

## **Hurricane Florence – After Action Report by AmRRON Corps Operator Golf-8-Romeo**

### **Event Overview:**

Hurricane Florence

### **Dates:**

9/11/18 – 9/20/18

### **Executive Summary:**

This is an informal after action report for Hurricane Florence from Golf-8-Romeo. This includes a timeline narrative of each day, with the major events that took place. I tried to be as brutally honest with my thought process and decision making as possible. The strengths and areas for improvement, include some recommendations and are a just starting point for more areas that we (I) need to improve on. Please feel free to give feedback and criticism where warranted for improvement and accuracy.

### **Strengths:**

- We were able to get word to the Cajun Navy working with FO about a couple who was stranded in flood waters on the 2<sup>nd</sup> floor of their domicile.
- Abbreviated STATREPs worked really well in quickly getting info out about local area.
- Flexibility and Communications between FQ-01 and B-65 and myself was quick and responsive to quickly changing conditions. These operators did an outstanding job in leading and directing me during the operation. I had complete trust in their decisions and did my best to execute per their direction. They are definitely to be commended!
- The lead-up to the event with other operators worked really well, I switched to my 20m attic antenna and tested comms on multiple bands with multiple QTHs, to see who I could reach.
- We were very resourceful in getting comms out, after sending out STATREPs via radio and not getting any acknowledgments, I had contact with a club member to get a STATREP out to FQ-01 via text message. He relayed back he was receiving me on the waterfall.
- FT8CALL and FSQ were invaluable during the event. For FT8, my clock held good on my laptop even after going dead. I was able to check it with WWV and it always dead on.
- We used 2m comms between my son (non-licensed) and myself when he was out in town. He was reporting conditions and we were relaying to him where to go for gas and food (in hindsight don't know why we were getting food, we had plenty on hand).
- We were well prepared with our food and water supply. We ate very well and was never in danger of not having enough for a short duration disruption. We are continuing to grow our long term food supply, but we are not yet completely there. We also had life straws on hand and these were not used.
- The pre-event modified SOI worked really well on my end. My fall back was always to the standard SOI when I was not clear or not in contact.
- My youngest son (21yo) stepped up to the plate big time and was commendable in his tenacity, resourcefulness and eagerness to help out. He was responsible for getting additional fuel and some fresh food and delivered each time without complaint. During this time he was also looking to help others and trying to coordinate his deploying for work up north.
- I was able to keep both freezers and one refrigerator cool and all my food safe during the grid outage.

## **Areas for Improvement:**

- I didn't know we were coordinating with FO and Cajun Navy until Wednesday and I was scrambling before the event to get some type of comms setup with the church, since they were taking calls for safety checks.
- I also should have done a better job in training the church with the 2m radio. I dropped it off, wrote some instructions and showed them how to use it. But they never did. It wasn't the first thought, it was the last resort. It should have been the other way around.
- In January I tried to implement a disaster preparedness group at the church and got no interest. I will get with Pastor Daryl and let the church know that the staff needs to really push this and we can be more effective in getting comms out and sending help where it needs.
- If we can get more personnel trained in comms and interested in helping out, we can really reach out to local officials and emergency response teams to direct help to where it needs to go. I was never in a position to offer help, since I had no way to establish comms with them and with other AmRRON operators at the same time.
- Getting a few more in my family to get their tech license. Even though we used 2M ham bands for comms since we had nothing else and it was justified since it was an emergency. We shouldn't have to think about it. They (family) should be trained and practiced in using radios.
- Backups to my backups, we don't have a second generator, that is a single point failure that didn't hit me until I was relying on it. I do have a battery backup for the radios in case generator fails.
- I've tested my generator during Hurricane Matthew and we only lost power for 23 hours. I was not prepared for a multi week long grid down scenario. Once we loaded the generator fuel went a lot faster than I had thought. We did not have enough fuel on hand and we had to find it. This hindered other duties where I could've been of more service.
- It's been many years since I've been put in high stress, long duration, situations and with a houseful of family members. I didn't anticipate the emotional toil and disruption of schedule it would take on everyone and this wore me out physically, mentally and emotionally. We also need to implement a schedule beforehand with assigned duties. It took a huge toll on me when I had to direct everything in real time.

## **Timeline Narrative and Notes:**

### **Storm Preparations (Through Thursday 9/13):**

We started preparing for this hurricane 2 years ago after Hurricane Matthew hit our area. I started pretty quickly, got my ham radio license and started stocking extra food, obtaining communications equipment and becoming a student of disaster preparedness. I have practiced going grid down and participated in T-REX 2017 & 2018. As well as planned about various disaster/grid down scenarios.

We had plenty of warning for the storm and as the predicted category for landfall was being debated my wife and I were discussing about riding it out or evacuating.

The factors that lead us to stay were: We knew we wouldn't be able to get back and mitigate any damages done. We also wanted to stay to see where we could help out.

We got a water-bob (100 gallon bladder for tub) and had 10 cases of water on hand. We have a propane tank that supplies the stove so we had a cooktop and no problem fixing meals. My son was given a counter top hot air oven that we used and worked great off of generator power.

Cell towers, not all towers/providers went down at same time, reports of slow network traffic. I was able to send a stat report via 2m to a Radio club member who had cell service and was able to get that to SigCen GA. SigCen-GA was able to relay back to me that he sees me in the 40m waterfall. A funny story, my daughter wanted to go see the waterfall, she thought it was due to the storms.

Also had the chance to train one of my daughters on giving STATREPs, so I could get a few hours of sleep. We gave STATREPS via Znet until cell coverage went down which was about 1-2 hours after power was gone.

**Early Friday (9/14) morning** storms were bad, wind 90mph+, house felt strong and the north and east windows were boarded. So it added some comfort level. I did move my girls to interior of the house during the worse part.

20m dipole attic antenna, was able to tune on 40m/80m and beacon on FT8 call and FSQ.

I was able to leave my station on beacon for FT8CALL/FSQ and keep QTC Message updated with a stat report and other info as well. This let others know I was at least on backup power while grid comms were down. Thanks to NC sigcen (B65) for that suggestion.

I beamed at 1800 on waterfall. We should think of adding to SOI for ft8call to leave that space open for emergency/reports. (Note: since the new implementation of FT8Call this is not possible, another idea I had was carving out a space on the waterfall for stations that were priority and/or assign stations prior to an event which frequencies on the waterfall to use, e.g. one station could have 1800, another 1900 and all other traffic kept above 2000. )

(I think) the NOAA TXs went down and I was unable to receive with HT. (After review I think my NOAA channels went haywire, they were not sowing the correct frequencies, not sure about this one)

Box fans were nice to keep air circulating. I am getting a generator cable hook up for house.

Still received emergency alerts on phone (flash flood warnings and tornado warnings came in with no cell signal whatsoever), these must be via GPS. I wonder if the time on the cell phone is controlled via this as well.

There were times I couldn't get any copy on anyone acknowledging my traffic, I resorted to even trying FLDIgi for CW. (Maybe I need to learn CW)

The Generator runs ~ 12 hours per tank. (Note: fully loaded it runs about 9 hours)

The email on how to run FT8 call and FLdigi simultaneously in Linux was a huge advantage

I got disoriented a bit with time and days. Had to really think about what day it was. They seemed to run together. This was just a minor obstacle and didn't seem to affect decisions or judgement but wasn't something I thought about beforehand. With the windows boarded up. Day break was off as well as the dark skies. It threw me off a bit and was not used to it.

Several days prior to storm we were very amped up and once it hit our energy level was high. We got very tired quickly once in the middle of the storms and had to rest and regroup. Once we got in a groove we were doing much better.

The first few days it was tough to get into a routine, I think we will make a schedule for meals. I was eating when I got hungry and not per a normal schedule.

Box fan was nice to have to help sleep and let you know when the generator was out of gas.

Will be getting a 2nd generator and 2nd HF rig. (2 is 1, 1 is none) that doesn't really hit you until you're solely relying on a single piece of equipment. That for me was a huge reality even though that concept was beat into me in the military, redundancy and backup.

My Baofeng radios did great as well as my ICOM 2m base station with my attic Blackbird dual band Jpole.

I scanned the local repeaters with the HT and followed the storm from skywarn and ARES groups.

Cell phones turned into flashlights, that's all they were good for.

It was huge knowing AmRRON was there, looking for my reports and making sure if I needed something it would get done.

Some of the kids downloaded Netflix movies to their phone and had some entertainment during the cell/power outage. Also they read books.

Saturday (9/14) morning put antenna pole back up. Feeder bands planned for this afternoon.

We had internet TV exclusively and had to create a makeshift antenna with a coat hanger and coax. Worked pretty good, enough to get local news reports. I will get a HDTV antenna at Walmart to have as backup and install in attic. The great thing about the TV was continuous storm coverage and we were able to see the radar when we had tornado alerts and see the actual path. Several tornadoes passed north of us a few miles on Saturday evening.

Surveyed the area in community on Saturday afternoon. A side street was flooded and that was not unusual. Lots of big trees down, none blocked the roads in our neighborhood. Wooden fences were knocked over. Did not see any major damage to the homes in our neighborhood. Did see several well pump houses demolished.

Son is going stir crazy, not being able to go out and help people. Curfew was in effect after sundown.

We ventured out Saturday afternoon and was able to get cell coverage and give a stat rep as well as check in with family. Also got a text from Pastor Daryl about sending relief supplies/assets to New Bern and Lumberton next week. Plan to go to Lifepoint tomorrow to check on things.

We had a break in the weather and finished putting up my 20/40 dipole.

Less than an hour later we were under tornado watch.

FT8CALL expires on Monday the 17th. Tried using FSQ but rty was eating up the designated freqs. Switched my station to beacon on both fsq and ft8. Got a message on ft8 requesting stat rep after tornadoes and sent it twice. There was rty still eating the band but moved below it and STATREP was recvd 100%. Also reported about having tv and getting wx updates.

We've been through 20 gallons of fuel for the generator. Will probably have to use siphon pump to get gas out of vehicles, unless we can find fuel for cans tomorrow on Sunday.

To help with routine I gave the girls cooking duty and they needed to plan the next days meals and keep kitchen clean. The house is getting a little funky from no AC. It is a little uncomfortable in the house but not hot. The rain is helping keep the house cool, but it is sticky. Water is still go so far, no reports of bad water yet. We still have plenty of water and also soda. I grilled steaks and chicken. We also had potatoes cooked in the air oven.

**Sunday (9/16):** I was able to get a partial cell signal by setting phone to roaming. I was able to download new version of FT8CALL and coordinated with B65 about the new differences and had the option to roll back. B65 said hold off and work with new version. That was good decision.

Got a distress call from Lifepoint Church and got message via Znet. Couple was stranded in flood waters in 2nd floor and needed rescuing. Word went to Fox Co and FO. Got word later that afternoon about couple was rescued. The area where they were was one of the worst in the county. Waterways receded by the afternoon in most areas.

My son and daughter went to grocery store to get a few things. And saw a family friend and went to talk to them. They almost got into an altercation about cutting line, this made me very nervous since he does not carry. Informed him to return to QTH ASAP. I was a lot more cautious about sending him out and exactly where he would go. I do think it was just a single jerk, because all experiences I had the rest of the day were very positive and people were patient and helpful. I can definitely see situations where conditions can go down hill quickly when people are already tired, angry and trying to survive.

Ventured out to asses damage and get fuel and take oldest daughter to work relief shifts at the hospital.

Lots of bad info on gas stations. Only station we saw with lines was empty by the time we circled back around 30 minutes later.

Stopped by Lifepoint Church and Mercy Chef was there preparing meals for community and first responders and disaster relief workers. Power was out most places. 95-98% of stop lights were out. Lots of power lines were downed due to trees falling in them. Had decent cell service while riding around town but it was still spotty. I was sending out STATREPs while I had service and giving reports on conditions. While out driving I was using my 2m radio to describe my location and give reports back to the house, since they had no cell service.

We could not find any fuel and we were getting low. I was feeling very defeated after coming up empty. Had to go to minimum generator ops and are goin to run an hour and go dark for 4-5 hours. That will push my fuel from 12 hours per tank to 2 - 2.5 days per tank. The plan is to run all the freezers and fridges during the hour and sent out STATREPs via FT8CALL and FSQ. 0100z 17Sep sent out several STATREPs via FSQ and FT8CALL 80m. No acks, but figured operators were away from station and would see when they return.

I had a siphon pump but three of our vehicles it would not work. Also still had at least 5-8 gallons in both tractor mowers. The pump worked good for the one vehicle we were able to siphon from. Another option we are exploring is the remove the fuel line and turn the key for priming the fuel line and fill the gas cans. Will test this out if the fuel run tomorrow comes up empty. I did not test the siphon pump on the vehicles before hand. Not sure if my hose is not long enough or anti-siphon tank or the gas tanks are not full enough. The siphon pump is designed for fuel transfers from one tank to another.

Work sent out a health and welfare text, replied back with we were good spotty cell service.

Also got a text from GE aviation about water

“Cape Fear Water may shut down! CFPUA wanted to give you as much notice as possible to begin filling up jugs and bathtubs. Please make plans for you and your family. Relayed by GE Aviation Security”

I was concerned for others but was confident we were ok since we had 100+ gallons.

Got a local radio station report that diesel was brought in and the water situation was averted. (Later found out that New Hanover Regional Medical Center gave them their extra fuel to keep going)

### **Monday (9/17):**

Sent son out for fuel at daybreak. He went to Leland, NC across the river and waited for a few hours and was informed that that station was reserved for first responders and emergency personnel. He then went to Sams Club and got in line but was informed that they weren't sure if they were going to power on pumps or even if they had fuel. He traveled down the road and found a station that had just open and was able to get in line and fill our gas cans and top off the vehicle. This was definitely an answered prayer and lifted our spirits.

They got back and we went out in our neighborhood to help clean up downed trees and do welfare checks to see if everyone had water and food. My son cleared a neighbors yard, from a couple of down trees. She is a widow and her sister lives with her. We made sure that they had water and food also.

We got our feet back under us and decided to head out and be ready to deploy to help out in the community where we could. Got in contact with FQ-01 and told him I was standing by. Made contact with P-76 and attempted to do a welfare check. The road was flooded and he had intermittent contact with him and he was doing ok. P-76 will see if he needs some supplies and then relay to me for a 2nd welfare check on Tuesday.

My son had to go out and try to get internet signal for work. He was supposed to mobilize on Tuesday. There are about 60 personnel that are trapped and can't get out to Nuclear Plant outages up north.

He took care of getting some emails out and tried to find out flight schedules or even if the airport was going to open for commercial traffic. Status unknown for next flights.

He stopped by an open grocery store and got some juice for his sister, she really wanted some. He proceeded to Lowe's and they just got a shipment in. They had generators, chainsaws, gas cans etc. He picked up 2 more gas cans and found a station open. He had to wait a few hours but was able to top off the vehicle and fill both cans. Another 10 gallons. 30 gallons we got on Monday.

Saw power crews working at the front of the neighborhood and fixing the down pole. We have to have a new pole put in and the rumor was that we are in the list for tomorrow. I'll get excited when I see that pole in. Should mean we are within 36 hours.

We got a call on 7.110 from MI, requesting a welfare check from an AmRRON operator (RM-09 I believe). Received about 2000EST. FQ-01 has to relay but got the info he received MFSK and he relayed via FSQ.

I ran our local 2m club net that starts at 2100EST. People were checking in at 2030. Everyone that joined the net made it through relatively well, minor damage to house, no flooding, towers still standing with some mangled elements. Everyone was running low on fuel. One member had power restored and offered fuel and generator. We were able to account for everyone and had no welfare checks to do.

Gave statrep ~2140 and added the two welfare checks to be done for tomorrow.

### **Tuesday (9/18):**

Headed to do welfare checks. P-76 said his friend was fine and was mobile checking in his properties. So I canceled that welfare check.

Went to check on the elderly couple and they were hanging in there. No power and no phone, their landline was down and cell not working. My cell was working at their location so I let them call their daughter in MI. She was a coworker with RM-09 (I believe) she was very relieved and was so excited that we got word out via radio to do this welfare check. We gave the couple 5 gal of gas, they were on almost empty on their generator. This would keep them going for another few days at least. They were so happy and grateful.

On our way to Lifepoint we happen to pass a gas station that had gas and was able to get right in line and it only took about 10 minutes of waiting to top off the Suburban and the gas can we had.

We stopped by Lifepoint church and checked on them. Mercy Chefs was up and running and providing hot meals in a drive-thru style. My youngest son grabbed a job ticket to repair a roof near our house and Lifepoint had tarps available to use.

My wife got a Facebook message from someone wanting us to check on her mom and brother. We got the address and she was so surprised to see us. We went and got her some groceries and gave her the 5 gallons we just got for her vehicle so she wouldn't have to worry about it. Her son has to go to Duke on 10/1 for heart surgery. The meds he takes was running low and they were rationing his medicine so he wouldn't run out. The CVS was going to be open today so after we brought her some groceries she would be able to go out. She was so so thankful for the help, she was crying when we went to hug them goodbye. My wife was so happy that we were able to help out someone on Facebook that she is "friends" with but doesn't even know. They are part of a chronic illness group.

[Note: We (I) get so busy with our lives that we miss the beauty of helping and serving. From my training, I try to keep alert and my head on a swivel and sometimes that makes me miss life around me. It seems like a tough balance.]

Went to get lunch at Mission BBQ. Headed back home to get everything for the roof tarp cover job. Good news, that roof was not steep, the house was a small ranch style. A huge oak tree branch was laying on the roof and over the peak. It looked like it could possibly fall if there's too much counter weight taken off the roof. It was in danger of hitting the neighbors fence and carport or getting one of us injured. My son trimmed the branches off enough to get the tarp able to cover the roof. Job done!

My son also helps out this family, a street over from where we were at, and they needed a tree cut up. We headed over and finished that. I made a STATREP and then we went home.

Got home and had cell coverage in the house. Took the old AC window unit from the shed and put it in the bedroom. It cooled off the room to 77 by 1:40 am when I woke up, definitely having a cool room to sleep was so nice. We were informed that our power would not be restored until next week. Power was restored early on 9/20.