



J U N E N F 4 A C M E E T I N G

# Something Bad Happened in Alachua County

TTX to Prepare for a COMMS Down Disaster

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## ★ Presentation Outline

1. Guidelines
2. Objectives
3. Facilitator's Background
4. Scenario
5. Activation
6. COMMS Concepts
7. The Circuits
8. Volunteers
9. MARC Units
10. Summary



## ★ Guidelines

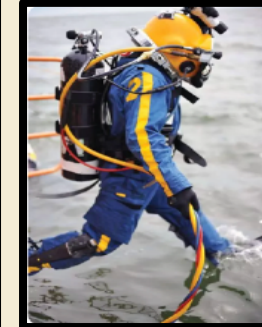
I will walk us through a tabletop exercise (TTX). This exercise should be viewed as an interactive discussion.

This is a learning environment, it is not a test.

Nothing discussed is binding, meaning, if you said that you would be able to do something today, it does not necessarily mean you will be able to volunteer at any given time.



## ★ Brett's Bio



I realize this presentation is NOT about me. I do think it might be helpful to understand where I'm coming from and how that shaped my understanding of radio communications and priorities: **28 years in the field of disaster preparedness and emergency management**

**Military:** 23 years Navy Special Operations. 7 years Deep Sea (hard hat) diver, 16 years EOD (Naval Parachutist and Diver). SME in CBRNe/WMD response, Anti/Counterterrorism, Weapons Technical Intelligence, and tactical communications. Combat tours in Iraq ('05/'06, Bronze Star Medal) and Afghanistan ('07).

**Government Civilian/Contractor:** 12 years in Disaster Preparedness and Emergency Management. 5 years Emergency Manager (GS-12), US Naval Hospital Guam. 7 years contract EM SME/Training & Exercise Coordinator, US Naval Bureau of Medicine and Surgery. BS Health Science, Certificate in Disaster & Emergency Management.

**Current:** Owner, **PACE Resiliency Training and Consulting, LLC**. Adjunct Faculty, Defense Medical Readiness Training Institute — teaching Public Health Emergency Management courses at Joint Base San Antonio and Uniformed Health Service University. Chairman Alachua Co.unity COAD/LTRG, President, Alachua County AUXCOM, NF4AC.



## ✦ Scenario

Something very bad happened in Alachua County (AC). We are not going to focus on what caused the problem, we are going to focus on the consequence management.

**We need to get accountability of all of our members and find out:**

1. How they are doing, and
2. How they can help (or if they need help).

**We need to staff the following positions for 48 hours:**

- The EOC with 2x personnel
- 3x shelters
- A Net Control Station (NCS) from one person's home

- We are also interested in finding out how many members will be able to operate a Local Helper Station (LHS)



## ★ Activation

**Any amateur who suspects a communications emergency exists, should monitor the primary command net repeater (see attached ICS-205) and/or other digital beacon/bulletin system, and utilize any remaining working communications medium (e.g. telephone, Internet) to make inquiries.**

### **No notice COMMS Blackout (worst case)**

**EMP/ Extreme Failures.** In certain very specific disasters, normal communications including many modern communications, may fail. **In this case, local amateurs may find directions being given by the Emergency Manager or their delegee over extant older vacuum tube voice equipment, on the specific frequency listed in the ICS-205 for such activations. These messages should be relayed as appropriate through local simplex or repeater frequencies, particularly those on the ICS-205**

### **Planned Activations (e.g. hurricane)**



## ★ Activation

### Who is being “Activated?”

Those willing to server the Alachua County Department of Emergency Management

**Badged volunteers** of Alachua County, as well as potentially for member of the Alachua County component of the Amateur Radio Emergency Services (**ARES**), who are *organized under a county-based Emergency Coordinator* and his/her Assistants and also for other licensed amateur radio volunteers who are not already integrated into either of the above groups.



## ★ Activation

### Planned Activations (e.g. hurricane)

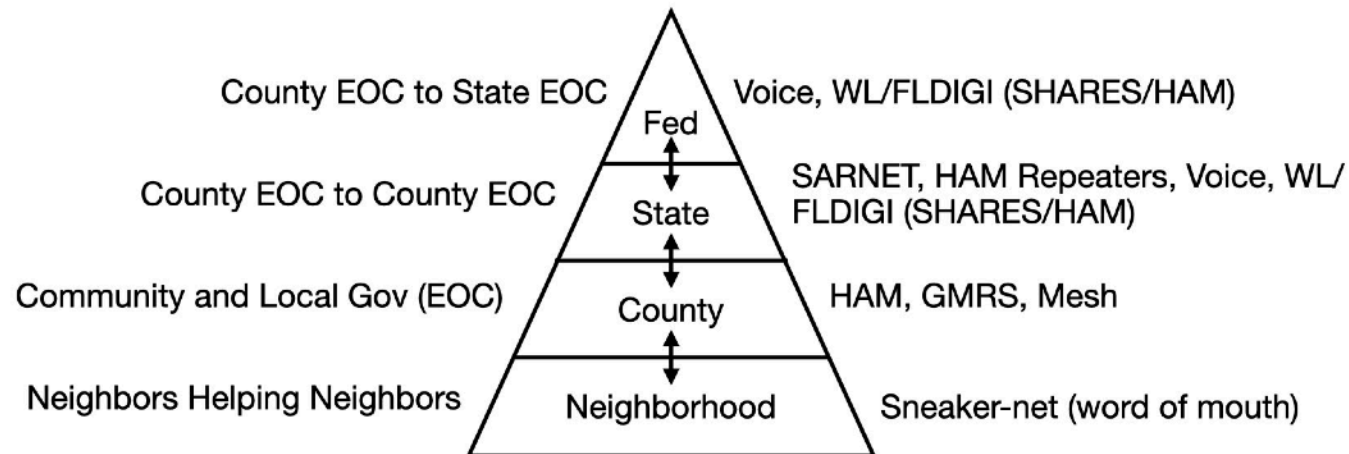
|   | Technique                                                                 | Comment / Actions                                                                                              |
|---|---------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| 1 | Everbridge Telephone Message Delivery                                     | Expect messages if this system still in operation, which may direct you to check email or WINLINK email.       |
| 2 | Primary Command Net (VHF Voice repeater or simplex locally) (SEE ICS-205) | Make inquiries, join existing net, or if indicated initiate formal/informal net                                |
| 3 | Local WINLINK Gateways<br>SEE WINLINK SOFTWARE                            | Observe SIGNON MESSAGE for possible bulletin<br>Download email to potentially find directions from authorities |
| 4 | Winlink Radio Only<br>SEE WINLINK SOFTWARE                                | Additional information may be sent via WINLINK radio-only in extreme situations                                |





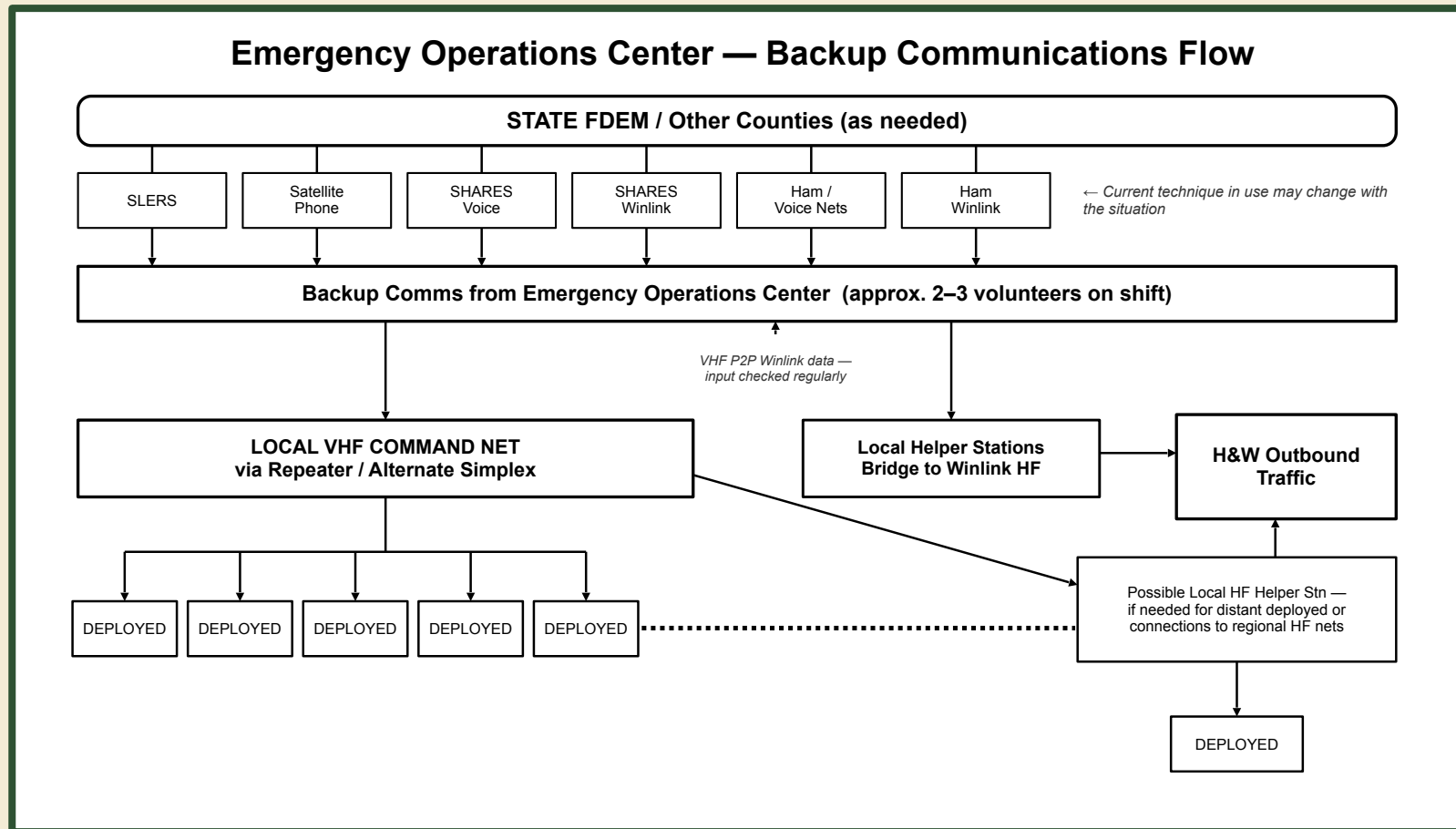
# ★ COMMS Concepts The Flow of Traffic

## Emergency Communications (Grid-down)





## ✦ COMMS Concepts (Layers)





## ★ COMMS Concepts (Concentric Circles)

Another way to describe this:

The government comms is the first circle; the AC EOC is the center. It expands to the county activated shelters (or other locations where they activate us), the MARC units, the surrounding county EOCs (we do monthly comm checks with them), the state EOC, the SHARES SE Region, and finally to the SHARES National Net (we do weekly comm checks with SHARES). The folks working in this circle are badged. Additionally, a net control station (NCS) operates from their home to be a bridge with the outside amateur stations, the shelters, and the EOC. This person does not have to be badged.



## ★ COMMS Concepts (Concentric Circles)

The second circle is the AC Rural Net. These volunteers report to rural fire stations every month and perform a comm check that includes VHF repeaters and SIMPLEX. They do not need to be badged. These folks may also be used to collect health and welfare messages.

The third circle is everyone else who shows up on the net that would like to help and share information.



# ★ The Circuits, How Do We Communicate

“The right tool for the right job.”

What is  
our job?

Just a review:

Winlink (HF, VARA, FM, AX.25)

SHARES

SLERS

A.L.E.

FLDIGI/JS8 Call

Voice

CW

“More tools for the job.”

Sat Phones (EOC)

Starlink

Portable Mobile Cell System

D-Star

System Fusion

Zello

EchoLink

MeshTastic



## ✦ More Volunteers?

What ideas do you have for us to get more volunteers?



## ★ Name to Task

| POSITION                        | WHAT YOU WOULD DO                                             | NEEDS    | VOLUNTEER |
|---------------------------------|---------------------------------------------------------------|----------|-----------|
| <b>EOC operators (NF4AC)</b>    | Run the county radio room — voice nets + Winlink into NF4AC.  | Badged   |           |
| <b>EOC operators (NF4AC)</b>    | Run the county radio room — voice nets + Winlink into NF4AC.  | Badged   |           |
| <b>Shelter #1 operator</b>      | Staff an ID-4100; pass shelter counts & needs to the EOC.     | Badged   |           |
| <b>Shelter #2 operator</b>      | Staff an ID-4100; pass shelter counts & needs to the EOC.     | Badged   |           |
| <b>Shelter #3 operator</b>      | Staff an ID-4100; pass shelter counts & needs to the EOC.     | Badged   |           |
| <b>VHF net control (home)</b>   | Run the net so the EOC isn't also net control.                | VHF      |           |
| <b>HF net control (home)</b>    | Out-of-county reach-back when VHF is saturated.               | HF + VHF |           |
| <b>POD site #1</b>              | Point of Distribution — supply/throughput reports to the EOC. | Badged   |           |
| <b>POD site #2</b>              | Point of Distribution — supply/throughput reports to the EOC. | Badged   |           |
| <b>Rural fire-station relay</b> | Bridge GMRS/mesh from cut-off areas (Cross Creek, Earlton).   | Helpful  |           |
| <b>Rural fire-station relay</b> | Bridge GMRS/mesh from cut-off areas (Cross Creek, Earlton).   | Helpful  |           |
| <b>Rural fire-station relay</b> | Bridge GMRS/mesh from cut-off areas (Cross Creek, Earlton).   | Helpful  |           |
| <b>Winlink H&amp;W site #2</b>  | Collect & forward health-and-welfare traffic via Winlink.     | Helpful  |           |



## ★ Individual and Family Preparedness

**3.14. Suggested Family Preparation.** Many of our volunteers have family commitments that influence their availability for service. There will always be immediate circumstances (such as a family member immediately post-surgery) that will change our availability. In the Hurricane Ian (2022) experience, depending on your denominator, we had an availability in the 36-41% range. To provide for possible service, we suggest attention to various provisions.

|                          | Item                                                                                          | Comment                                                                                                                     |
|--------------------------|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> | Be aware of your NEIGHBORS who may be of help to your family.                                 | They may have space, power generation, skills that may help your family.                                                    |
| <input type="checkbox"/> | FRS or GMRS may assist you in communicating with neighbors in communications / power outages. | There is a possibility of a county-wide GMRS repeater. Note that GMRS requires a family-level license; no test, but a cost. |
| <input type="checkbox"/> | Consider integrating your spouse with                                                         | Increase the possible pool of support.                                                                                      |





# ★ MARC Units

## MARC3 capabilities -

### **Public safety communications**

100ft crank up tower  
10kw diesel generator  
100w VHF repeater (NIFOG)  
100w UHF repeater (NIFOG)  
100w 700/800 repeater (NIFOG)  
Portable radios cache - qty 76 APX8000 all band  
Mobile radio cache - qty 10 Kenwood all band  
Various antennas and accessories to make it all work  
JPS Z2 radio bridge for linking disparate radio systems via ROIP/VOIP  
JPS ACU-M radio bridge (qty 2) for linking disparate radio systems  
Starlink standard terminal  
Starlink flat panel high performance terminal

### **SHARES NNA4UJ**

Codan Envoy HF radio with deployable broadband antenna and 33ft BlueSky mast (SHARES)  
Pactor4 Modem (SHARES)

### **AUXCOM KR4KUR (Alachua County Public Safety Professionals ARC)**

Kenwood TS480 200w HF radio (AUXCOM) with Pactor4 and Signalink modems, antenna tuner  
Yaesu FT-8900R UHF/VHF/6m/10m

## MARC SFM Coordinator capabilities

### **Public safety communications**

Portable radio cache - qty 4 APX8000 all band  
JPS MCC4 radio 4 channel console for linking disparate radio systems via ROIP/VOIP  
Starlink flat panel high performance terminal

### **SHARES NNA4UT**

Codan Envoy HF radio with deployable broadband antenna and 33ft mast (SHARES)  
Pactor4 Modem (SHARES/AUXCOM)

### **AUXCOM currently using my personal KE4NVI (Working on obtaining another club call)**

Anytone AT-578UV pro DMR UHF/VHF (AUXCOM)



### **Kevin D. Rulapaugh**

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## ★ Summary

This TTX walked through Alachua County's COMMS-down activation from first notice to task assignment:

**Scenario** — A major event disrupts all normal communications in AC. Primary mission: account for all members and staff the EOC, three shelters, and a Net Control Station for 48 hours.

**Activation** — Monitor the primary command net repeater. Look for Everbridge notices and monitor the VHF frequencies in accordance with the PACE plan. Procedures differ for no-notice blackouts (including EMP scenarios) vs. planned events like hurricanes.

**Who Activates** — Badged AC DEM volunteers and ARES members willing to serve.

**COMMS Concepts** — Traffic flows outward in concentric circles: Gov/EOC at center → AC Rural Net → general volunteer net. Multiple layers provide redundancy.

**Circuits** — Winlink, SHARES, SLERS, ALE, FLDIGI/JS8, voice, CW; plus Sat phones, Starlink, D-Star, Meshtastic, and others as available.

**Name to Task** — Specific volunteers assigned to specific positions to ensure coverage.

**Key Takeaway** — Preparedness is not just gear. Know your role, your circuit, and your team before the event.



# + Questions