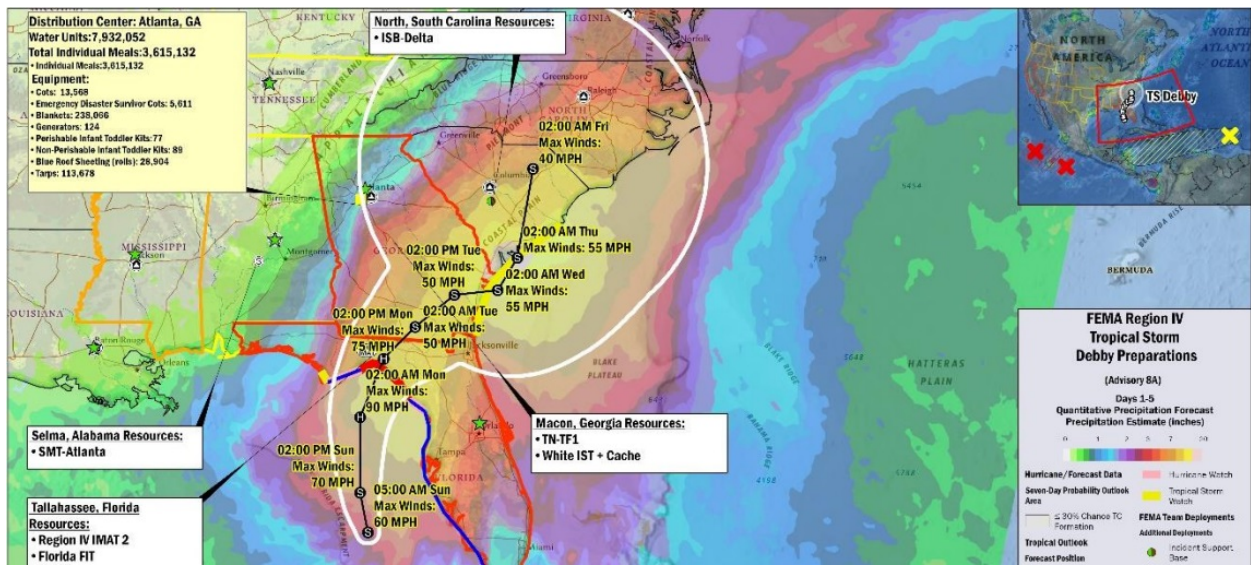


# Alachua County AUXCOMM Volunteers Response to Hurricane Debby August 4/5, 2024

Approved August 13 2024



FEMA Advisory, Sunday August 4 2024

# After Action Report/Improvement Plan

## **HANDLING INSTRUCTIONS**

Points of Contact:

**Alachua County AUXCOMM Volunteers:**

Name: Jeff Capehart  
Emergency Coordinator  
FCC License: W4UFL

Name: Gordon Gibby MD, Asst. Emergency Coordinator  
FCC License: KX4Z  
SHARES License: NCS521, NND4FL

### **Acknowledgment**

*This document borrows heavily from the excellent AARIP for Nicole/Ian  
that was written by Brett Wallace, NH2KW.*

**APPROVED VERSION**

## CONTENTS

Administrative Handling Instructions.....	ii
Contents.....	iii
Executive Summary.....	1
Section 1: Response Overview.....	3
Section 2: Planning Summary.....	5
Section 3: Timeline and Events.....	6
Section 4: Analysis of Objectives/Results.....	13
Section 5: Conclusion.....	16
Appendix A: Improvement Plan.....	17
Appendix B: Hotwash Documentation.....	21

## EXECUTIVE SUMMARY

Hurricane Debby was a Tropical Storm expected to intensify quickly in the hot waters of the Gulf and it headed for the Big Bend area of Florida on Saturday, August 3 2024. Alachua County ARES(R) volunteers were given confidential planning information to prepare for shelter operations on Sunday August 4.

Behind-the-scenes, six deployment-capable volunteers were located quickly, and additional at-home volunteers also arranged. Deployment occurred on Sunday August 4 at 2 PM and continued until mid-afternoon Monday August 5, 2024. Thankfully the impact of the now-Hurricane Debby on Alachua County was primarily rain, limbs and trees down, and several tens of thousands of temporary electricity outages.

We tried out two new approaches to backup communications during this Incident: (1) inviting all local amateur radio operators to contribute frequent situation reports, including involving The Gainesville Amateur Radio Society managing an HF net, and (2) our first attempt at capturing digital Field Situation Reports in a GIS-mappable database. We experienced very significant success in both, with some challenges. There were 32 additional reporters beyond our eight volunteers; the Gainesville Amateur Radio Society significantly participated in the Response, and we obtained our very first map of structured Field Situation Reports. We anticipate this capability growing and becoming more useful.

Our volunteers carried out their assignments quite well and multiple advancements and issues were handled. Three shelters maintained radio communications with the EOC and the EOC maintained potential radio communications with the Florida Department of Emergency Management (FDEM) and surrounding counties prior to, during, and following the approach of the hurricane.

An estimate of the total volunteer hours was as much as 165.<sup>1</sup> If valued at \$20/hr and at an 8:1 match, this would result in approximately \$24,000 benefit for Alachua County. .

### Major Strengths

- Notification from the Emergency Manager's office was timely and significantly in advance of deployment (28 hours)
- Delivery of go-boxes was excellent
- Return of go-boxes did not require our team to handle; all taken care of
- Communication amongst team members (in planning and preparation) was noted as a major strength.
- Voice and data lines of radio communication were maintained continuously through the storm.

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<sup>1</sup> Unclear whether "sleeping hours" can be counted.

- Activated 8 badged volunteers for the hurricane
- Staffed the EOC with 1 team-member.
- Staffed 3 shelters with 1-2 team-members at each location for the hurricane
- Operated net control from a remote location which reduced the burden on the EOC team.
- Greatly increased data input from county amateur radio operators outside of normal volunteer group!
- First operational testing of GIS-mappable WINLINK Field Situation Reports.
- First in-deployment addition of digital access wiring to existing county-owned Go-Boxes.
- Successful usage of previously developed pre-signed (bitmap) ICS-214s for volunteer effort reporting.
- Successful sign-out and deployment of LiFePO4 charged batteries
- Volunteer assist with deployment of STARLINK, and recognition of its shortcomings in a wind-related disaster
- First testing of GMRS local repeaters demonstrated excellent coverage, spanning most or all of the county

## **Primary Areas for Improvement**

- Identified that we do not have an adequate mechanism for provision of Signalink computer-interface equipment with Go-Boxes
- Significant difficulties with radio frequency interference between digital and voice radio systems at the EOC that was previously thought to be conquered.
- Significant difficulties with "looping" digipeater issues between NF4RC-7 and the EOC NF4AC (operating in peer to peer mode), that did not seem to occur with local VARA-FM RMS stations (not operating in peer to peer mode)
- Some training issues on using radios.
- There were quite extensive amateur radio infrastructure failures or losses during or related to this Incident.

## SECTION 1: RESPONSE OVERVIEW

<b>Response Name</b>	Hurricane Debby 2024
<b>Response Dates</b>	August 4/5 2024
<b>Scope</b>	The storms affected multiple jurisdictions. The scope of this AAR/IP is focused on Alachua County AUXCOMM Volunteer response.
<b>Mission Area(s)</b>	Response
<b>Core Capabilities</b>	Operational Communication, <sup>2</sup> Planning, Information Sharing, Public Information, and Community Resilience <sup>3</sup>
<b>Objectives</b>	<ol style="list-style-type: none"><li>1. Safety of volunteers and community</li><li>2. Property safety</li><li>3. Backup communications</li><li>4. Practice communications protocols including Field Situation Report<sup>4</sup></li></ol>
<b>Threat or Hazard</b>	High winds, flooding
<b>Scenario</b>	Category 1 Hurricane
<b>Sponsor</b>	Mother Nature
<b>Participating Organizations</b>	DHS/FEMA, Florida DEM, Alachua County Office of Emergency Management, North Florida ARES®, Alachua County ARES®, Volunteers.
<b>Point of Contact</b>	Gordon Gibby, MD, KX4Z, docvacuumtubes@gmail.com

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2 [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_2_Communications.pdf)

3 <https://www.fema.gov/emergency-managers/national-preparedness/mission-core-capabilities>

4 Taken from a hastily written ICS-201 Briefing that served as the IAP, written on Sunday August 4th morning by Gordon Gibby and circulated by email to the deployment volunteers.

## **Disaster Planning Team**

Jeff Capehart W4UFL  
Gordon L. Gibby KX4Z  
Leland Gallup AA3YB  
David Huckstep W4JIR

### **Active Volunteers**

Leland Gallup AA3YB- Alachua County EOC (ESF #2)  
Gordon L. Gibby KX4Z- Easton-Newberry Shelter (ESF#6)  
David Huckstep W4JIR- Alachua County Net Control Station  
Susan Halbert KG4VWI- MLK Shelter (ESF#6)  
(Assisted by Rosemary Jones KI4QBZ ESF#6)  
Eric Please KO4ZSD- Senior Center (ESF #6)  
(Assisted by Dean Covey KV4RL ESF#6)  
Jeff Capehart W4UFL- In Reserve<sup>5</sup>  
Earl McDow K4ZSW - Backup VHF Net Control

A large number of ad-hoc community ham radio operators who made reports into our response.

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<sup>5</sup> Down with a communicable viral illness

## SECTION 2: DISASTER RESPONSE PLAN DESIGN SUMMARY

### Disaster Response Plan Purpose and Design

The purpose of the Alachua County AUXCOMM Volunteers is to support the Alachua County Office of Emergency Management by providing auxiliary communication in the event that phone and internet communications are interrupted.

### The Incident Action Plan (IAP):

Our team maintains a consensus-developed Communications Plan, which can be reviewed at: <https://www.nf4rc.club/comms-plan-2/>. A simple IAP was created as an ICS-201 Briefing Document combined with an ICS-205 Frequency document and circulated the morning of August 4th to potential volunteers. This can be reviewed at: <https://www.nf4rc.club/2024-hurricane-debby-iap/>

### Incident Command System / Leadership

The Alachua County AUXCOMM Volunteers are task organized under the Emergency Support Function #2 (Communications<sup>6</sup>).

Jeff Capehart is the Emergency Coordinator. Gordon Gibby created the IAP. Leland Gallup provided staffing for the EOC radio room during Hurricane Debby.

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6 <https://www.fema.gov/pdf/emergency/nrf/nrf-esf-intro.pdf>



### SECTION 3: TIMELINE AND EVENTS

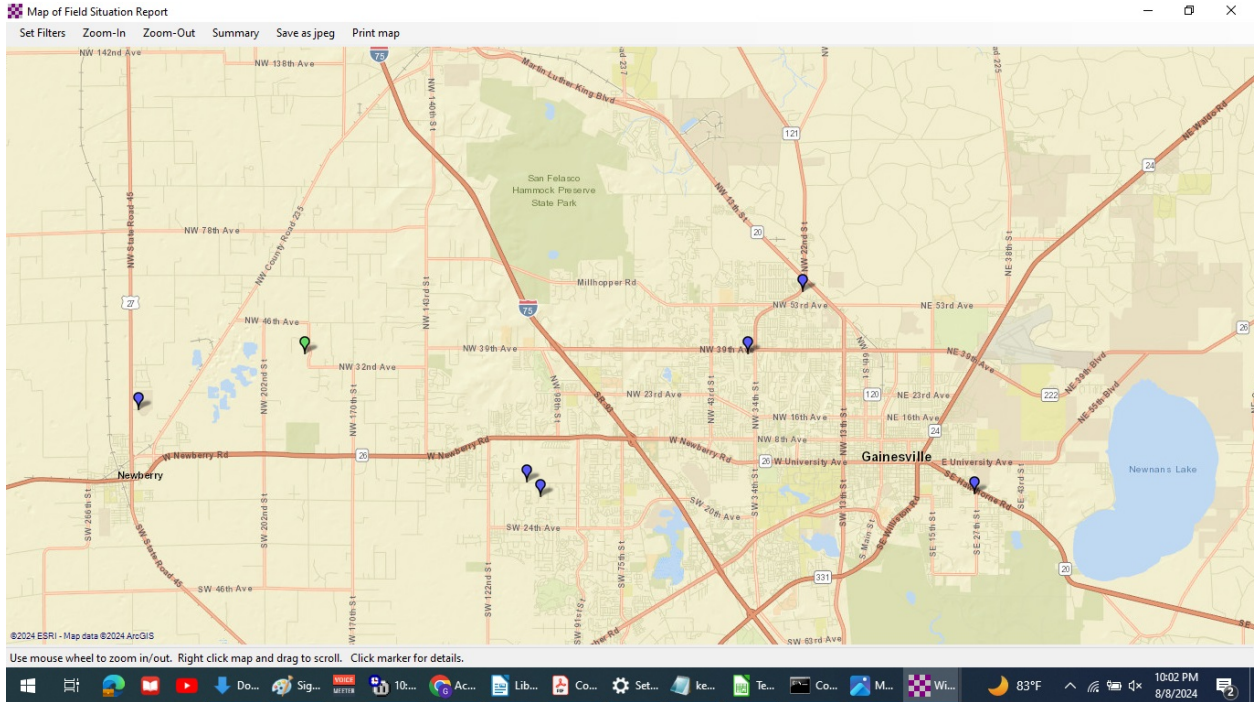
TIME (DATE)	EVENT	COMMENT
<b>SATURDAY</b> <b>Aug 3 2024</b> ~10 AM	EOC Francine notifies Gordon Gibby of shelter opening tentatively 2 PM Sunday	Confidential information; Gordon was in Lake City at Columbia County ARES(R) meeting
12 Noon	Texting/phone calls to begin locating potential volunteers  Posting on groups.io (intentionally vague) to obtain volunteers	Volunteers begin to announce availability
Afternoon/Evening	Planning for staffing Communications to GARS leadership to attempt HF net	Volunteers needed to make their own individual arrangements for home safety, family safety, etc.  Mannish is going out of town, unavailable. Brett is already out of town, unavailable. Jeff is ill David H. is out of town and hurrying to get back to serve Several other volunteers indicate availability.
Afternoon/evening	Earl McDow is labeling the digital cables for installation on go box radios.	See appendix of Comms Plan for wiring information
8 PM	Announcements on VHF net without disclosing confidential information	Helped to firm up volunteers
9 PM	Recognition that Gordon did not solidify with Francine how radios would be delivered.	
10 PM	Simple list of items to consider taking on deployment sent out	A 2 m radio with coax to connect up to the wall connector, and a battery in case the power goes out, and a power supply if it doesn't.

		<p>An extension cord and some thing that will allow you to have several outlets from just one</p> <p>Your own signal link and associated cables including a cable to your computer which you also need to take— you’re going to try to connect up to the shelter radio with the cables that we all built. Try to pick those up from Earl or whoever has them</p> <p>An SWR meter or antenna analyzer would be a very wise item</p> <p>Some copies of ICS 214.</p> <p>Some blank paper</p> <p>Pens or pencils</p> <p>A copy of our ICS Dash 205 which is page 24 of the com plan</p> <p>Simple tool kit including a voltmeter</p> <p>Comfort food. Comfort beverages non-alcoholic Please leave weapons in your car, locked! All medication’s that you might need for 48 hours</p> <p>At least a flashlight and some batteries</p> <p>If you need them, Eye shades</p> <p>Bedding material including a pad of some sort. Pillow.</p> <p>A jacket is a really bright move because some of these places can be cold.</p> <p>Rain gear or umbrella would probably be smart</p>
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		<p>A couple changes of clothes and toilet paper</p> <p>Whatever will keep you occupied during the boring times, that could be a project you're working on or a book to study or maybe you want to practice Morse code?</p> <p>It's always smart to have one roll of toilet paper!!! Don't forget your cell phone charger and some way to charge from your 12 V battery!</p> <p>Some cash &amp; change</p> <p>I will be taking my VHF go kit and probably also my HF go kit and a short HF antenna with a 9 to 1 Balun . I'm trying to figure out whether I want to take a small mast and a roll-on support. Not sure I can get that done....</p> <p>You may want to take a small cart or some thing that you can stick all this in!!</p>
10 PM	Earl has 6 digital wiring sets labeled and offers to deliver as needed.	
<b>SUNDAY Aug 4</b> 0700	Gordon makes trip to EOC to remove unnecessary computers and grab a battery; sees Emergency Manager and gives brief update.	
0800	During return trip Gordon reaches Francine to verify radio delivery	Turns out the Senior Center was going to be skipped -- this is rectified.
0900	Gordon creates and sends out an ICS-201 / 205 as an IAP to team members, including two leadership from GARS and	Unfortunately, he forgets to include everyone: misses Eric Pleace

	Reid Tillery	
1400	All volunteers arrive at shelter locations	
1500	First VHF net is held	First Field Status Report sent at 1556 from Easton-Newberry
1600	Additional net session, large number of additional ham reports gathered.	
Hourly	Additional nets are held	
1900	@ Easton-Newberry, discussions on how to make Mobile Broadband Kit (MBK) system function best	We have a page on this device: <a href="https://www.nf4rc.club/how-to-docs/county-ares-docs/mobile-broadband-kit-introduction/">https://www.nf4rc.club/how-to-docs/county-ares-docs/mobile-broadband-kit-introduction/</a>
2000	@ Easton Newberry, assisting IT in successful deployment of STARLINK	Unfortunately, it is deemed vulnerable to both theft and WIND damage, so stowed and brought back inside.
Overnight	Easton-Newberry goes on generator for some period. Fire alarms go off at MLK center.	Fire Rescue cannot find exact cause of fire alarm. Work continues on that.
0800	Multiple FSR are being sent, but there are significant problems with NF4AC peer to peer reception.  Waldo EOC is having generator problems.	
0900	ATT at Easton is described as "flaky" P2P is working again at EOC, but there are issues with "looping" Generator issue at Waldo is solved. Neither Waldo or Sr Center have digital capability; a nearby ham is assisting Waldo Windsor K9RTA reports multiple trees down, blocking several road, pine tree on power lines. Windsor GMRS is functioning fine.	

	High Spring WB2FKO - no power K9RFT - Melrose - no power KQ4ICI 39th/34th no power	
1000	Multiple people attempting P2P, without listen before transmit, there are packet collisions W4DFU-12 is functioning fine.  K9RFT (Melrose) has repaired GMRS antenna and extremely successful GMRS repeater contact easily accomplished from Melrose to Easton-Newberry (almost the width of the county) with full quieting, strong signals. Repeater channel 15/23  EOC sends out reports received so far to KX4Z for off site processing.	First attempt at off site GIS Map appears to be missing some stations?
1100-	Discussions on how to file ICS-214 documents for financial documentation	Portions of our group have their "bitmap signed" word-documents and are able to file their reports at the Alachua county EOT page.  Web site nf4rc.club is used to provide explanations of how to do so.
1400-1500	Stations are released, equipment is stowed.	
<b>THURSDAY August 8 1900</b>	Full Hotwash Zoom session held.  Large number of comments received (see Appendix)	Recreation of GIS mappable Field Situation reports shows several reports, but still seems to be missing others. see below.



**MAP CONSTRUCTED DURING HOTWASH FROM REPORTS  
PROVIDED OVER THE AIR DURING THE EVENT FROM  
NF4AC TO KX4Z**

## Amateur Radio Infrastructure Failures

No.	Item	Comment
1	K4ZSW packet RMS final amplifier failed, indeterminate time	Made station basically unusable due to low power output
2	K9RFT GMRS antenna malfunction	Until corrected, made GMRS repeater connections from Melrose unusable.
3	Waldo EOC generator issue	Corrected during event
4	EOC - NF4RC-7 looping events	Made delivery of P2P reports difficult
5	EOC digital/voice interference	Determined that low-power voice does not inhibit data connections to NF4RC-7, but the duplexer rejection is surprisingly poorer for 146.220 than it is for 146.550; unknown reason at present.
6	KX4Z failure in analog power supply or radio for SHARES station NND4FL	This appears to have blown a fuse or otherwise damaged the internet-controlled power system, which completely downed ham station KX4Z also.  This was not detected until well after the event due to operator being deployed to shelter.
7	KX4Z-12 destructive failure of battery in Evolve III computer, unknown time, before or during Hurricane	Although the radio and computer appeared to still function, the keyboard was damaged beyond use and the system was at risk of fire. This was not detected until close observation post Hurricane
8	Loss of KX4Z HF antenna	Wire parted high in tree; however, radio lost all power due to SHARES station excessive current draw.
9	Loss of KX4Z Internet <sup>7</sup>	Some event caused the Cox router to fail; the cause of the failure was not recognized until KX4Z decided to simply reset the unit, solving the Internet outage. Cox telephone service did not recognize the location of the failure and so did not recommend router reboot, delaying to the solution.

<sup>7</sup> KX4Z location lost commercial power and solar power with battery backup automatically provided power to all systems. However, the event that caused the commercial power loss might also have resulted in damage to some of the systems that failed at KX4Z. Of note, this station is on the western side of the county and thus experienced higher winds than eastern stations.

## SECTION 4: ANALYSIS OF OBJECTIVES / RESULTS

*Aligning exercise objectives and core capabilities provides a consistent taxonomy for evaluation that transcends individual exercises to support preparedness reporting and trend analysis. Table 1 includes the exercise objectives, aligned core capabilities, and performance ratings for each core capability as observed during the exercise and determined by the evaluation team.*

*Unfortunately we didn't have a written IAP for this Hurricane.....but we can review the Objectives that Brett utilized for Hurricane Ian and TS Nicole.*

Objective	Core Capability	Performed without Challenges (P)	Performed with Some Challenges (S)	Performed with Major Challenges (M)	Unable to be Performed (U)
1. Safety of volunteers and community	Community Resilience <sup>8</sup>	<b>P</b>			
2. Property Safety	Community Resilience	<b>P</b>			
3. Backup communications	Operational Communication	<b>P</b>			
4. Practice communication protocols including Field Situation Report	Operational Communication		<b>S</b>		

Table 1. Summary of Core Capability Performance



## OBJECTIVE 1:

Safety of volunteers and community

### Strengths

*Strength:* Volunteers were safe in shelters and for some, relief was provided when needed.

### Areas for Improvement

*Area for Improvement:* Some team members were caught a bit off-guard and suggested afterwards that their planning for the deployment might have been better. Although some written suggestions were provided, making these more easily available in an IAP might help. The number of volunteers to deploy is still thin. Arranging for relief, and decreasing the daylight hours of service might be an improvement.

## OBJECTIVE 2:

Property Safety

### Strengths

*Strength:* All of our gear was properly transported, set-up, utilized, re-packed and transported back again. The community escaped major property damage with the biggest problems being up to 32,000 households without power at various times.

### Areas for Improvement

*Area for Improvement:* We needed some digital equipment at some locations that wasn't provided.

## OBJECTIVE 3:

Backup Communications

### Strengths

**Strength:** Deployment planning was via telephone calls and emails. During the incident, VHF voice was the primary means of communication, although multiple digital communications were also tested and utilized. We had greatly increased community amateur radio operator participation which provided potential reports if normal telecommunications failed. 218 total check-ins, and 32 participants outside our deployed group.

### Areas for Improvement

**Area for Improvement:** All of the means of notification listed in our Comms Plan were not utilized, due to lack of time for planning.

## OBJECTIVE 4:

Practice communication protocols including Field Situation Report

### Strengths

**Strength:** We had notable successes in our first ever effort at collecting GIS-mappable Field Situation Reports.

### Areas for Improvement

**Area for Improvement:** Some of our team members didn't have all the necessary equipment to participate. We also experienced crippling "looping" of digipeated communications between NF4RC-7 (digipeater) and NF4AC (peer to peer recipient) on more than one occasion.

## SECTION 5: CONCLUSION

The Alachua County volunteers had a generally very successful deployment service for the EOC and county shelters during Hurricane Debby. Planning and execution of the deployment was generally well-done, with good interaction between volunteers and Emergency Management Department. The updated Comms Plan and past Improvement Plans that corrected various issues contributed to making this deployment fairly uneventful.

However, we experienced multiple equipment infrastructure failures -- more than usual -- which are documented in this report. Some time and effort will be required to remedy some of those failures.

We were elated at several triumphs: integration of significantly more community volunteer participants into reporting (32 different stations); integration of some HF support from The Gainesville Amateur Radio Society, with frequent VHF presence as well; and our first-ever trials of the GIS-mappable Winlink Field Situation Report. Further, we discovered our existing GMRS repeater infrastructure, though lacking battery backup, can cover huge swaths of the county.

With relatively little large-scale damage to the county, the shelters housed few residents for a short period of time. Our deployed volunteers mostly worked on gaining skills at new digital techniques and working to solve connection problems. The event revealed some weaknesses that can be addressed and provided a wonderful opportunity for new relationships with leaders in the county who stopped by to chat at the EOC backup radio room.

## APPENDIX A

### IMPROVEMENT PLAN

No.	Finding	Remedy	Assigned to	Target Completion
1	Eric got missed in the distribution of the Incident Action Plan	Take the time to make a written list of volunteers and possibly even an email "group" so people don't get missed	Gordon	
2	Digital wiring sets worked well, but only 6 are labeled.	Get remainder of digital wiring sets "labeled"	Earl	DONE!
3	Only 3 go-boxes now have digital wiring sets	Devise ways to add additional sets without creating controversy		
4	Some volunteers weren't quite sure what to bring	Have a better suggested list available for immediate entry into IAP	Gordon	DONE - added to boiler plate IAP
5	Some volunteers don't have Signalink etc	Create a "cache" of loaner Signalink units possibly with some computer support also, at the EOC	All	In progress; 2 units purchased so far.
6	Team Depth	Promote volunteerism and willingness to deploy so that potential volunteers are aware of the opportunity and make arrangements to overcome obstacles		DONE - promoted at two local clubs
7	Overly long "day"	Consider stopping nets earlier and potentially dropping to every 90 minutes or every other hour when need is less.		<i>Agreed to modulate per storm intensity</i>
8	EOC person has divided responsibilities	Allow to make early or timed reports on nets so they can be out of the main area more visible more of the time		Agreed

No.	Finding	Remedy	Assigned to	Target Completion
9	Little plan for communications if badly needed by shelter (our PRIMARY mission)	Review what information is already shared by normal telecommunications and educate our team on what might be needed in the event of true comms failure.	Huckstep	Interviewed Peaton 8/14/2024, gained list of information,
10	Poor audio connection from EOC data radio requires constant background "hiss"	Replace with radio with "demodulator" output that can be provided to the Signalink and speaker output can be reduced		DONE - found FT7900 that has demodulator output This radio also has MUCH BETTER rejection of 146.220 MHz.
11	Peer to Peer "looping"	Appears to be experienced by other groups as well. Check EOC setup to remove digipeater function if present. Investigate solutions.		EOC was set to digipeat, and 6 retries. Killed digipeating, and changed to 2 retries. Will retest Retest: not seen again so far  Also retuned cans for 15dB isolation and reduction of phase noise from Yaesu's
12	Unfamiliarity with how to submit 214's	Create educational page to remind, include with IAP; another session to develop bit-mapped signatures is needed		DONE - on boiler plate IAP
13	Usefulness of Field Situation Report	Gain familiarity with how to "filter" so that this becomes more useful if actually needed.  Discuss with GIS mapping crew how to hand-off		

No.	Finding	Remedy	Assigned to	Target Completion
14	Limited HF net	Discuss with HF personnel possibility of maintaining a more visible HF presence for hams who might need to reach us this way.		
15	Missing reports on FSR map	Test and learn more about how this works. (Might be related to infrastructure losses.)		Likely due to lightning damage at KX4Z-12
16	Limited reporting to Hurricane Net	Dispatch messages to Hurricane Center, Winlink or voice.		
17	Need a map of road hazards, gas availability etc	Investigate if these exist and whether we can send them out to shelters via radio or other techniques.		Peaton has a spreadsheet & willing to share - unclear if map?
18	Difficulty finding the EOT link: <a href="https://alachuacounty.us/depts/em/Pages/eot.aspx">https://alachuacounty.us/depts/em/Pages/eot.aspx</a>	Provide more educational information in the IAP -- provide the link there	Gordon	DONE
19	Stations stepping on each other during check-ins	Try more sequenced directed check-ins, such as letters of the alphabet.  NCS might want to keep a list of the "regulars" and just call on them.		
20	Improper radio protocol	Remind protocol: station called, from <your station>		
21	Need for "local" RMS stations	Educate existing sysops on how to add RMS_RELAY to provide in-community support without need for Internet.	Gordon	Will be done
22	Unfamiliarity with the go-box VHF radio	Provide a "cheat sheet" of suggestions and instructions, boiler-plate, within the IAP	Gordon	In progress
23	More weather information outgoing from EOC/other	Perhaps assign to Jeff, who is good at that?		

No.	Finding	Remedy	Assigned to	Target Completion
24	Un-recognized problems with VARA-FM P2P	Consider P2P practice Wednesdays at the EOC on VARA-FM VHF - Make available several hours on Wednesdays		Retuned cans - DONE Better radio - DONE
25				

## APPENDIX B

# HOTWASH DOCUMENTATION

### HOTWASH COMMENTS

Hurricane Debby  
August 5 2024

Attending:

Gordon Gibby

Dean Covey

Earl McDow

Mike H.

George Deitz

Hugh M.

Jeff Capehart

Susan Halbert

Rosemary Jones

Kennith Miller

Brian Joy

-----  
Gordon,

Sorry I am busy this evening and will miss the hot wash. My feedback is that I should have been better prepared: paper & pen, food, blankets, digital capability, HF radio & antenna, towel & toothpaste.

Go box should have battery and Signalink (& HF radio setup).

Best wishes for the meeting.

73

Eric Pleace, KO4ZSD

508.240.4488

Gainesville FL 32605

-----  
Gordon: I will not be here on Thursday evening. So I thought I'd share with you some quick after action impressions. Brain dump.



**Team depth.** This is perhaps our most significant issue. We are too few. If this activation had gone beyond a day, I would have had to leave. I would probably have been too tired to continue. And I think I'm not the only one who is thinking that. If we don't have a larger bench of people who can and will deploy to our variety of served locations, then we will have "abandon the post" in the face of reality. We are volunteers. We'll just have to leave and do so. We need to have an honest conversation with ourselves and our served agency that even with a continued "threat to infrastructure" we might have to go. "Threat to infrastructure" is a key code phrase that is important in our context -- threat to infrastructure passed means we can be released.

**EOC.** Nice operating environment for one person at a time. Two is also acceptable, but with only one person that person can sleep in the room on off periods. But two means that more than one thing can be done at once -- go to meetings, keep situational awareness in the main room, and so forth. Two also means that the VHF net can be attended to as needed.

**Radio assets.** The requirement to have squelch-open, audio output up on the old Icom 2m VHF transceiver is a nuisance. Also may be "flaky" connections/connectors. Transceiver may need replacement. Also recommend a "permanent" "QuintPlexor" in the HF area -- or, well, okay, at least a duplexer that can permit more than one HF signal to go out simultaneously over the one coax.

**VHF cross-interference.** Don't know if our "cans" are working well at all. Keying the mic on the 2m VHF phone transceiver shows up as received signal/sound in the Icom VHF data transceiver. I don't recall this before. The purpose of the can is to permit simultaneous phone and data options -- that may now be problematic.

**VARA FM.** Well, it's "flaky" for P2P, it seems. Granted we need to leave the Signalink and Icom transceiver settings stable to get good calibration and ping responses from NF4RC-7 and W4DFU-12 -- but still, the P2P was problematic and many had trouble getting in. As well, the VARA on NF4RC-7 is an older version and probably should be updated. We were getting a TX transmission cycle of repeated transmissions from the digipeater. With no TX from the sender or the intended target machines. A stable, mature, always on P2P capability requires, it would seem, a newer transceiver, the phone-data can issue taken care of, and updated VARA FM installs on the digipeaters. I'm thinking.

**214s.** Process on the 214s needs to be refreshed with each activation. Your tutorial on the web page is excellent.

**Command nets.** Don't really know if every hour is too much. I found that it was, what with all the check ins that were being taken. Also recommend that the EOC be allowed to post information before the taking of the roll.

**Field Situation Report.** This is an excellent capability. I even showed it (IIRC) in passing to County Chair Alford, who is very interested in what we do. I spent about 40 minutes with her giving a soup to nuts on radio, EMCOMM, our support to the County, etc. I think she was impressed. She is an engineer by training and very rapidly absorbed what I was saying. I also got a chance to spend some time talking with Andrew Kaplan, who was a designated ESF2 rep. He's going to be calling me for further information, as he develops a release for inside county use as to our amateur volunteer support to the County. Our insistence on relationships, the ICS structure, and a proper understanding of our niche in the ecology of emergency management, is paying off.

**HF.** I saw absolutely no HF in this activation. Everything was local/tactical. Of course, in a longer or more severe activation, HF will come into its own. But this hurricane showed that 2m analog phone is the king of usefulness where the tactical rubber meets the reality road.

**Teamwork.** I saw good team work in this activation. The effort that has gone into developing relationships paid off. That being said, the lack of current hands-on with some of the gear was visible. Also, we need to look at "permanetizing" the go-box's digital capacity so that we in fact will have digital capability for each go box that deploys. And team members deploying to shelters need to work on and nail down their on-site working relationships with the shelter directors. While they are on site, the shelter director is their "boss." Relationship management is a crucial volunteer skill!

**Final thoughts.** *A good practice drill as we weren't really called upon to do real work.* But any drill is an opportunity to learn. This one was. Again, this was a scatter-shot brain dump. If I get more, I'll pass to you.

Leland

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My 214 forms are attached. They also have been uploaded to the Alachua County site. The shelter manager got the first two in hand-written format due to previous instructions. The third one got finished at home after check-out and sent today. I used my signal link, computer, back-up antenna, and, for a while to establish digital communications, my radio and power supply. **Do I need to fill the equipment form?**

I was able to send a direct P2P VARA SITREP and an early draft of ICS214-1. After I got the County equipment running, I sent the second SITREP via the UF RMS. ***For some reason, no dot for the MLK center showed up on the map.*** Maybe the form automatically sends my home address??? (That seems to be the default on the form.) I need to check for a dot there.

Thanks,

Susan Halbert KG4VWI

Jeff Capehart -- Not much HF for emcomm. Hurricane center at 14.325 , looking for reports in affected area. Although not right there, we did have tropical weather. Jeff noticed expansion of wind field. Have someone call them up. Possibly GARS group or Leland

Miller -- Shannon checked into the Hurricane net; Ken Miller also gave one for west Gainesville.

Rosemary: didn't want to have a check in at midnight. We have another volunteer for the EOC -- Susan has been there. Susan is great with everything Would like to be stationed there. Susan has Level 2. (Therefore could be a secondary person) Has been secondary person at least twice (including Irma).

Susan -- needed at a shelter due to not enough people; would like to be at the EOC. Had a dream for years EOC has a map that show where roads are closed and gas stations. Could get that map and send that out to our stations. (Gordon needs to look into this)

Wants to work to getting digital equipment available for all go boxes. Some people have Signalinks; Eric didn't have one; would be nice if it were in the box. Good to get the cables working, had good time learning to get all that setup

Rosemary: needed the EOT link. Earl helped get the signature right. EOT link disappeared off her computer Needs a roofer due to leak.

Mike: Analog vhf net.

Lots of QRM -- needs priority sequence, with shelters and then people "with problem" higher than ordinary folks. Mike had an HT and therefore problems getting in.

Specifically call for check ins for people with lower power.

"One at a time" [requests for check-in] doesn't work! (people don't have ESP)

Possibly go by alphabetic parts for suffixes

Same stations checking in and Net control could keep a list of the "regulars" to eliminate them having to check in

Correct ham radio protocol -- station you're calling FOLLOWED by your own callsign [the same way that air traffic does it ]

Net control be a bit more of a "policeman"

Well run event

Susan: Discussion about VARA FM Peer to Peer

Earl would like to know how to setup RMS\_RELAY and "local"

Earl's VHF RMS station had dead finals and hoping to replace that within a day or two.

Ken -- simple suggestion -- everyone who is willing to be deployed needs to go to the EOC and hook up a Signalink and record their settings for each of the connection devices and have everything set up!

(using a digirig--excellent results, 3rd week with it)

Rosemary: everyone has the homemade Signalinks available, willing to donate to be used by anyone.

Problem was we didn't a "marketplace" [place to barter/transact units, I think]

Jeff: Thursday night TechNite on the process that Gordon did. Hopefully fresh in people's minds.

Flash Report #1 came out Thursday 11AM ("we're monitoring") Net Thursday night -- nothing to do.

Friday: storm became "potential tropical" -- flash report late Friday -- asked for EOT groups to have "flexibility of short window of notification" Jeff talked that over with Leland -- "do we need to notify our people??" Leland thought "let's wait until Sunday"

Saturday -- 11AM Gordon got notice of Sunday 2PM opening.

Flash Report Saturday -- listed the Shelters 6:32 PM -- (still confidential)

[So the hams actually got notification EARLIER than the shelters!]

We did preliminary assignments on SATURDAY by texting from Lake City

Was this sufficient advance notice?

Susan -- Saturday not at work, so it worked out. Gave her a chance to figure out things.

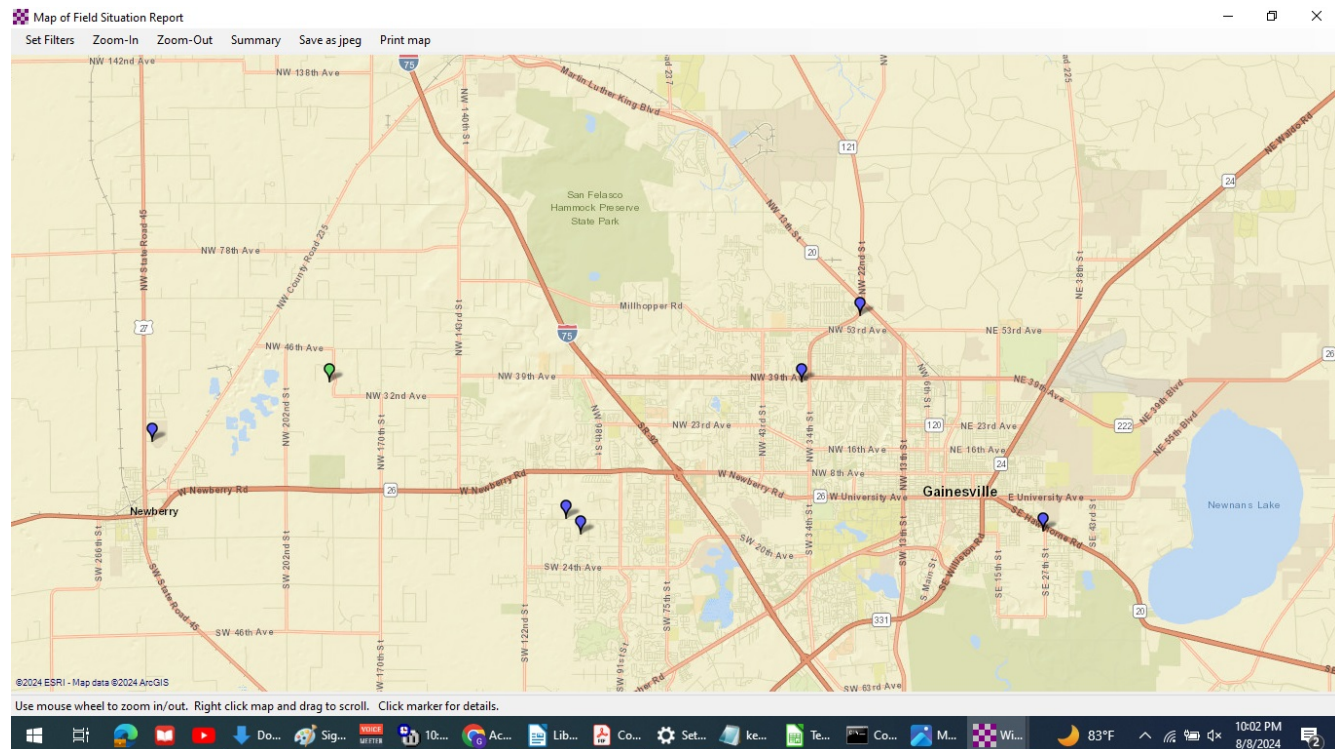
Rosemary: e.g. Mannish ready to get badged ( Jeff: several ready ) Ron, Mannish

Jeff: field situation report -- puts a place marker (doesn't "tell you" ) what is going on at that location.

If it reflected all the hams that would be useful! Trying to figure out power in locations -- there are web pages that do that.

Rosemary: had a power line down in front of driveway. Can get next door neighbor to let her know

Susan: Pretty sure that when she submitted the forms, got the right GPS stuff.



Map constructed from reports received from NF4AC back to KX4Z:

(Written input from Susan)

1. I really like the mapping ideas. If we get proficient at this, we can provide the maps I have wanted to see in shelters for a long time. We need to figure out how to get all the messages to be reflected on the map. More experimentation would be good.
2. This storm was a great opportunity to refresh our minds about getting things assembled and packed, learning what we forgot, and what is not useful and just makes more weight to pack.
3. The new antenna (at least VHF) at MLK worked like a champ. There were lots of great signal reports, especially in comparison to the one I used last year, and to keep the net audible when I tried digital modes.
4. No problems with the go-box after Eric showed me that I need to select a channel for normal operation. A list of channels might be useful. VFO worked for 144.990.
5. The frequencies and call signs might need to be updated on our ICS205 on the website, especially for the WINLINK and VARA frequencies. The names, call signs, and frequencies of the digipeaters and local RMS stations should be included.
6. VARA FM P2P might need some practice and troubleshooting. P2P worked OK when I sent a direct message (this year and last year), but it did not go through the high digipeater, even though my signal was cleared with VARA auto tune. I wonder if one of the stations needs a paid VARA license. I think you can't be (or use??) a digipeater if you don't have one.
7. HF capabilities: I think we don't all need HF capabilities in the shelters. The EOC does because it needs to send messages to the state EOC, etc., and Leland's idea for a Quintplexor hook-up is a good one. I think that being an HF gateway is a really good role for some of our members who need to stay home due to family reasons, illness, or even lack of a badge. It would be good

to find several people (redundancy) who have good HF capabilities and who could monitor the hurricane net and also listen to the HF net that usually runs during storms. Obviously, these people would also need good VHF connections to Net Control. All the duties that do not need to be performed by the EOC personally should be delegated to someone else, allowing EOC operators to listen to briefings and network with people in the room.

8. Maybe this should have been the first one. We need more timely weather information. The first National Weather Service briefing came at 08:30 on Monday! The storm was almost done by then! I suggest assigning the solution to that problem to Jeff Capehart.

9. The hourly net could be truncated a bit, especially since the EOC station can't take the time to listen to 30 minutes every hour. This is NO criticism of David, who did an excellent job, as always, running the net outside of the EOC. These are only suggestions, so please don't take anything personally, and feel free to push back. a. Let EOC and shelter stations go first to report any issues. b. I liked the idea of calling on regular check-ins. c. Other people with situation reports come next, with those having any issues prioritized. All is well messages come last. The EOC station, and shelter stations could be dismissed if needed before general check-ins. d. As we improve our mapping capabilities, most of the situation reports could be handled via WINLINK and mapped directly, with the map given to the EOC. This might be really useful if we could pull it off!!

Susan Halbert KG4VWI