

Eastern Massachusetts ARES & SKYWARN Introduction & Update



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Amateur Radio Emergency Service (ARES) – New Proposed Mission & Vision Statement

■ Mission Statement

- The Amateur Radio Emergency Service, a program of the ARRL, offers to its partners at all levels, trained Amateur Radio Service licensees who are skilled in the use of a wide range of emergency and disaster communications techniques and who are committed to supporting our partners' missions in service to the public.

■ Vision Statement

- The Amateur Radio Emergency Services (ARES), a program of the ARRL, the national associate for Amateur Radio, is comprised of organized, trained, and identified Amateur Radio operators who augment and support vital communications on behalf of the public through partner agencies and organizations during emergency and disasters. The Amateur Radio Emergency Service, through its volunteer radio communicators, strives to be an effective partner in emergency and disaster response, providing public service partners at all levels with radio communications expertise, capability and capacity.

ARES

- Exists in almost every state, but is not a national organization
- Is a component program of most ARRL Sections
- Most states contain one section, but more populous states contain two or more
- Examples: NY, NJ, PA, CA, FL, and MA
- Section Emergency Coordinator (SEC) heads the ARES program in each Section

What is SKYWARN?

■ SKYWARN

- The National Weather Service's volunteer weather spotting program which provides timely severe weather reporting to NWS for the protection of life and property.
- The SKYWARN Amateur Radio program is an ARES function at NWS Boston/Norton (Could involve RACES or other groups across the country).
- SKYWARN training sessions (approx. 3 hour sessions) are available in the Spring of each year.
- You don't need to be an Amateur Radio Operator to become a SKYWARN Spotter though it is very useful.
- Spotters have varying activity levels:
 - Some will monitor and check out/find potential damage areas.
 - Most will report as they see activity from home/work or as they go about their daily lives.
 - Hope is that all trained spotters when seeing reportable/severe criteria will contact NWS via Amateur Radio/Spotter line/Webform.

Tropical Storm Isaias Quick Recap

- Tropical Storm Isaias caused significant pockets of tree and power line damage and direct roof structural damage in a few locations
- Hardest hit was Western and Central Mass, Connecticut, and Rhode Island with some wind damage reports in Eastern Mass
- Wind Gusts as high as 74 MPH was recorded in Hampton, CT, 70 MPH in Milford, CT, 67 MPH in New Britain, CT and 62 MPH in Southwick, MA.
- Wind gusts of 61 MPH were recorded at Northeastern University in Boston and 60 MPH at Fairhaven – West Island, MA
- Little in the way of the rain due to our area being on the strong wind/severe weather side of Isaias though some 1"+ amounts were noted along the east slopes of the Berkshires
- Several tornado warnings issued but no known touchdowns (may be hard to determine due to all the straight-line wind damage)



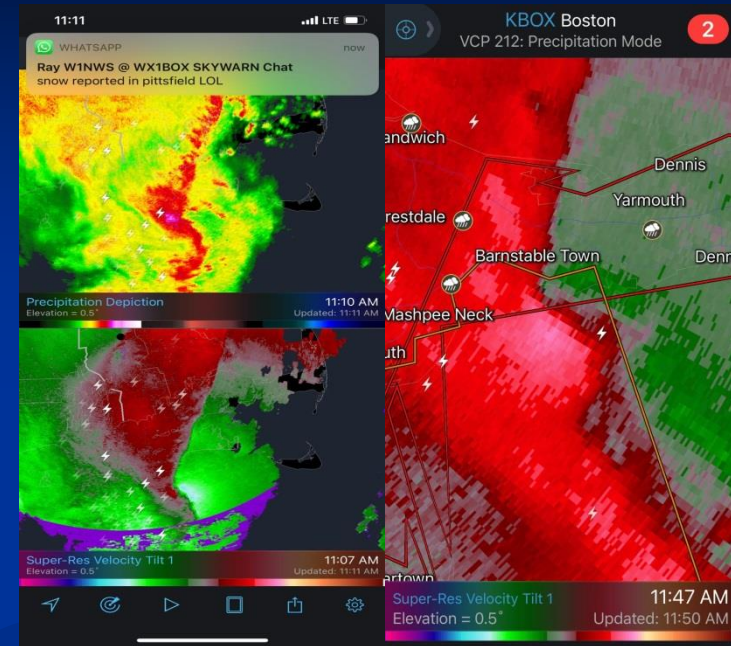
Wednesday 10/7/20 – Derecho Event

- A strong cold front produced a very intense squall line of severe thunderstorms known as a “derecho” which is Spanish for big wind
- Derechos are classified when they meet certain criteria including a track of 240 miles or longer – the convective complex emanated from New York State
- Straightline wind gusts between 40 and 85 MPH were recorded across its path
- The derecho caused an EF0 Tornado in Millis Massachusetts
- Numerous Amateur Radio SKYWARN Nets were active relaying reports of widespread pockets of tree and wire damage and even some direct structural damage
- Power outages in Massachusetts rivaled Tropical Storm Isaias earlier this year
- Top pic from @pauls12 in Worcester MA via Twitter and bottom pic from KD1CY-Rob in New Bedford MA



Cape Cod Tornado Warning – Monday 11/23/20

- Tornado Warning was issued for Marthas Vineyard and Barnstable County from 1123 AM-1200 PM
- Severe thunderstorm Warnings were then issued for Nantucket and Barnstable Counties of Massachusetts
- Minimal wind damage occurred (large tree and wires down on thad ellis road in Brewster) and a funnel cloud was reported on Aquinnah Marthas Vineyard
- Wind gusts between 35-65 MPH were reported across Cape Cod and the Islands as the severe thunderstorms moved through the area
- Interviewed by Fox25 to express how SKYWARN Spotters and Amateur Radio Operators provide information during these warnings:
<https://www.boston25news.com/news/rob-macedo-joins-boston-25-news-discuss-mondays-tornado-warning-cape-cod-marthas-vineyard/6758bf6d-a723-4c58-92b8-d3deef2121b2/>



RACES – Radio Amateur Civil Emergency Services

- **RACES – Radio Amateur Civil Emergency Services**
 - Sanctioned in Part 97 FCC Rules of the Amateur Radio Service to do communications at the request of the Emergency Management Director and Emergency Management Agency
 - By FCC Rules, RACES training drills and tests are ordered by the responsible Emergency Management Agency – these drills and tests do not exceed a total time of 1 hour per week
 - The monthly RACES Nets fulfill this objective
 - With approval of the emergency management agency designee in the State/Commonwealth, district or territory, a drill or exercise may be conducted up to twice per year for a time window not to exceed 72 hours
 - RACES people can be part of your Emergency Management team to provide both Amateur Radio and non-Amateur Radio communications at the EMA Director's discretion
 - Public Service Events and any local exercises
 - Shelter communications when required in disasters
 - Supporting damage assessment and initial situation awareness/disaster intelligence particularly in weather events working with the NWS SKYWARN program
 - Relationship with MEMA is stronger but further improvements to the relationship delayed by COVID

Changes at MEMA

- James Mannion in addition to his role as MEMA Region 2 Manager is now the interim manager of MEMA Region 1 for through the end of 2020
 - Could become permanent based on a variety of factors
- Region Two office officially moving from New Bedford Mass to Franklin Mass
 - Move completed around end of September
 - Ops split between both offices right now
 - Franklin facility obtained because it has a large warehouse facility – 20 Forge Park
 - Could potentially be a “Coop site” for MEMA Framingham HQ requiring larger comms build out
- Have requested Stu Solomon-W1SHS, who lives in Franklin and Norfolk County ARES DEC, to assist N1YLQ-Sparky regarding this change
- Would be helpful to get more Amateurs involved out of Norfolk County to assist Region 2 when ops are fully moved there



ARES (cont'd)

■ Organization

■ Section Emergency Coordinator (SEC)

- Heads ARES program in section
- On SM staff

■ Assistant Section Emergency Coordinator (ASEC)

- Assists the SEC and can have a similar role to the SEC and act as SEC when unavailable – also on the SEC staff

■ District Emergency Coordinator (DEC)

- Leads ARES activities in large area, usually county or similar regional designation
- May also be given this position to lead a specific ARES function (Red Cross, SKYWARN).
- May also be picked for unique field operation capability.
- On SEC staff

ARES (cont'd)

■ Organization (cont'd)

- Assistant District Emergency Coordinator (ADEC)
 - Assists the DEC and can have a similar role to the DEC and act as the DEC when unavailable
- Emergency Coordinator (EC)
 - Heads ARES program in local area
 - Can represent town, city, or even county
- Assistant Emergency Coordinator (AEC)
 - Assists the EC and can have a similar role to the EC and act as the DEC when unavailable
- Official Emergency Station (OES)
 - Designated by ARES leadership
 - Meets certain eligibility and training requirements
- ARES member (Now three different levels of membership)

ARES Membership Levels

- There are now 3 ARES membership levels and members can remain at any level they choose based on the extent of their desired ARES involvement
 - ARES – Level 1
 - Primary level for those who choose a non-leadership role and those new to Amateur Radio or Emergency communications
 - Requires introductory training typically conducted by the local ARES group to meet their needs and the needs of agencies/partners
 - Training can be informal or formal – in Eastern Massachusetts – the “EMCOMM Workshop” would cover this aspect as well as any other local group training.
 - The training introduces the fundamentals of public services/emergency communications and provide instruction of how participants conduct themselves in the field/when activated.
- Not required for any ARES level but we recommend SKYWARN Training to all ARES members

ARES Membership Levels

- Next ARES level is level 2 – designed for Amateur Operators to take their pursuit further and work with agencies
 - ARES – Level 2
 - All requirements of ARES Level 1
 - Must complete the ARRL EC-001 Introduction to Amateur Radio Emergency Communications (a no-cost program)
 - FEMA ICS (Incident Command System) Classes (IS-100, IS-200, IS-700 and IS-800)
 - These ICS classes have always been recommended by Eastern Massachusetts ARES
 - Required ICS classes for operating in any Emergency Operations Center (EOC) for any volunteer and not just Amateur Radio Operators
 - We encourage participants to take advantage of any other training opportunities available through partners to enhance knowledge and skill set

ARES Membership Levels

- Next ARES level is level 3 – designed for ARES participants to take on the ARES leadership positions within the section
 - ARES – Level 3
 - All requirements of ARES Levels 1 and 2
 - Must complete the ARRL EC-016 Emergency Communications for Emergency Management (when available)
 - FEMA Professional Development Series of courses IS-120, IS-230, IS-240, IS-241, IS-242, IS-244 and IS-288 the role of voluntary organizations in Emergency Management
 - The classes above are designed to teach skills in managing volunteers and partnering with agencies
 - Participants are encouraged to complete IS-300 and IS-400 classes but they are not required (Note: These are classroom based and are not “required classes” in this region)

What is 'ARES Stand-by'?

- ARES Stand-by means that there is the potential for Amateur Radio deployment as requested by served agencies such as the Red Cross, Salvation Army, hospitals and other agencies.
- Local and Regional RACES and Emergency Management may request additional Amateur Radio support from ARES if ARES can support it.
- If the stand-by is initiated for a storm situation, it is also to get more Amateurs active to do reporting for SKYWARN and the National Weather Service and for data sharing with all served agencies as well as the media.
- The Stand-by is also designed to do the following:
 - Have Amateur Radio Operators charge batteries/prepare equipment.
 - Give their availability for potential deployment to their ARES EC/DEC if agencies request ARES support as well as for ARESMAT (ARES Mutual Aid Team) deployment.
- If you only want to focus on local ARES support, participation in ARESMAT is “not ever required”!

2020 Eastern Mass ARES Plans Completed

- Eastern Massachusetts ARES has worked through a number of 2020 plans and pivoted focus due to COVID:
 - Continued robust support of the National Weather Service Boston/Norton via SKYWARN self-activation protocols and remote operation including for Tropical Storm Isaias on August 4th and the derecho on October 7th
 - One stretch had 12 SKYWARN activations from late June through late July – this despite drought conditions over Southern New England
 - Amateur Radio station at NWS Norton – WX1BOX – not accessible due to COVID
 - Completed an ARES winter exercise with Cape Cod ARES in early February
 - Completed an Eastern Massachusetts ARES section wide exercise on Saturday May 30th. 2020 coincident with a Red Cross National Exercise and the WX4NHC, Amateur Radio station at the NHC, Communications Test
 - Completed a review and update of the ARES members in the Eastern Massachusetts ARES Database
 - Completed an Eastern Massachusetts ARES Section Plan and that plan can be seen at the following link: <https://ema.arrl.org/wp-content/uploads/2020/09/Eastern-Massachusetts-ARRL-ARES-Section-Communications-Plan-Released-Version-1.0.pdf>

2020 Eastern Mass ARES Plans Completed

- Eastern Massachusetts ARES has worked through a number of 2020 plans and pivoted focus due to COVID:
 - Completed multiple Eastern Massachusetts ARES leadership staff calls
 - Completed a meet and greet with Mass VOAD on Tuesday 11/3/20 – Details here: <https://ema.arrl.org/2020/11/11/eastern-massachusetts-ares-does-virtual-meet-greet-with-massachusetts-voad-via-zoom-tuesday-11-3-20/>
 - Appointed an Eastern Massachusetts ARES Section Net Manager – W1HAI-Joe Weisse
 - Monthly Eastern Massachusetts ARES Net held on the first Monday of each month (second Monday if it's a legal holiday) on the MMRA Linked repeater network – net has been active with 10-20+ check-ins per month
 - MMRA system was incorporated into the May 30th Red Cross National exercise as well
 - Taught two online SKYWARN Classes – one on the NWS GoTo Webinar session and the other for the New England ARES Academy
 - Gave a training presentation to the New England ARES Academy on Situational Awareness and Ground Truth
 - All New England ARES Academy classes available on Youtube: <https://www.youtube.com/channel/UCsMzRyHawnFIIQ0j4CbXPVQ>

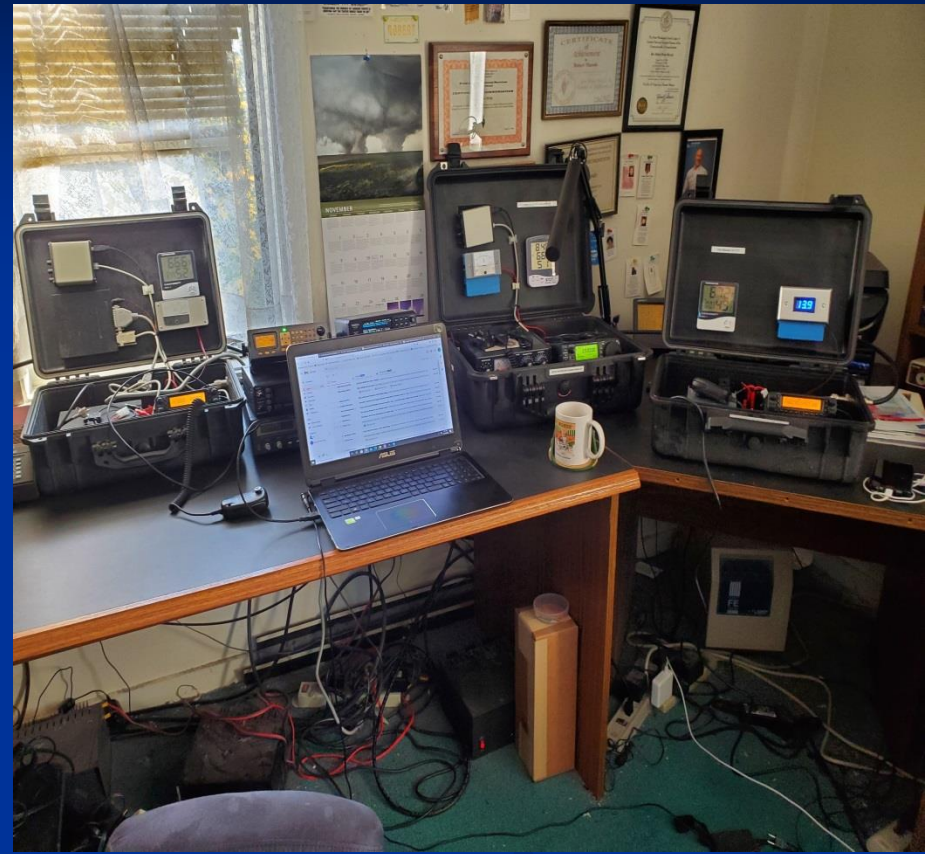
2020 Eastern Mass ARES Plans Completed

- Eastern Massachusetts ARES has worked through a number of 2020 plans and pivoted focus due to COVID:
 - SEMARA ARES held a 2 hour net after the Sunday 11/8 Earthquake just south of New Bedford Mass -
<https://ema.arrl.org/2020/11/10/semara-ares-activates-net-for-situational-awareness-after-earthquake-3-6-on-richter-scale-occurs-southeast-of-the-new-bedford-area>
 - Situational awareness was the main purpose of the net along with standing by in case partner agencies requested assistance
 - Police and fire departments responded to numerous calls about possible gas leaks in the Greater New Bedford area
 - Minor damage occurred to 3 homes to the smoke stack/chimney area on Crapo Street in New Bedford
 - Damage photos are courtesy of New Bedford EMA as relayed by N1IXC-Joe Krisnosky



2020 Eastern Mass ARES Plans Completed

- Eastern Massachusetts ARES SET (Simulated Emergency Test) Preliminary Results from Saturday 11/14/20:
 - Done in coordination with a national Red Cross Exercise
 - Messages were sent to National Red Cross by Cape Cod ARES
 - Over 100 stations checked in over various nets including the Eastern Mass ARES Section Net, HF Net, and various local ARES group frequencies
 - Digital messages were sent by various Amateur Radio operators on the nets and various ARES groups:
 - Between the two winlink email addresses – 24 emails were sent



Remainder of 2020 and 2021 Eastern Mass ARES Plans

- Remainder of 2020 Eastern Massachusetts ARES Plans
 - Zoom Call with Braintree EMA to get them more involved in ARES/RACES/SKYWARN – Saturday 11/28/20 at 10 AM
 - SKYWARN Recognition Day (SRD) 2020 with adjusted format for COVID – Saturday 12/5/20 0000-2400 UTC
- 2021 Eastern Massachusetts ARES Plans
 - Conduct 2-3 section wide exercises
 - Review and determine the extent of the implementation of ARES-Connect (Volunteer management system)
 - Have a revision two of the section plan to cover ARES ID policy and make other minor revisions
 - Offer an online ARES training regimen via Zoom during the winter and early spring months
 - Continue robust support of the NWS Boston/Norton SKYWARN program including training sessions
 - Support Massachusetts RACES as MEMA and EMA officials time permits due to COVID
 - Support communications for local EMAs and NGOs where needed with COVID vaccination clinics

For More Information

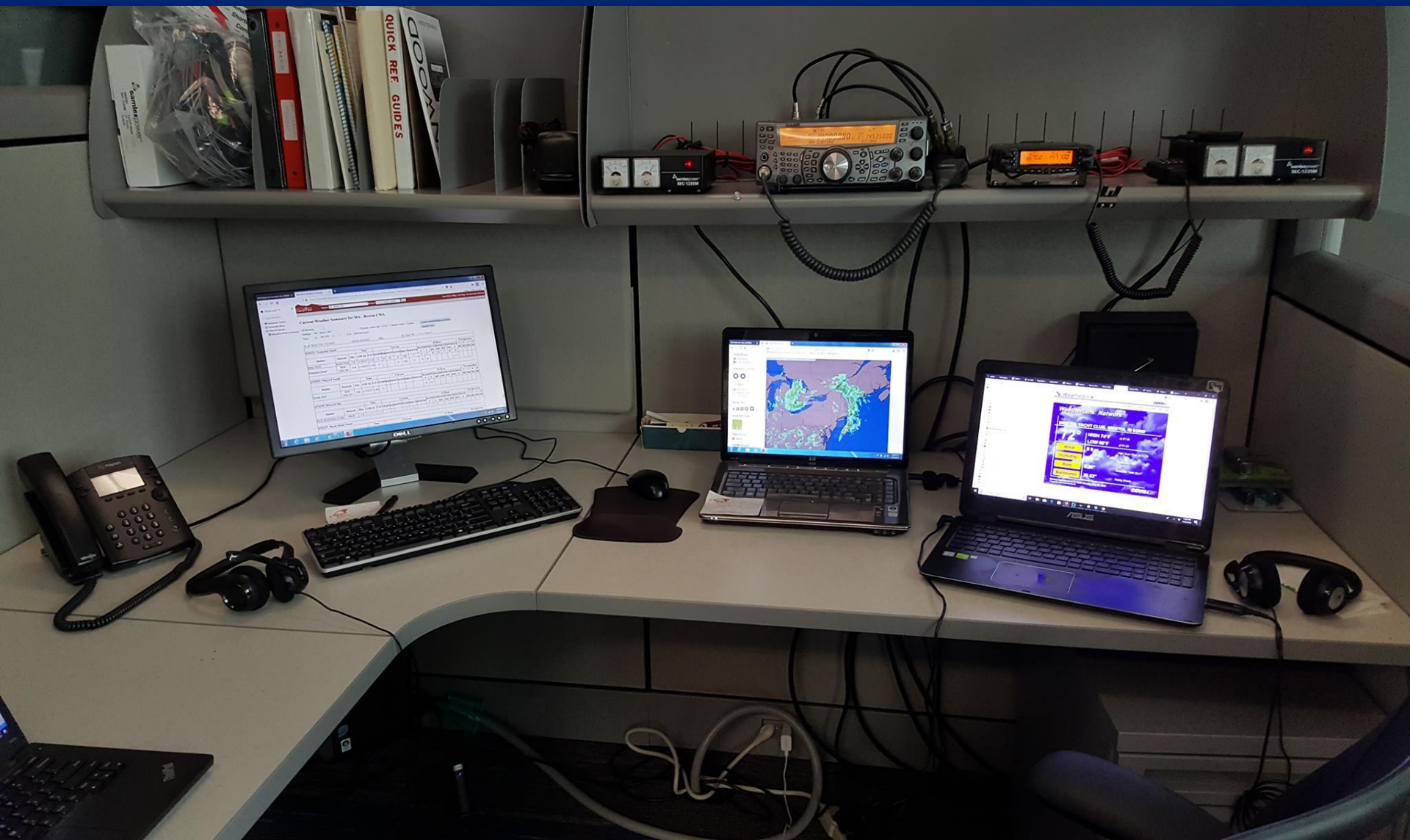
- For more information on the NWS Boston/Norton SKYWARN Program and Eastern Massachusetts ARES, check out the following links:
 - WX1BOX Home Page: <http://www.wx1box.org>
 - WX1BOX Facebook Page: <http://www.facebook.com/wx1box>
 - WX1BOX Twitter Feed: <http://www.twitter.com/wx1box>
 - NWS Boston/Norton SKYWARN Video Home Page: <http://video.nsradio.org>
 - Eastern Massachusetts ARES: <https://ema.arrl.org/ares>
 - Eastern Massachusetts ARES Facebook & Twitter Pages: <https://www.facebook.com/EMaARES> and https://twitter.com/ares_ema
 - ARES Plan info – ARRL web Story: <http://www.arrl.org/news/new-plan-aligns-ares-with-the-needs-of-served-agencies>
 - ARRL ARES Strategic Plan complete document: <http://www.arrl.org/ares-plan>

Thank You for your commitment to SKYWARN, ARES and Public Service



It makes a major difference
to the Amateur Radio
Service and the
community!!

WX1BOX, the Amateur Radio Station at NWS Boston/Norton



How You Can Help

- **Amateur Operators Can Help in the Following Ways**
 - Take the SKYWARN training class.
 - Check into nets by Stating your call, name, and location and if you're willing to investigate damage areas within a certain radius of where you're located.
 - Volunteer as a Net Control Station.
 - Volunteer to go out and look for areas for possible wind damage or large hail.
 - **Do NOT get in the way of Public Safety.**
 - Hams that work in Public Safety are encouraged to relay reports of wind damage and large hail via Amateur Radio.
 - Check with family and friends for possible severe weather if no reports are received on the air.
 - If you're not a trained spotter, ask NCS for reporting criteria info.

Supporting Public Safety Monitoring

- Monitoring Public Safety can be an excellent way to gather situational awareness/disaster intelligence and SKYWARN information.
 - It needs to be done properly. Knowing the difference between the initial dispatch versus the unit on scene reporting in on the situation.
 - Can be helpful in areas that need investigation for damage assessment purposes for the National Weather Service and other entities.
 - Acts as a tool to gather information that can be utilized initially with the understanding that it can change as responders gather what is happening on scene.
 - Helpful during public safety events to understand any issues public safety may be handling if there are enough Amateur Radio Operators to monitor while performing their assignments.

SKYWARN & Social Media Monitoring Update

- Social Media continues to be an increasing source of information and another means to gather damage reports and information.
 - WX1BOX Amateur Radio Facebook page has grown in the amount of 'likes'. (~3984 people 'like the page').
 - WX1BOX Twitter account extremely active with 15,000 followers.
 - Facebook and Twitter continue to offer an additional means to gather reports and info from people that see criteria info as well as for existing Amateur Operators and SKYWARN Spotters to report information where these means may be more convenient.
 - Remains a powerful way to attract new SKYWARN Spotters and Amateur Radio Operators.
 - Amateur Radio Operators are considered by FEMA's Craig Fugate 'the inventors of social media'. Our future in emergency communications is the continued creation of as well as management of social media/situational awareness and disaster intelligence.

2018 – MEMA RACES Survey

- As part of an initiative from the Massachusetts RACES Working Group – a RACES survey was sent out across the commonwealth to gauge RACES interest and here are the “rough” results:
 - 49 communities say YES they have a RACES Officer
 - 36 communities say no RACES Officer and YES to help finding one.
 - 31 communities say no RACES Officer and NO to help finding one.

116 Total communities

 - In February 2019 – an appeal for the communities interested in requiring a RACES Officer/RACES operators was sent out by various means
 - The RACES Radio Officer/Operator appointments are all handled at the local EMA Director’s discretion
 - EMA Directors can seek info and advice with others where they see fit