

ARRL® Northern Florida
ARES® Section
Hurricane Dorian After-Action Report



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Introduction

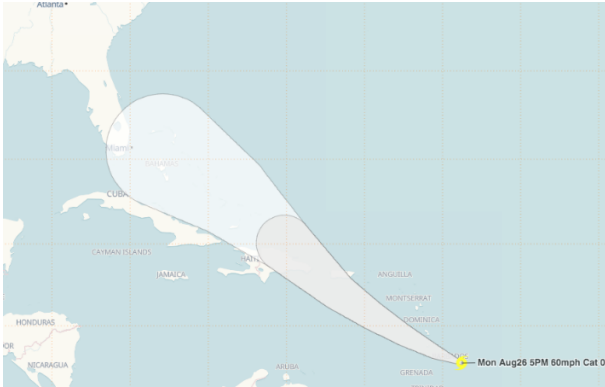
On Wednesday, August 28, Tropical Storm Dorian became Hurricane Dorian. At the time Dorian was set to make an impact on the east coast of Florida as a category 4 or 5 hurricane. Luckily Florida was spared, unlike the Bahamas.

Hurricane Dorian impacted the islands as a Category 5 hurricane. Dorian effected the Bahama islands for 72 hours. The center of Hurricane Dorian stopped for several hours east of the city of Freetown before moving on.

Dorian later moved up the east coast of the United States affecting 5 or more states.

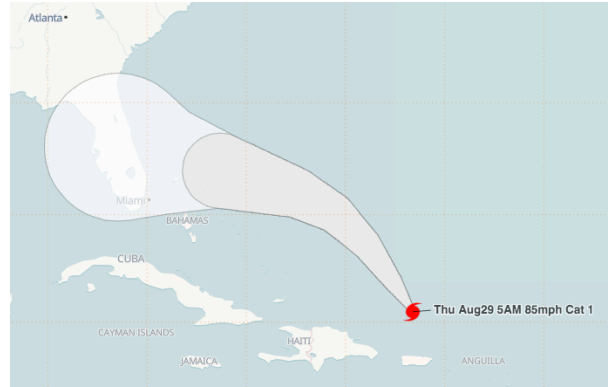


Hurricane Dorian's track



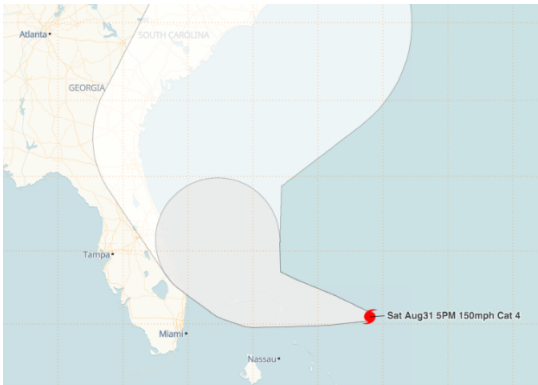
Tropical Storm Dorian on August 26th, 2019

LOCATION...12.7N 58.8W
 ABOUT 60MI SE OF BARBADOS
 ABOUT 165 MI ESE OF ST. LUCIA
 MAXIMUM SUSTAINED WINDS...60 MPH
 MOVEMENT...WNW OR 290 DEGREES AT 14 MPH
 MINIMUM CENTRAL PRESSURE...1002 MB



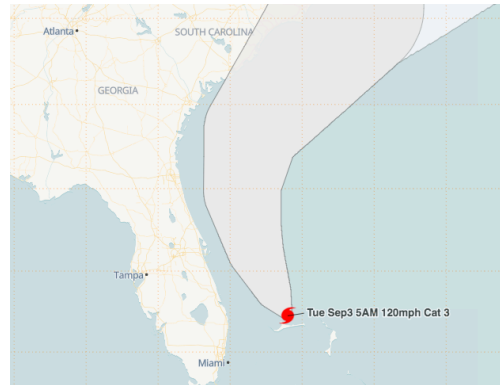
Hurricane Dorian on August 29th, 2019

LOCATION...20.5N 66.6W
 ABOUT 150 MI NNW OF SAN JUAN PUERTO RICO
 ABOUT 425 MI ESE OF THE SOUTHEASTERN BAHAMAS
 MAXIMUM SUSTAINED WINDS...85
 MOVEMENT...NW OR 325 DEGREES AT 13 MPH
 MINIMUM CENTRAL PRESSURE...991 MB



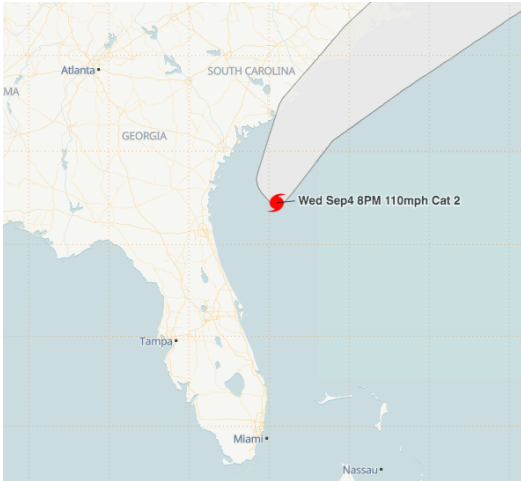
Hurricane Dorian on August 31st, 2019

LOCATION...26.2N 74.4W
 ABOUT 170 MI E OF GREAT ABACO ISLAND
 ABOUT 355 MI E OF WEST PALM BEACH FLORIDA
 MAXIMUM SUSTAINED WINDS...150 MPH
 MOVEMENT...W OR 280 DEGREES AT 8 MPH
 MINIMUM CENTRAL PRESSURE...945 MB



Hurricane Dorian on September 3rd, 2019

LOCATION...26.9N 78.4W
 ABOUT 35 MI NE OF FREEPORT GRAND BAHAMA ISLAND
 ABOUT 105 MI E OF WEST PALM BEACH FLORIDA
 MAXIMUM SUSTAINED WINDS...120 MPH
 MOVEMENT...STATIONARY
 MINIMUM CENTRAL PRESSURE...950 MB



Hurricane Dorian on September 4th, 2019

LOCATION...30.6N 79.8W
ABOUT 150 MI S OF CHARLESTON SOUTH CAROLINA
ABOUT 275 MI SSW OF WILMINGTON NORTH CAROLINA
MAXIMUM SUSTAINED WINDS...110 MPH
MOVEMENT...NNW OR 345 DEGREES AT 8 MPH
MINIMUM CENTRAL PRESSURE...961 MB

Timeline of Events

Date	Topic
August 28 th 2019	<p>It was announced to the Emergency Coordinators (EC) of all three Florida Amateur Radio Relay League (ARRL) Sections that there would be a Tri-Section teleconference given by the three Section Emergency Coordinators (SEC) of Northern Florida Section (NFL), Sothern Florida Section (SFL) and West Central Section (WCF). On the following day to discuss Dorian's possible effect on Florida and what the plan was going forward.</p> <p>At that meeting, an online application was announced for anyone wanting to volunteer for deployment after Hurricane Dorian. To better coordinate resources and to confirm the applicant's information, the SEC would contact the volunteers EC or the served agency.</p> <p>We asked for EC's to submit a copy of their updated ICS-205: Communications Plan. If the SEC lost communications with the county and was sending a team into the affected area, we needed the latest list of frequencies the deployed team could use to establish local communications.</p> <p>It was also decided to have a teleconference every day to keep everyone update on the state of Florida and the latest from Florida Department of Emergency Management (FDEM).</p>
August 29 th 2019	Counties began raising their activation levels to monitoring.
August 30 th 2019	Due to the changes in Hurricane Dorian's path, counties on the west side of the state began standing down while others on the east continued to raise their activation levels.
August 31 st 2019	The Tri-Sections of Florida now called Florida Amateur Radio Emergency Service (ARES) started sending out a Florida ICS-205 that included High-Frequency (HF), Statewide Amateur Radio Network (SARNET) and national simplex frequencies.
September 1 st 2019	<p>Northern Florida Sections Changed to Level II monitoring.</p> <p>It was decided to start the Florida ARES net that would combine all three section nets into one net. ASEC Dave Davis WA4WES would coordinate the HF net. The net would use the Northern Florida Frequency of 3.950MHZ/7.242MHZ. Working with the SARNET manager, it was decided to have Pat Lightcap, K4NRD to act as SARNET coordinator.</p>
September 2 nd 2019	After the Florida Amateur Radio Point of Contact (FARPOC) got a call from the State Wireless Interoperability Coordinator (SWIC) at the State Emergency Operations Center (SEOC), it was decided to delay the HF and SARNET activations for 24 hours. The HF and SARNET would be activated on September 3rd at 08:00 EDT.
September 3 rd 2019	<p>At 0800 ET the Florida ARES net was activated on 3.950MHZ and SARNET on SARNET.</p> <p>At 1000 EDT the section went to level II. I asked Kevin Bess, KK4BFN, the Northern Florida Section Manager for preauthorization to go to a level I if needed. He agreed.</p> <p>I had daily situation reports (sit-reps) from counties during Dorian. These reports submitted on the section group forum kept me and other EC's as to the situation all along the Florida east coast. As the West side of Florida began to demobilize the east coast waited for Dorian.</p>
September 4 th 2019	We started sending out a daily Florida ARES Sit-Rep that included HF propagation report, weather report, the section ICS-205 and the status of each section in Florida. At 17:00 EDT, I received a call from FARPOC that SWIC has stood down ARES all over Florida due to the change in the course and strength of Dorian. The word was immediately sent to all operators and coordinators to begin demobilization and shutting down nets. I lowered the section level to II monitoring.
September 5 th 2019	The section stood down from level III monitoring.

Successes

Topic	Description	Changes
Procedures and planning.	Everyone followed the new procedures we have been working on since Hurricane Michael. There were a few bumps but nothing like the issues we ran into before. This activation ran smoothly because of everyone's hard work.	We only ran into small issues that we are currently working on resolving.
Situation Reports (Sit-Rep)	Both SEC's and EC's sending Sit-Reps to one another worked perfectly. Everyone worked together, and everyone had an understanding of the situation. Using the group forum made it quick and easy to pass these reports and quickly reply with changes or suggestions.	<p>There are still EC's and AEC's not part of the group forums. I had to send a separate email to individual EC's. The issues that arise is a question gets asked several times or a great idea by an EC on the forum does not get to the individual EC's not on the forum.</p> <p>We are still working on resolving this issue.</p>
ICS-205 Radio Communications Plan	<p>I requested ICS-205's from all EC's in the affected areas. If all communications were lost in an area and we had a team being deployed, that team would have the latest communications plan and could go down the list to find what frequency their counterparts were using.</p> <p>The SEC's sent out a section ICS-205 listing the section HF frequencies, simplex interoperability frequencies and a list of SARNET repeaters.</p>	

Needs Improvement

Topic	Description	
EC's and some NGO's don't know how to request amateur radio support.	As hurricane Dorian got closer to Florida's coast. The SEC's became aware of EC's and NGO's either confused or unaware of how to request amateur radio support from the FDEM.	We have started working on a document explaining how to request resources from FDEM for EC's. We would like to have a meeting with NGO's in Florida to discuss the issues.
HF net communication coordination.	<p>When Dorian was approaching the Florida Coastline, its path was very unpredictable. It was soon decided by the SEC's that we should run an HF statewide ARES net. I contacted Dave Davis WA4WES the Assistant Section Emergency Coordinator (ASEC) for the northern Florida section to help coordinate efforts with the three-section ARES net managers.</p> <p>After Hurricane Dorian, it was discovered that not all participants in the emails received or missed email which caused confusion and hampered HF coordination behind off the air.</p>	We are in the process of reviewing procedures and will work with all parties to solve this issue.
HF net and emergency net protocols.	<p>After the Florida ARES net started at 08:00 EDT a station for the Northern Florida ARES net came on frequency saying they would need to take over the frequency at 09:00 EDT for the NFARES. A disagreement started as to who should use frequency.</p> <p>There should never need to be an issue when an emergency net is on a frequency. It is widely known that if the frequency is in use by an emergency net, the other net should move + or - 5khz to make room for emergency traffic.</p> <p>There should never be a disagreement over the air. People from amateur radio operators, news agencies and shortwave radio listeners have these frequencies tuned in to monitor traffic coming from the affected area. Word quickly spread about the on-air issue.</p> <p>The correct way to hand this is to either move the net + or - 5khz or contact your Net Manager (NM), Section Emergency Coordinator, or Section Manager to solve the problem.</p>	All SM's, SEC's and ARES NM are planning on having a meeting to better educate and coordinate.

Summary

After Hurricane Michael in my After-Action report, I noted issues found and what needed to be improved. For the past 11 months, the three Section SEC's have been working with the SEOC on new procedures, better ways to document activities and coordinate better with officials and county EC's. There are a few more issues found after Dorian, but a large portion of the problems encountered during Michael has been solved. Operations during Dorian went much smoother and coordinated.

Counties reporting showed just under one thousand hours total used for Dorian. The eastern counties of the NFL Section had over 60 volunteers on the ground and 110 check-ins on the Florida ARES net.

Dorian coordination was accomplished as a team effort by everyone from SEOC officials, SM's, SEC's EC's and their teams. Hours of training, hard work and preparation made Dorian a great proving ground. We still have more to accomplish and look forward to working with everyone.

Glossary

ARES	Amateur Radio Emergency Service
ARRL	Amateur Radio Relay League
AEC	Assistant Emergency Coordinator
ASEC	Assistant Section Emergency Coordinator
EC	Emergency Coordinator
EMA	Emergency Management Agency
EOC	Emergency Operations Center
FAFPOC	Florida Amateur Radio Point of Contact
FDEM	Florida Department of Emergency Management
Florida ARES	Florida Amateur Radio Emergency Service
NFARES	Northern Florida Amateur Radio Emergency Service
NFL	Northern Florida Section
NGO	Non-Government Organization
NM	Net Manager
SARNET	Statewide Amateur Radio Network
SEC	Section Emergency Coordinator
SFL	Southern Florida Section
Sit-Rep	Situation Report
SM	Section Manger
SWIC	State Wireless Interoperability Coordinator
WCF	West Central Florida Section