Enforcement: The County is well aware of significant difficulties with deputy hand-held transceivers being unable to penetrate the metal-reinforced school walls. For this reason, they provided powerful mobile public service radio equipment as part of their 14 shelter radio go-boxes. When requested by Alachua County Sheriff authorities (dispatch or an officer emplaced at the Shelter) provide common-sense relaying of information as instructed using the public service radio. Most shelters have an additional coax pass-through with SO-239 connectors which can also be utilized to provide HF communications if the volunteer brings a suitable HF radio and suitable HF antenna.

<u>Command and Control (C2)</u>. This will be by the Emergency Manager and as delegated to badged volunteers serving at the EOC and/or as net control station.

Authorization to Secure. As directed by the Emergency Manager.

<u>Redeployment/Recovery</u>. As directed by the Emergency Manager

<u>Training and Exercise</u>. ACAV make continual practice of these deployment skills, particularly during annual Emergency Conferences and in a spring deployment HSEEP-based exercise and often via a Simulated Emergency Test during the Fall. All volunteers are expected to maintain active participation with the training made available and advance through the ARES® Taskbook, created for this purpose, and to additionally take ICS courses as directed by the Emergency Manager. Also consult our Integrated Preparedness Plan.

Support Annex D

Augmentation to other agencies, or as requested by Alachua EOC

<u>Background</u>. The fourth MEF is to support another agency as requested by the EOC. This may be a hospital, a utility plant, or even a location outside of Alachua County. ACAV and NFARC volunteers have a rich history over the last half decade of developing innovative training programs and techniques to provide potentially better emergency communications service to Floridians. We have sponsored Emergency Symposium or Conferences in 2017, 2018, 2019 and 2020. We have developed HSEEP-based deployment exercises, HF and VHF voice and data message transaction training, and multiple assets to complement the wealth of voice repeaters that the Gainesville Amateur Radio Society has richly supplied the Alachua County area. We have published multiple texts, including:

2018 Conference <u>https://www.amazon.com/Amateur-Radio-Emergency-Communications-</u> Symposium/dp/1983678805

2019 Conference <u>https://www.amazon.com/Amateur-Radio-Emergency-Communications-</u> Conference/dp/1791865941

2020 Conference: <u>https://www.amazon.com/2020-Amateur-Radio-Communications-Conference/dp/B083XX3SZR</u>

Additionally, we have published multiple After Action Reports/Improvement Plans.

There are additional options for service which have rarely been utilized but are possible. With the equipment provided by the County, the trained and badged volunteers can also be deployed **if requested** to assist fire or law enforcement facilities' communications²¹ in any of several ways.

Assisting the MARC unit(s): Some of our volunteers have participated in MARC Unit (Mutual Aid Radio Communications) training (IO-MARC²²) and can assist with deploying the significant capabilities of the Region 3 MARC unit. Our group has exercised with the MARC unit on at least two occasions and has also exercised with the Forestry Division Tower.

Our volunteers and surrounding amateur radio community have significant expertise in both local NVIS HF communications, and also with the emplacement of VHF/UHF repeaters, and if necessary, can be tasked with efforts to assist with last-ditch communications systems in the event that the commercial trunking system is severely damaged by physical or cyber-attack, or EMP. This area of potential service has not been significantly explored or exercised in our local

²¹ For example, in one historical incident, communications with fire stations was lost and volunteers were dispatched to provide communications there. (Similar to what was done in Puerto Rico.) In that historical incident, amateur radio frequencies were used, but now with more diverse equipment, at the discretion of the Emergency Manager/ESF2 additional possibilities exist. Personal communication, Craig Fugate, May 2021.

²² See: https://trac.floridadisaster.org/trac/CourseDetailPublic.aspx?mode=ModeEdit&ID=200&EventID=2826

area, however, past history includes the stationing of amateur radio operators at fire stations during extreme communications difficulties in Alachua County.

Neighborhood Volunteers.

In addition to possible deployments to locations, there are a number of potential Alachua County amateur radio operators in various neighborhoods who, although not officially badged, can provide important service communications to/from their neighborhood via VHF or HF communications, as part of the recognized Neighborhood Ham Watch²³ or just ad-hoc. These volunteers can organize FRS or other local communications in their own neighborhood when ordinary communications are not functional, and directly reach volunteers serving the Emergency Manager via our various local net communications.

From this experience, we have gained some hard-won knowledge that has been helpful to another NGO, the Florida Baptist Disaster Relief organization, and resulted in the publication of an online training series for their communications volunteers and a written text as well.

It is therefore possible that volunteers from our group may be called upon to serve in other groups or other capacities. In addition, the Emergency Manager may wish for members of our group to assist in other areas of communications, such as any of the vast array of important communications that would be damaged in the event of an EMP/CME, such as banking transactions.

<u>Concept of Operations</u>. In the catch-all grouping of volunteer efforts, trained volunteers who are approved and accepted by whichever group may be called upon to assist with NGO agency communications via voice or data, via amateur or via SHARES, via UHF/VHF or HF as appropriate. Repeater communications, assistance with tcp/ip microwave networking, power generation systems are also areas where several volunteers have experience.

<u>Assumptions</u>. Volunteers will make voluntary choices where best to serve, taking all factors into consideration, and governmental agencies or NGO agencies will make their own voluntary choices of whether to involve volunteers.

Activation.

- a. <u>Authority to Activate</u>. Via the authority in charge of the involved group.
- b. Occasions for Activation. As per the involved group.

Implementation.

Command and Control (C2).

Authorization to Secure.

²³ See Neighborhood HamWatch, page 8 of the NFL Communications plan, <u>https://archive.arrl-nfl.org/wp-content/uploads/2016/03/NFL-Section-Comm-Plan-FINAL-May-1-2016.pdf</u>

Redeployment/Recovery.

<u>Training and Exercise</u>. The training and exercises provided within the Alachua County ARES® and NFARC environments are designed to be wide ranging to cover a number of areas such as, but not limited to: FCC licensure advancement, electronics understanding, diagnostics, and repair; power systems for radios and emergency power; voice and data communications; HF, VHF, UHF and microwave communications; tcp/ip networking; microcomputers such as Arduino & Raspberry Pi; antennas and feedline; governmental communications systems at the local, state and federal level; NTS / RRI nets; Winlink and NBEMS systems; low signal systems such as FT8 and JS8; deployment considerations such as personal care, safety, water, food, fuel and transportation. Our Field Day experiences are a part as well as our LabNLunch sessions where hands-on building experiences are gained. Our Emergency Conferences provide opportunities for teaching and gaining experience. Our training and exercises are intentionally wide-ranging.

Hazard Specific Annex A

Hurricanes/Severe Storms

Our group has significant experience with hurricanes and severe storms and has been deployed in multiple instances due to expected damage to at-risk structures leading to opening of multiple shelters. As our County is located at a convenient "stopping point" for fleeing shortages leading to the need to open a large number of shelters to accommodate stranded motorists.

It is uncommon for Alachua County to experience very strong hurricane winds -- but not unknown at all!

The 1896 Cedar Keys Hurricane is one such example. Wikipedia reports:²⁴

The **1896 Cedar Keys hurricane** was a powerful and destructive tropical cyclone that devastated much of the East Coast of the United States, starting with Florida's Cedar Keys, near the end of September 1896. The storm's rapid movement allowed it to maintain much of its intensity after landfall and cause significant damage over a broad area; as a result, it became one of the costliest United States hurricanes at the time. The fourth tropical cyclone of the 1896 Atlantic hurricane season, it formed by September 22, likely from a tropical wave, before crossing the Caribbean Sea just south of the Greater Antilles. It entered the Gulf of Mexico as the equivalent of a major hurricane on the Saffir–Simpson scale , and struck the Cedar Keys—an offshore island chain that includes the island and city of Cedar Key—early on the morning of September 29 with winds of 125 mph (205 km/h). The area was inundated by a devastating 10.5 ft (3.2 m) storm surge that undermined buildings, washed out the connecting railroad to the mainland, and submerged the smaller, outlying islands, where 31 people were killed. Strong winds also destroyed many of the red cedar trees that played an important role in the economy of the region.

....

By several days after the hurricane, 12 people were reported dead across Alachua County.[10] Five of them were in High Springs,[58] including two seeking shelter in a box car that was blown off the tracks.[12] Four turpentine workers in LaCrosse were crushed to death when a fallen tree landed on their cabin, and three others in the town were killed. In Newberry, which was "totally wrecked",[12] three people died.[58] About 20 homes and businesses in Gainesville were ravaged,[12] as were a sawmill, church, and warehouse.[59]

In the realm of communications, our group anticipates that a Cat III level storm crossing our area would have very severe effects, possibly removing or completely overwhelming normal telecommunications, and very possibly damaging public service trunked communications, all power availability, and avenues for broadcast to the public.

²⁴ See: https://en.wikipedia.org/wiki/1896_Cedar_Keys_hurricane

Hazard Specific Annex B

Wildfire

Wildfire is a common issue in heavily forested northern Florida. Thankfully we have not seen the vast devastation of lands and communications facilities (towers, microwave, fiber, etc.) that has happened in western states²⁵. However, given the right circumstances, this is indeed possible in Florida as well and could significantly damage communications systems. In some western states, wildfires destroyed cell phone towers and new repeaters had to be urgently installed to allow firefighters to safely work in the area.²⁶

This is a particular risk for outlying communities with potentially reduced communications backups and margins. Therefore, our group has come up with some potential methods by which we can assist, at the direction of the Emergency Manager. Some of our groups are trained to assist the MARC unit, for example and can be activated for that purpose. Other volunteers have expertise in repeater configuration, repeater emplacement. We may also be able to augment the radio caches maintained if there were a shortage. In each of these cases, the Emergency Manager would be the decision maker on how best to deploy the existing professional and volunteer personnel available to meet the needs.

²⁵ One report indicated that 77 cell phone towers were destroyed. <u>https://www.cbsnews.com/news/california-wildfires-communication-issues/</u> The FirstNet is significantly dependent on cell phone communications.

²⁶ See: <u>https://www.kptv.com/news/how-firefighters-restored-communication-after-wildfire-destroyed-equipment-in-santiam-canyon/article_7912c26c-f711-11ea-b316-b7d1b1851117.html</u>

Hazard Specific Annex C

Cyber /Infrastructure Attack

At the time of this writing, the eastern seaboard of the United States of America has had 45% of its fuel transport capacity damaged by a cyber-attack on the Colonial pipeline. At this time, already 26 cities, counties or states have had significant cyber-attacks; hospitals are increasingly attacked as well. Cyberthreats can arise from state-supported or individual terrorist groups.

The Christmas 2020 suicide bombing of the AT&T offices in Nashville did enormous damage to the cell phone and other communications of AT&T; the host of the FirstNet system.²⁷ Over 60 emergency communications systems were affected²⁸.

Our local telecommunications could be severely affected including the fiber systems that provide much of the public service trunking systems.

Therefore, our group has worked to provide response strategies to all of these anticipated losses. As has been noted above, some of our members are trained on the MARC unit, and others have specific abilities with repeaters and other possible short-term ad-hoc systems. Historically, amateur radio has been utilized to help keep fire departments in communications when phone service was cut. The decision to utilize any of these possibilities rests with the Emergency Manager/Authority Having Jurisdiction.

²⁷_https://www.phonearena.com/news/blast-in-nashville-affects-at-t-customers_id129233_

²⁸ https://www.timesfreepress.com/news/local/story/2021/may/23/tennessee-board-details-impactchristmbombing/547395/

Hazard Specific Annex D

Civil Unrest

Civil unrest is particularly strong at the time of this writing, with multiple cities convulsed by ongoing violence including riots, arson and homicide. Shootings and homicides are up double to triple digits in many cities. As we have a highly educated population, it is possible that civil unrest could involve targeted attacks on communications infrastructure, some of which we judge is quite vulnerable. As a result, our group has formulated some strategies that volunteers could assist authorities in response, **if so requested**.

Hazard Specific Annex E

Electromagnetic Pulse/Coronal Mass Ejection (EMP/CME)

The risk of EMP/CME has been known to USA leaders since World War II and military systems are believed largely hardened, while civilian communications much less so. In 1988 a government agency planned to put an end to the concern of EMP damaging our telecommunications response capabilities²⁹. Apparently, they were not able to complete that project. The ARRL placed four significant articles in their literature to help prepare amateur radio operators for the possibility of an EMP³⁰.

Only a handful of states have taken any action to protect their power grid from significant transformer damage. Some efforts to provide backup transformers were recently carried out. In 2019, the Department of Homeland Security, National Coordinating Center for Communications, published Version 2.2 of their authoritative text on developing resilience in communications systems against EMP; publicly available information that any EOC or amateur radio group or operator can leverage³¹. Multiple discussions have been held during monthly lectures of the SHARES Interoperability Working Group, with hundreds of participants; significant (FOUO) communications systems have been piloted and/or developed within SHARES as a response. In 2020 DHS/CISA released a program update on the response to the EMP threat, and in that document, promised an interagency EMP-related Exercise to be held in 2021³². The State of Florida 2018 Enhanced State Hazard Mitigation Plan devoted 13 pages to describing the risk of the related hazard, Solar Weather, to the State³³.

In spite of the large federal and congressional awareness of the hazards of EMP/CME, there is comparatively little in the literature of amateur radio/ARES® addressing these risks. Harris Co. ARES® presents on their website a 2-page summary of protective actions that amateur radio operators can take³⁴. The ARRL, on their Lightning Protection web factsheet has taken note of their past recommendations for EMP protection³⁵. However, beyond those two limited presentations, we have been unable to find significant planning on the part of ARES® or ARRL groups to deal effectively with these issues, despite their 75-year history of scientific understanding.

We believe that it is important to address this issue squarely, however humbly and incompletely, since it is visible in almost all FEMA hazard lists, and DHS has established three concrete goals to address this hazard³⁶.

²⁹ https://apps.dtic.mil/dtic/tr/fulltext/u2/a206952.pdf

³⁰ See: https://qsl.net/kx4z/QST-Electromagnetic Pulse and the Radio Amateur.pdf

³¹ See: <u>https://www.cisa.gov/sites/default/files/publications/19_0307_CISA_EMP-Protection-Resilience-</u> <u>Guidelines.pdf</u> The SHARES program of which Alachua County is a licensee, is a part of the CISA/DHS.

³² https://www.cisa.gov/sites/default/files/publications/emp-program-status-report_508.pdf

³³ See: <u>https://www.floridadisaster.org/contentassets/c6a7ead876b1439caad3b38f7122d334/shmp-2018-full-02-23-2018.pdf</u>

³⁴ See: https://harriscountyares.org/training/KNW/KNW-131.pdf

³⁵ See: http://www.arrl.org/lightning-protection

³⁶ See: https://www.dhs.gov/sites/default/files/publications/18_1009_EMP_GMD_Strategy-Non-Embargoed.pdf

Several of our members have significant knowledge in this area from extensive reading, planning, and writing. It is known that older technologies for communication are relatively hardened against EMP, and CME power losses can be planned for.

In the event of a CME, it is expected that there would be widespread power losses in Alachua County, leading to telecommunications failures, and failures of delivery of food, water, fuel and lubricants. Much of this is beyond the scope of our communications group, but we can assist if requested, with providing or reconstituting backup communications to shelters, and potentially to public service systems.

In the event of an EMP attack, more extensive damage from the E1 and E2 components are expected. Congressional research has suggested that much of the telecommunications system could be destroyed, much of the power system irrevocably destroyed, and widespread societal dissolution might occur. Our communication group focuses on relatively straightforward efforts that can significantly increase the sustainability of our members and possible methods by which we can, if requested by the Emergency Manager or AHJ, to assist with maintaining some form of public service communications. The experience of Katrina suggests that this is an important goal³⁷.

37 See: https://www.qsl.net/nf4rc/KatrinaComms.pdf

Appendix A

Authorities and References

https://www.fema.gov/sites/default/files/2020-07/fema_ESF_2_Communications.pdf

https://www.fema.gov/sites/default/files/2020-07/fema_ESF_13_Public-Safety-Security.pdf

https://www.floridadisaster.org/globalassets/cemp/2020-cemp/2020-state-cemp.pdf

<u>https://www.floridadisaster.org/globalassets/importedpdfs/state-logistics-plan---cover-preface-and-exec-summary-2015.pdf</u>

https://www.qsl.net/nf4rc/

https://www.cisa.gov/publication/fog-documents

https://www.cisa.gov/sites/default/files/publications/PTE%20FOG%20Best%20Practices_Draft_ FINAL.pdf

https://www.qsl.net/ws1sm/AUXFOG.pdf

https://www.fema.gov/sites/default/files/2020-05/CPG_101_V2_30NOV2010_FINAL_508.pdf

https://www.dms.myflorida.com/business_operations/telecommunications/suncom2/emergency_ support_function_communications_esf_2

https://www.floridadisaster.org/sert/esf/

https://members.tripod.com/florida state dcat/

https://www.cisa.gov/sites/default/files/publications/CISA%20SCSI%20101%20Factsheet_10.22 .19%20-%20FINAL%20%28508c%20%2B%20OGC%29.pdf

http://www.osceolacountyares.org

https://qsl.net/nf4rc/StateVolunteerRequirements.pdf

https://www.fdle.state.fl.us/Background-Checks/VECHS-FAQs/Definitions.aspx

https://www.myflfamilies.com/service-programs/backgroundscreening/docs/SCREENINGbyCHAPTER.pdf

https://ahca.myflorida.com/Executive/Inspector General/Internal_Audit/docs/FY2017-2018/AHCA-1617-02-AEmployeeBackgroundScreeningProcess.pdf

http://leg.state.fl.us/statutes/index.cfm?mode=View

Statutes&SubMenu=1&App_mode=Display_Statute&Search_String=110-1127&URL=0100-0199/0110/Sections/0110.1127.html

http://www.leg.state.fl.us/Statutes/index.cfm?App_mode=Display_Statute&URL=0400-0499/0435/0435.html

Confidentiality requirements of SHARES:

See: https://www.cisa.gov/sites/default/files/publications/SHARES Form 1.pdf

The ARRL ARES(R) Strategic Plan: <u>http://www.arrl.org/files/file/Public Service/ARES/ARES Strategic</u> <u>Plan - final - PSC.pdf</u>

Appendix B

List of Acronyms and Glossary

Item	Explanation				
ARES®	Amateur Radio Emergency Service, a program of the American Radio Relay League				
ARRL	American Radio Relay League, a non-profit organization devoted to the hobby of Amateur Radio				
ACAV	Alachua County ARES Volunteers. A subset of the North Florida Amateur Radio Club.				
EMP	Electromagnetic Pulse, a very high power and short-duration pulse of radio energy generated by a high-altitude nuclear explosion that causes significant damage to communications and power transmission equipment.				
CME	Coronal Mass Eruption. An ejection of material from the Sun that upon reaching the magnetic field of the Earth, causes significant magnetic line of force changes that have potentially dire consequences for long distance grid transmission lines and transformers.				
NIMS	The National Incident Management System (NIMS) provided by the U.S. Department of Homeland Security.				

Appendix C: Default ICS-205 for Volunteer Operations [be alert for announcements of changes]

Incident Radio	Communications	Plan (1	ICS 205))
		•		

1. Incident Name:				2. Date/Time Prepared:			3. Ope	3. Operational Period:		
Default Alachua County ARES(R)			Date:			Date Fr	Date From: Date To:			
			Time:			Time F	Time From: 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
		Tactical	K4GNV820 Rptr	Amateur	146.820W	123	146.220W	123	А	Primary/Command Net
		Tactical	K4GNV685 Rptr	Amateur	146.685W	123	146.085W	123	Α	Secondary Repeater
		Tactical	82RptrOut	Amateur	146.820W	N/A	146.820W	N/A	A	Simplex (if repeaters unavailable)
		Tactical	2M 146.490 Simplx	Amateur	146.490W	N/A	146.490W	N/A	А	Simplex Local Comms - 1
		Logistical	HF Winlink	Amateur	TBD	N/A	TBD	N/A	D	Frequencies per software
		Logistical	VHF Winlink	Amateur	146.070	N/A	146.070	N/A	D	Local AX.25 Gateways/Digi
		Logistical	VHF Winlink	Amateur	146.030	N/A	146.030	N/A	D	Local AX.25 Gateways/Digi
		Tactical	N FL Ares Net	Amateur	3.950LSB	N/A	3.950LSB	N/A	Α	North Florida ARES net
		Tactical	SE Regional SHARES	SHARES	As publ.	N/A	As publ.	N/A	А	SHARES comms
5. Special Instructions: (a) Refer to local VHF packet maps to understand gateways, locations, digipeaters. See: <u>https://www.qsl.net/nf4rc/</u>										
. Prep	Prepared by (Communications Unit Leader): Name: Signature:									
CS 20	5		IAP Page		Date/Time: May 25 2021					