

2019 Alachua County Hurricane Dorian After Action Report / Improvement Plan



Alachua County ARES Voice Net Practice Session

Gordon L. Gibby KX4Z

and the volunteers of the Alachua County ARES group

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DEDICATION

This After Action/Improvement Plan document is dedicated to all the volunteers of Alachua County who have worked so hard to provide a better volunteer backup response..



Wendell Wright putting in new shelving for our new Radio Room

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ACKNOWLEDGMENTS

The North Central Florida Amateur Radio Club would like to acknowledge all the work done by the Alachua County Emergency Management group to further backup amateur radio support capabilities, and in particular, the incredible support provided by Col. Huckstep W4JIR of the Alachua County Sheriff.



EOC has graciously allowed the use of their facilities for numerous training programs carried out by NFARC/ARES



NEWEOC RADIO ROOM

1 INTRODUCTION

Hurricane Dorian caused major death and destruction in the Caribbean, and threatened Florida significantly. Floridians remembered what happened just recently and stocked up a bit more in advance this time. Gas still became scarce for about 2 days in Alachua County. The University shut down, expecting the arrival -- and then the track of the Hurricane unexpectedly slowed, and changed, and Florida was largely spared.

Still, one cannot "turn off" an incident -- considerably different from an Exercise -- and everyone in Alachua ARES had to make preparations for the possibility of another significant event. This gave us a chance to test our previous improvements, as you'll see in this report, and think through some systems that we hadn't really understood well before.



2 ALACHUA COUNTY MERGED TIMELINE

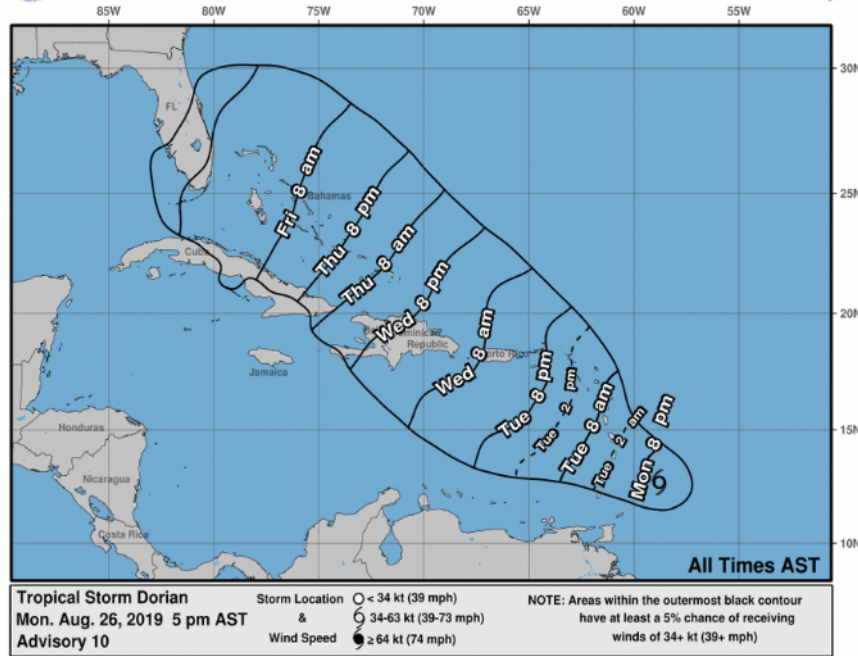
MONDAY AUGUST 26

Monday August 26

Evening advisories from national weather service on earliest reasonable arrival of tropical winds:

Full Forecast	Earliest Reasonable	On
3 days	Most Likely	Off

 **Earliest Reasonable Arrival Time of Tropical-Storm-Force Winds** 



he storm is forecast to dissipate within 3 days, the "Full Forecast" and "3 day" graphic will be identical

TUESDAY AUGUST 27

Tuesday Aug 27

Gordon emails members urging them to get fuel

WEDNESDAY AUGUST 28

Wednesday Aug 28

Alachua County EM planning to wait until Aug 29 to decide on upgrading local EM status.

Wednesday Aug 28

Coax from the roof antenna is now diverted to the "Chigger Antenna" with much better performance on 80/60/40 meters (lower noise) -- but higher risk from windstorm.

Wednesday Aug 28

Gainesville SARNET connection still not working

THURSDAY AUGUST 29

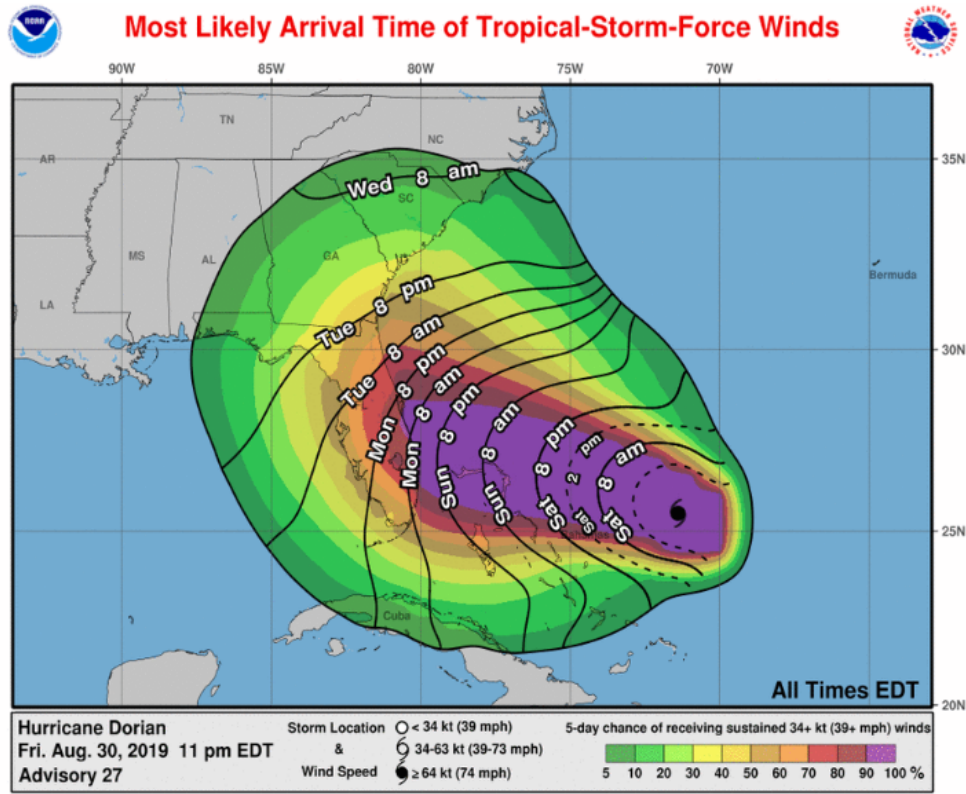
Thursday Aug 29 Florida Gov. declares statewide emergency -- Alachua County waiting until Friday Aug 30 to decide on opening shelters. EOC meeting Alachua County at 1 PM; local ARES net meets at 8PM (Leland NCS)

Thursday Aug 29 Gordon forwards SHARES info to Leland

FRIDAY AUGUST 30

Friday Aug 30 University of Florida cancels classes for Tuesday Sept 3 due to expected arrival of Hurricane Dorian. Gordon is discussing getting coax from our roof antenna down as a backup.

Forecast Length*	Arrival Time of TS Winds	5-day Windspeed Probabilities
Full Forecast	Earliest Reasonable	On
3 days	Most Likely	Off

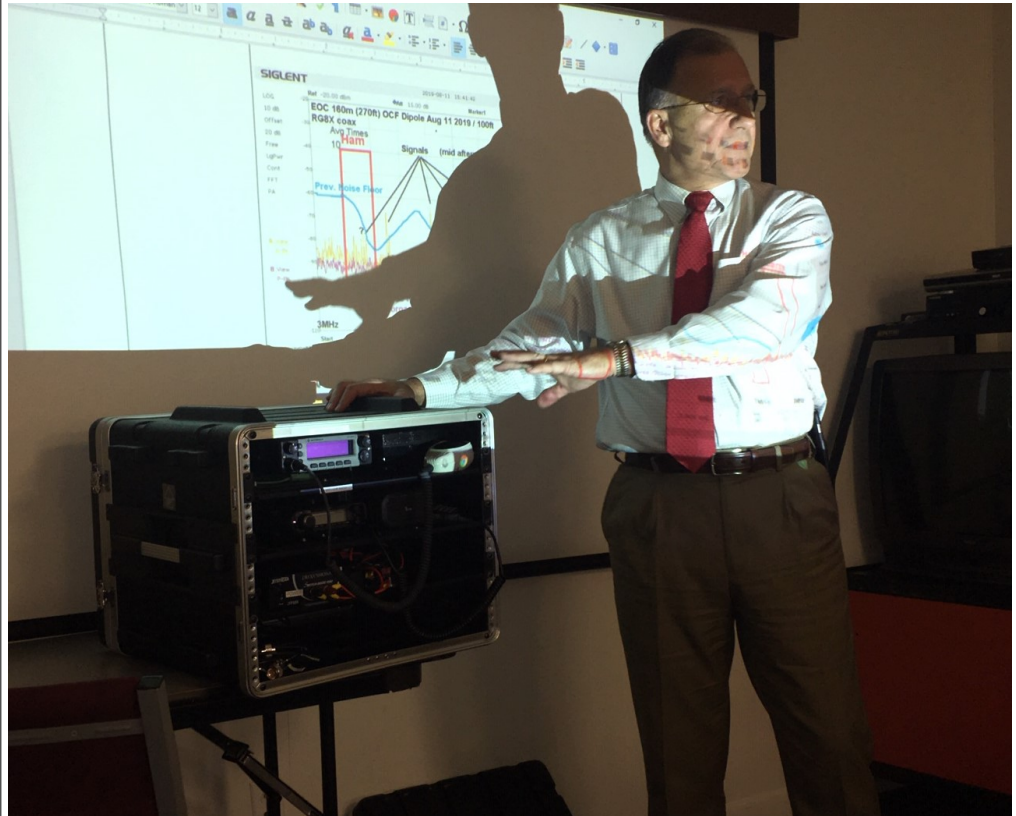


Aug 30 Potential shelters to be opened are now planned:
 Order of shelters to be opened:
 #1 will be Easton, #2 MLK (Waldo road) both of which are pet friendly
 #3 Senior center, able to take people with medical issues;
 #4 Westwood middle school if Senior Center overflows with medically needy people.

Other Issues:

RADIOS

Only one go box is completely populated (the prototype).
800 MHz police radios WITH POWER SUPPLY will be individually positioned at shelters that don't get the only complete go box.
Col. Huckstep was upset that others were not done, but I reassured him that there is very little chance they would be needed as we had AT LEAST 3 vhf/uhf goboxes in RIDGID boxes at the EOC and only *1* was used when we have umpteen shelters open.



Col. Huckstep presenting the Go-Box Systems developed by Alachua County

BATTERIES: I would suggest that we disperse those precious batteries to the shelters as they open in case power drops. The police radios appear to have bare wires. Hams would need to simply connect to the 12V battery if that becomes an issue..

COAX: hams will need to bring coax (pl259 on both ends) to go from ham radios to the VHF/UHF SO-239 on the wall to the already installed exterior antenna.

****Police radios have N connectors.** Col. Huckstep is going ot look into getting coax with N connectors to go from the police radio to the wall

	<p>connection....that hadn't been quite recognized (he thinks)</p> <p>Anyone crazy enough like me to run HF needs to bring their own HF antenna and coax to reach the feedthru and as we learned, a ladder to reach the other side. Obviously not many are going to need to do that so I would NOT worry about it at all.</p> <p>Decison on WHAT / WHEN to open is likely to come MONDAY.</p> <p>BADGED VOLUNTEERS: the badges are not yet out. Every shelter will have a list of the approved volunteers and you will go there and just show your identification and they will look you up on their list.</p> <p>If you don't have a suitable VHF/UHF radio -- you will need to get one of the RIDGID boxes we made, which are at the EOC and fill out a ICS-211e line and sign it please. I will ask leland to arrange for such a form to appear down there and be "findable" for you to sign out radios.</p> <p>Planning is to drop a calbe from the rooftop antenna on Monday at 11 AM</p>
Friday Aug 30	<p>Jeff Capehart adds a forwarding rule for RACES email so he will get copies, and subsequently arranges for other local leadership to get copies as well</p> <p>Alachua county has not yet made any decisions on closing any County facilities.</p>
<p>SATURDAY AUGUST 31</p>	
Saturday August 31	<p>Gordon drafts a nearly-complete ICS-201 for activation of the ARES group -- with "TBD" left in all the spots for shelters, times, and volunteer assignments.</p> <p>This form (an iCS-205 boilerplate specifically designated for the ARES group alone) was shown to the Alachua County Chief Deputy and to the Alachua County Emergency Manager and both thought it was excellent. A copy was then sent to the Alachua County EM for his records at his request.</p> <p>Due to meeting schedules and availability, antenna work to add a cable from the rooftop antenna gets moved up to 0930 Sat Morning. Accomplished with a cable hanging down to a bush by the back door. The rope tensions on the roof antenna are adjusted properly. Col. Huckstep, Ryan Lee, Gordon Gibby, Leland Gallup.</p>



Coaxial cable routed to the roof top antenna.

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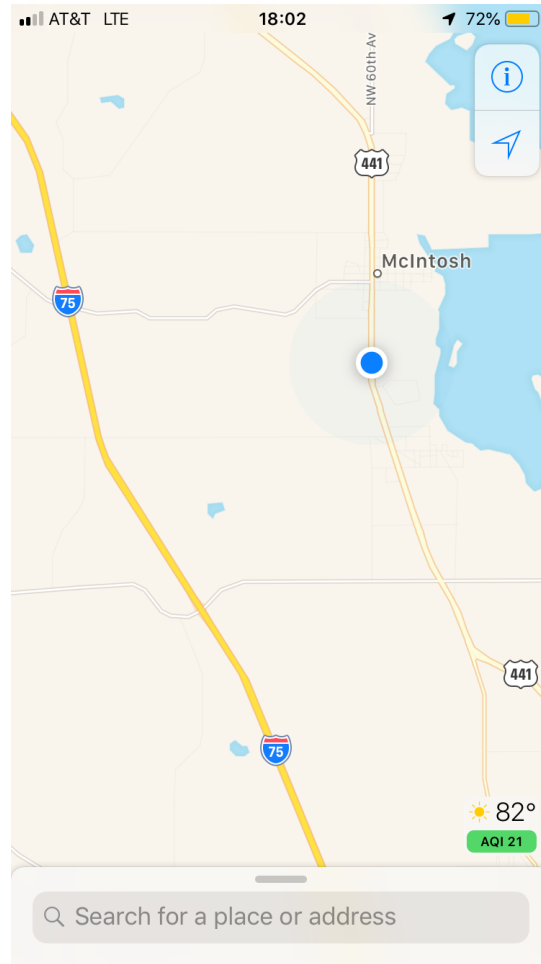
SUNDAY SEPT 1

Sunday Sept 1	NFL Section ARES advances to Level III 10 AM
Sunday Sept 1	Request made by KX4Z to the JS8 group on groups.io, to have volunteers join @ALACHUA for testing of relay possibilities.

MONDAY SEPT 2

Monday Sept 2 Monday	P4 waiver provided by FCC Gordon works out in teory a way to provide a fowarding system to get to the Ocala SARNET since the Gainesville system isnt working Alachua county is now "out of the cone" so effots are stepping down a bit.
Monday Sept 2 Monday 1330LOC	JS Testing at the time of day that was WORST for North Florida SSB practice exercise: 80 meter JS8: successfully captured message back from K4MVR, cached a message for Leland 40 meter JS8: two responses to @ALACHUA from volunteers; W4CAT (Tennessee) SNR -1 KN4CRD (Georgia) SNR -8 30 meter JS 8 -- no responses.
	Gordon drove south on 441 until he found a location where one could just reach the Ocala access to the SARNET -- and still communicate by VHF to Alachua County. The location was marked by a windmill at the top of a large hill. Even a 5 watt walkie talkie to a mag mount on the top of the truck would generally reach the

Ocala system for getting into the SARNET from this location.





There are likely many ways to leverage this structure at that hill top, in an emergency.

Sept 2 Monday 7:30 PM **SUCCESS at sending radio gram cached over JS8.** Message cached at K4MVR and picked up by AA3YB --- "NR 3 KX4Z 6 Newberry FL....." and so on. **FIRST RADIOGRAM BY OUR GROUP OVER JS8**

Sept 2 Monday -- time uncerertain, likely 7:30 PM

80 meters -- K4MVR reports SNR -22
 40 meters
 KC1GU (Massachusetts) reports SNS -2
 K4KDR (Virginia) SNR -1
 W1FVB (New hampshire) SNR +0

30 meters
 K8CJM (Ohio) SNR -14
 W1FVB (New Hampshire) -13
 W7SUA (Arizona) SNR -6

TUESDAY SEPT 3

Tue Sept 3 NFL Section ARES advances to level II at 10 AM

Sept 3 6AM JS8 40 meters

	W7SUA (Arizona)
WEDNESDAY SEPT 4	
Wed. Sept 4	NFL Section ARES decreases to Level III at 8 PM
THURSDAY SEPT 5	
Thur Sept 5	NFL Section ARES stand down 10 AM

Alachua ARES - Standby only (Level 3)

No shelters activated, but 4 pre-determined.

(MLK, Newberry/Archery, Sr. Center, Westwood MS)

We had 6 available ARES members on Monday; 5 Tuesday; 3 Wed. Most had concerns over whether their employer was closing or remain open, or had other obligations that made them pending or conditional for future availability after the holiday. If we had been requested to open 4 shelters, we would have needed 2 people at the EOC, and 1-2 people at each shelter. That would have been 6 minimum; 10 preferred.

EOC staffed only by ESF-5. Only 7am-7pm shift. Gordon/Leland visited EOC. SitReps emailed to staff.

"Near 0 percent chance of impact".

Highest wind was 40mph Tue @ 2:20pm near UF.

An ICS-205 document was sent ahead of time.

Karl sent around a consolidated Florida SITREP.

FLORIDA ARES Net was Active 0800-1800 daily in 2 hour net control slots.

SARNET was open until 8pm 9/4 with NCS in 4 hour slots.

3 OBSERVATIONS, RECOMMENDATIONS, & ALACHUA COUNTY IMPROVEMENT PLANS

Note: The Alachua County NFARC group can only make improvement plans for its own local efforts.

Observation	Recommendations for amateur radio operators	Improvement Plan (for NFARC / Alachua County ARES)
<p>1. Alachua County RACES volunteers still do not have any formal badges, though important decision on which volunteers are approved were made, a huge step forward.</p>	<ul style="list-style-type: none"> • 	<p>Continue to encourage Alachua county EM to complete the badging process.</p>
<p>2. Excellent progress on a lower-noise "chigger antenna" in the woods -- but everyone recognizes increased risk to windstorm, therefore the coax from the roof top antenna was added-- excellent progress. But a formal 2nd coax and switch are needed.</p>		<p>Plans are tentative at this point, need to be firmed up for the final coax. We anticipate this will conclude our antenna redevelopment that involves county efforts. We may make further improvement to the antenna in the woods, but that should not require County effort</p>
<p>3. Alachua County RACES is using borrowed HF transceiver for user-friendly operations, is limited to 100 watts output by transceiver, loaned antenna tuner, and limitations of the antenna.</p>		<p>Aggressive improvement plan is forming:</p> <ol style="list-style-type: none"> 1. Continue to use loaner transceiver until better option available. 2. A chassis of an SB-200 is becoming available for rebuild and modification for combined ham/shares operation. Pursue rebuilding this amplifier to allow for 400-600 watts output SSB. 3 Pursue a higher-power antenna tuner 4. Materials have already arrived to allow a higher-power Balun to be constructed to improve the power handling capabilities of the

		<p>antenna.</p> <p>5. Consider adding coax traps to the antenna to provide for 4-5 Mhz operation., for Federal interoperability</p>
<p>4. SARNET continues to be a problem for Alachua County because the Gainesville DOT equipment's receiver system is not functioning. An experiment carried out prior to the hurricane demonstrtd that a 35 watt signal within 100 yards of the antenna still did not create full quieting. That had been known by the GARS Repeater committee for a year, but their requests were not fulfilled. There are poltiicl issues in the way of getting this fixed.</p>	<ul style="list-style-type: none"> • 	<p>A plan was worked out for a relay computer/patch system to allow the EOC to connect to the Ocala SARNET -- but a by-the-book interpretation of the SARNET rules disallows this solution, and requires a live human to provide relaying.</p> <p>A plan and location were worked out to handle this exigency, but it would be much better if the Gaineville system worked.</p>
<p>5. SARNET is at risk of jamming. A malicious interferer who would not identify was encountered during Alachua County testing to try and reach Ocala.</p>	<p>Amateur radio operators created quite the response when DOT indicated they did not wish to service the SARNET. It would be wise for Section Officials to stay on top of this and keep bringing it back to the hams when things like our repeater don't work for a year or more.</p>	<p>We just cannot put all our hopes on the SARNET Having HF, and digital and a multitude of skills remain important. That is why getting the EOC backup radio systeems up to speed have received such a priorit for ARES.</p>
	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> •
		<ul style="list-style-type: none"> •

ABOUT THE NORTH FLORIDA AMATEUR RADIO CLUB

The North Florida Amateur Radio Club was formed in order to better support the ARES(R) mission in Alachua County. The formation of the club allowed acquisition of a club callsign and also liability insurance -- two crucial assets when carrying out simulated exercises on public or private property with permission, and when using WINLINK radio email (which requires callsigns for its own email addresses).

The club maintains a web site (<https://www.qsl.net/nf4rc/>) and is very active in carrying out NIMS-compliant exercises and writing them up afterwards, in HSEEP format when possible. These are published on the club website and usually also on Amazon as soft-cover books.

Previous publications of this club include:

2017 Hurricane Exercise

<https://qsl.net/nf4rc/2017AlachuaCountyCreateSpaceAfterActionReport.pdf>

<https://www.amazon.com/Alachua-County-Hurricane-Action-Reports/dp/1548062200>

2017 Steinhatchee Storm Exercise

<https://qsl.net/nf4rc/2017AlachuaCountyCreateSpaceSteinhatcheeAAR.pdf>

<https://www.amazon.com/Steinhatchee-Storm-How-Puerto-Rico-volunteer/dp/1978441509>

2018 Waccasassa Wildfire

<https://www.qsl.net/nf4rc/2018/2018 AlachuaCounty Waccasassa Wildfire Excercise.pdf>

<https://www.amazon.com/Waccasassa-Wildfire-Exercise-Alachua-Reports/dp/1721727817>