# Emergency Exercise Plan
## Simulated Exercise Test – Saturday, October 24, 2020
## Communications Functional Exercise
## 0800 to 1300
Updated: October 6, 2020 12:30 pm

**Planners**

| Position Title | Name | Agency | Contact Info |
|---|---|---|---|
| EMA Planner | Dale Rowley | Waldo Co EMA | emadirector@waldocountyme.gov |
| HAM Planner | Steve Hansen | Knox ARES | shansen@belljar.net |
| SHARES Planner | Steve Hansen | NCC AUX | shansen@belljar.net |
| ME Section Mgr | Bob Gould | Maine ARRL | N1wjo@maine.rr.com |
| ME Section EC | David Lowe | Maine ARRL | We1u.david@gmail.com davidlowemesec@gmail.com |
| State EMA | Steven Emond | MEMA | Steven.Emond@maine.gov |

**Planning Activities**

| Meeting Title | Agenda | Date | Time | Location |
|---|---|---|---|---|
| Initial Planning Meeting | • Identify Participants/Units<br>• Approve Mission Statement<br>• Approve Exercise Objectives<br>• Approve Scenario Narrative<br>• Approve Comm Methods to Test<br>• Approve Schedule | 8/5/20 | 10am | Zoom |
| Mid Planning Meeting | • Approve Tasks to be completed<br>• Add any additional Participants | 8/31/20 9/8/20 | 1 pm 6 pm | Zoom |
| Final Planning Meeting | • Finalize Plan<br>• Final Questions | 10/14/20 | 1 pm | Zoom |

**Emergency Functions to Test**

- Communications – Emergency Management
- Communications – Amateur Radio
- Communications - SHARES Winlink

**Exercise Mission Statement**

The purpose of the disaster exercise is to test and evaluate the Communications function by involving State and Local Emergency Management and Amateur Radio communication units in a functional exercise simulating a disaster incident that involves Maine.

1

**Exercise Objectives**

- Demonstrate the ability to operate during a total grid failure emergency.

- Demonstrate the ability to share disaster information between the various EOCs during a cascading disaster event where communications assets are diminished.

  o Test which County EOCs can transmit off the Statewide EMA Harris radio channel.
  o Test which County EMA repeaters can be reached by each County EOC.
  o Test which RegionNets can be reached by each County EOC.
  o Test the satellite phones
  o Test the NAWAS system
  o Test the ability to successfully transmit Radiograms by VHF simplex relays between widely separated County EOCs.
  o Test the ability to communicate between town, county and hospital radio stations.
  o Test the ability to use digital NBEMS and Packet Radio to relay messages.
  o Test the ability to utilize SHARES Winlink to relay messages.

- Provide training experience for radio operators using standard procedures and a variety of modes to communicate under simulated emergency conditions.

- Test amateur radio communications between County EOCs and amateur radio operators from their home stations for proper operation on 80m, 40m, 2m and 70 cm.

**Scenario**

As Hurricane Victor, a huge Category 3 storm, churns its way up the East Coast towards New England, a rash of cyber incidents begin to plague various telecommunications resources.

As the effects of the hurricane reach the Maine coast, a major cyber-attack on the landline telephone systems in New England occurs. This has the effect of limiting all phone calls to within a local exchange. Cell phone service and internet service cease.

Someone breaks into the MSCOMMNET radio hut on Sugarloaf Mountain and downloads a vicious, fast-moving, denial of service virus onto the computer system which spreads throughout the MSCOMMNET system. Meanwhile, several radio towers around the state are damaged by high winds from the hurricane.

**Exercise Points of Contact**

| Entities | POC | Phone Info | Call Sign | EMA Voice | VHF Voice | HF Voice | Win Link | Packet | NB EMS | EOC open? |
|---|---|---|---|---|---|---|---|---|---|---|
| Androscoggin | Paul Leonard | 784-0147 | KE6PIJ | X | X | | | | | |
| Androscoggin | Keith Anoe | | KE4UCW | | | | | | | Yes |
| Androscoggin | Pete Thuotte | 212-6603 | N1ZRL | | X | X | X | X | | |
| Aroostook | Darren Woods | 493-4328 | KC1ERZ | X | X | | | | | |
| Aroostook | Roy Woods | 492-7532 | KB1WGN | X | X | | ? | | | Yes |
| Aroostook | John Gibson | 493-4328 | | X | | | | | | |
| Cumberland | Jim Fraser | 892-6785 | KB1SDK | X | X | | | | | |
| Cumberland | Mike Mooney | | WZVAN | | X | | | | | Yes |
| Cumberland | Chris Wheeler | 892-6785 | | X | | | | | | |
| Franklin | Tim Hardy | 778-5892 | KB1SBT | X | X | | | | | Yes |
| Franklin | Russ Norris | 778-9930 | KA1FKC | | X | | | | | |
| Hancock | Andy Sankey | 667-8126 | W1AXS | X | X | X | X | X | X | Yes |
| Hancock | Andrew Braley | 460-5158 | KA1EMS | X | X | | | | | |
| Kennebec | Paul Doucette | 649-3093 | KB1OLK | ? | X | | | | | |
| Kennebec | Mike Coulombe | | KB1UTD | | | | | | | Yes |
| Kennebec | Mike Ellis | | W1MAE | | | | | | | |
| Knox | Ray Sisk | 594-5155 | WA4GSB | X | X | | | | | |
| Knox | Candice Richards | 594-5155 | KC1JRD | X | X | | | | | |
| Knox | Steve Hansen | 706-6967 | KB1TCE | | X | X | X | X | X | Yes |
| Knox | Michael Courtenay | 699-9844 | KB1DBL | | X | | | | | |
| Knox | Richard Bates | 200-4064 | WD1O | | | | | X | | |
| Lincoln | Melissa Temple | 882-7559 | | X | | | | | | |
| Lincoln | Jose Douglas | 677-0008 | KB1TCD | | X | X | X | | X | Yes |
| Lincoln | Joe Devonshire | 549-0061 | AB1YO | | X | | | | | |

| Entities | POC | Phone Info | Call Sign | EMA Voice | VHF Voice | HF Voice | Win Link | Packet | NB EMS | EOC open? |
|---|---|---|---|---|---|---|---|---|---|---|
| Whitefield FD | Richard Beausoliel | 624-1572 | N1REX | X | X | X | X | X | | Yes |
| Oxford | George Jones III | 603-475-2930 | W2GPJ | | X | | | | | No |
| Oxford | Wayne Strout | 388-2915 | N1YIS | | X | X | | | | |
| Penobscot | Bradley Nuding | 945-4750 | KC1HVP | X | X | | | | | No |
| Piscataquis | Tom Capraro | 564-8660 | KB1ZQY | X | X | | | | | |
| Sagadahoc | Grainne Shaw | 443-8210 | | X | | | | | | Yes |
| Sagadahoc | Steve Kercel | 729-4504 | AA4AK | | X | X | | | | |
| Sagadahoc | Harry McNelley | 837-2182 | N1TTT | | | | | | | |
| Somerset | Mike Smith | 474-6788 | | X | | | | | | Yes |
| Somerset | Dave Corson | 431-1985 | K1DWC | | X | | | | | |
| Somerset | Steve Roderick | | | | | | | | | |
| Waldo | Dale Rowley | 338-3870 | KC1LKI | X | X | | | | | Yes |
| Waldo | Brit Rothrock | 338-3870 | AB1KI | | X | X | X | X | X | |
| Waldo | Bob LaFontaine | 323-0086 | N1PBY | | X | | | | | |
| Washington | Mark Burgess | 271-0078 | K1HF | X | X | X | X | X | | Yes |
| York | Dave Francoeur | 324-1578 | KB1HUU | X | X | | | | | Yes |
| York | Neil Tolman | 590-4896 | K1NBT | ? | X | X | X | | | |
| MEMA | Steve Mallory | 557-3671 | | | | | | | | Yes |
| MEMA | Steve Emond | 557-3673 | | X | | | | | | |
| MEMA | Steve Soucy | 620-2414 | | | | | | | | |
| MEMA | Bob Gould | 415-5419 | N1WJO | | X | | | | | |
| Army NG | Jim Belanger | 626-4249 | | | X | X | X | | | Yes |

RED = County EMA Staff

**County EMA Communication Methods to Test**

The following list will be used to test and record the level of success of the following means of EMA communications:

| 2-way radio | NAWAS | Satellite Phones |

**Amateur Radio Communication Means to Test**

The following list will be used to test and record the level of success of the following means of Amateur Radio communications:
- Voice with other Counties on Amateur VHF repeater systems
- Digital data with other Counties on Amateur VHF repeater systems and packet network.
- Voice with other Counties on Amateur VHF using simplex.
- Voice with other Counties on Amateur HF systems
- Digital data with other Counties on Amateur HF systems

**Other Tests**

Throughout the Exercise, feel free to test EMA and Amateur radio systems with your various town EOCs, hospitals and Amateur Radio Operators at their home stations.

**Schedule**

**0800 – 1000      Hurricane Effects Being felt in Maine** (Phone and Internet Out)

| Cat | Action | Task |
|-----|--------|------|
| EMA | Perform radio checks on any other counties' radio repeaters. | 1 |
| EMA | Perform radio checks with MEMA on all RegionNet Towers in your area | 2 |
| HAM | Perform radio checks with other Counties on Amateur VHF repeater systems | 6 |
| HAM | Send digital data to other Counties on Amateur VHF repeaters (NBEMS) | 7 |
| HAM | Send Digital Data through the Winlink System | 8 |
| HAM | Send Ditigal Data through the Maine Packet Network | 9 |

**1000 – 1200      High Winds and Long Term Grid & Internet Failure** (Repeaters offline)

| Cat | Action | Task |
|-----|--------|------|
| EMA | Alternate NAWAS Warning Point Roll Call with Counties by State EOC. | 3 |
| EMA | Call the State EOC by satellite phone. | 4 |
| EMA | Perform radio checks with your Town EOCs and critical infrastructure | 5 |
| HAM | Perform a voice message relay (Radiograms) through other counties. | 10 |
| HAM | Perform voice radio checks with other Counties on Amateur HF. | 11 |
| HAM | Perform voice radio checks with nearby Counties by Amateur VHF simplex. | 12 |
| HAM | Perform voice radio checks with hospitals and shelters in your county | 13 |
| SHARES | Send Check In form via SHARES Winlink to specified collection point. | 14 |

## TASK 1 - EMA 2-way radio Task – County Repeaters

Several of the County EMA offices operate radio repeaters.  During the exercise, we would like each county to attempt to transmit on another county's repeater.  These repeaters are shown below.  Make sure that you have a radio programmed with the frequencies before the exercise.

If you are having difficulty reaching a tower, that you think you should be able to reach, go ahead and make a telephone call to the respective county EMA to discuss what might be the issue (wrong frequencies, PL tone, or no one was listening, etc).

| Time to Test | Repeater to Test | By these Counties |
|---|---|---|
| 0830 | Harris Mountain | Franklin, Hancock, Kennebec, Knox, Lincoln, Penobscot, Piscataquis, Somerset |
| 0845 | WOEMA | Cumberland, Hancock, Kennebec, Knox, Lincoln, Penobscot, Piscataquis, and Somerset |
| 0900 | FNEMA Mosher | Cumberland, Somerset |
| 0905 | FNEMA Mt Blue | Cumberland, Piscataquis |
| 0900 | HKEMA | Penobscot, Piscataquis, and Waldo |
| 0900 | STEMA | Franklin, Kennebec and Piscataquis |
| 0915 | KCEMA North | Somerset, Piscataquis, and Waldo |
| 0920 | KCEMA Central | Waldo |
| 0930 | KCEMA South | Cumberland, Knox, and Lincoln |
| 0945 | LNEMA | Cumberland, Kennebec, Knox, Piscataquis, and York |
| 0950 | YCEMA | Cumberland |

Use the EMA Communications Worksheet in Annex 1 to record your results.

Please see the EMA Repeater Programming Schedule in Annex 3.

Note: The EMA repeater located on Harris Mountain in Dixmont should not be mistaken for MEMA ALL's channel on the Harris MSCOMNET Radio.

**TASK 2 - EMA 2-way radio Task – Maine RegionNet Repeaters**

Each county EOC should attempt to complete a radio check on at least three Maine RegionNet repeaters.   In order to lessen the impact on the MEMA Radio Room and lesson the time we are tying up the repeaters, we will use the following schedule:

| Region 1 | | |
|---|---|---|
| **Time to Test** | **County** | **Repeater/Towers to Test** |
| 0800 | York | York, Mt Agamenticus and Ossipee Mtn |
| 0810 | Cumberland | Gray and Pleasant Mtn |
| 0820 | Androscoggin | Spruce Mtn and Gray |
| 0840 | Franklin | West Kennebago |
| **Region 2** | | |
| **Time to Test** | **County** | **Repeater/Towers to Test** |
| 0850 | Sagadahoc | Huntoon Hill, Whitten Hill, and Granite Hill |
| 0900 | Lincoln | Huntoon Hill, Whitten Hill, and Granite Hill |
| 0910 | Knox | Coggins Hill, Huntoon Hill, and Granite Hill |
| 0920 | Kennebec | Augusta, Granite Hill, and Cook Hill |
| 0930 | Franklin | Sugarloaf Mtn and Mt. Blue |
| 0940 | Somerset | Eaton Mtn, M.t Blue, and Sugarloaf Mtn |
| 0950 | Waldo | Mt. Ephraim, Coogins Hill and Cook Hill |
| 1000 | Hancock | Mt. Ephraim |
| 1005 | Cumberland | Whitten Hill |
| 1010 | Androscoggin | Whitten Hill and Granite Hill |
| **Region 3** | | |
| **Time to Test** | **County** | **Repeater/Towers to Test** |
| 1025 | Hancock | Cadillac Mtn and Bald Mountain |
| 1035 | Penobscot | Bomarc, Passadumkeag, and Garland |
| 1045 | Piscataquis | Garland, Big Moose Mtn, and Spencer Mtn |
| 1055 | Washington | Cooper, Cadillac Mtn, and Musquash Mtn |
| **Region 4** | | |
| **Time to Test** | **County** | **Repeater/Towers to Test** |
| 1120 | Aroostook | New Sweden, No 9 Mtn, and Ashland |

Use the EMA Communications Worksheet in Annex 1 to record your results.

**TASK 3 - NAWAS**

All the Counties (except Kennebec) have a NAWAS (National Warning System) station located in either the EMA office, the County Communications Center, the Sheriff's Office or both. The State EOC will perform a NAWAS Alternate Warning Point test at **12:00 noon** on October 24th.

| County | Station in EMA | Station in RCC or SO |
|---|---|---|
| Androscoggin | Yes | Yes |
| Aroostook | Yes | Yes |
| Cumberland | Yes | No |
| Franklin | Yes | Yes |
| Hancock | No | Yes |
| Kennebec | No | No |
| Knox | No | Yes |
| Lincoln | No | Yes |
| Oxford | No | Yes |
| Penobscot | No | Yes |
| Piscataquis | No | Yes |
| Sagadahoc | Yes | Yes |
| Somerset | No | Yes |
| Waldo | Yes | Yes |
| Washington | No | Yes |
| York | Yes | Yes |
| NG JOC | Yes | |

Use the EMA Communications Worksheet in Annex 1 to record your results.

**TASK 4 - Satellite Phones**

All County EMAs and the Maine National Guard (except Penobscot County) have commercial, satellite telephones. Each County should contact the State EOC.  The number is: _____ .

Try to limit the time on the phone; we want to make sure that every phone works, not pass a lot of information.

The time frame for the satellite phone call will be: _____.
Use the EMA Communications Worksheet in Annex 1 to record your results.

**TASK 5 – EMA Radio Checks with Local Agencies**

If you have the time and interest, we recommend that each county EMA perform radio checks with local hospitals, critical infrastructure and Town EOC/Fire Departments.  See if you can use simplex (no repeaters) to contact these agencies.  You will need to coordinate with your local agencies to make sure they will be available.  This will not be recorded for the Statewide SET.

**TASK 6 – Amateur VHF Repeater radio checks with other Counties**

This task is a bit of a radio contest.  It involves amateur radio operators trying to see how many County EOCs or County ARES members that they can contact.  Record who you contacted and let us know!  Record the County and the call signs reached. You can use any form you want to collect this information or you can use something like the below chart.

| Call Sign of Originator | | Location  (Town/County) | |
|---|---|---|---|
| **Time** | **Call Sign** | **Location** | **Frequency** |
|  |  |  |  |
|  |  |  |  |

*Use the 2020 Maine ARES Frequencies Chart Primary Repeater.*

**TASK 7 - Send digital data to other Counties on Amateur VHF repeaters (NBEMS)**

This should be done using VHF simplex within a county or between two or more counties. Specifics will be determined by the involved counties and included in their plans.
- Use voice on the repeater to coordinate.
- Transmit using PSK250RC5.
- Use fldigi in combination with flmsg to send a form. Suggestions include the ICS-213 or the weather report form (native to flmsg).

Use the Amateur Radio Communications Worksheet in Annex 2 to record your results.

**TASK 8. Send Digital Data through the Winlink System (HF and/or VHF)**

Each participating Winlink capable station will send a Check In form to KB1TCE@winlink.org

Any permitted HF mode may be used. If the sending station has access to a packet RMS gateway, that may be used instead of or in addition to HF. Telnet (internet) is not to be used.

This may be done at any point during the exercise.

The form may be found from the New Message screen in Winlink Express under:
- Select Template
- Standard Templates
- General Forms
- Winlink Check In.txt

Subtitle the form "Maine Amateur Radio SET" by pressing the Setup button and entering the text in the text box.

**TASK 9. Send Digital Data through the Maine Packet Network**

For those stations that have packet access to the Maine Packet Network, please submit a Winlink Express Check In form addressed to WD1O. Subtitle the form "Maine Packet Radio Network SET".

Stations that do not have a packet node in their area my connect into the network using Winlink Express by sending the Check In form to WD1O and connecting to WD1O-2. WD1O scans the following frequencies using ARDOP, VARA and Pactor. All frequencies are center (dial + 1500 Hz).

3589.500 kHz
7104.500 kHz
14106.700 kHz

This task may be completed at any point during the exercise.

**TASK 10 - VHF Simplex Relay Task**

The idea of the simplex relays sort of recreates the original raison d'être for the ARRL given that HF in those days wasn't reliably good for more than intra-regional communications.

There are two aspects to this task:

1. To encourage cooperation and coordination between ham radio operators throughout the State. This exercise will require significant advance coordination between stations within counties and county to county.

2. To demonstrate the ability to send, relay and receive messages with no errors.

- Messages will use the standard ARRL/RRI radiogram format. (**Annex 4**)
- Each message will be from a county EMA director to another director (e.g. director for York to director for Aroostook).
- Each end point should be an EMA. If an EMA is closed due to the COVID situation, the message can be handed to a nearby operator.
- 2m/70 cm voice only. Use the Maine ARES simplex frequencies for VHF.
- Any fixed, mobile or portable station may be used.
- Portable repeaters are permissible, but only within a county.
- Messages will be pre-written and sent to the originating agency before the exercise by the Eval Team. At the start of the exercise, the director will hand the message to the originating ham radio operator.
- At the end of the chain, the receiving operator will hand the message to the addressee.
- Each station in the relay will submit a copy of the message as they received it. This will help determine where errors crept in and, if the message did not propagate through the entire path, we will have the message as it arrived at the intermediate point.
- Message originator/addressee will be announced well before the exercise so the various groups will have time to establish the relay points.
- Each station in the chain will submit their copy via email to kb1tce@belljar.net. Note the time that the message was received and transmitted.
- Origination and Destination stations must be at or in close proximity to the physical location of the county EOC.
- Intermediate points need to be within the noted counties, precise locations to be determined by the groups performing the relays.
- If it is not possible to get from one relay point to the next, as specified, an intermediate relay may be established in an adjacent county.
- **Use the 2020 Maine ARES Frequencies Chart Primary frequency for each County.**

Here is an example of possible message content:

1 TEST P XXXXXX 19 ALFRED ME 0800L OCT 24
DARREN WOODS
AKEMA
158 SWEDEN ST
CARIBOU ME 04736
BT
RANDOM CHARACTER EXERCISE SEQUENCE FOLLOWS
X ARZGB JRUPF 54DQT ZVOTO
R95QZ X END OF RANDOM
CHARACTER MESSAGE X REGARDS
BT
ARTHUR W CLEAVES YKEMA
AR

The above format is easy to check and will demonstrate competence in formal message passage, phonetics, etc.

*Note: "XXXXXX" indicates the call sign of the originating station.*

# RADIOGRAM

| NUMBER | PRECEDENCE | HX | STATION OF ORIGIN | CHECK | PLACE OF ORIGIN | TIME FILED | DATE |
|---|---|---|---|---|---|---|---|
| 1 | TEST PRIORITY | | W1ABC | 19 | ALFRED ME | 0800L | OCT24 |

| TO | THIS RADIO MESSAGE WAS RECEIVED AT |
|---|---|
| DARREN WOODS<br>AKEMA<br>158 SWEDEN ST<br>CARIBOU ME 04736 | W1ABC<br><br>ALFRED ME |

PHONE NUMBER

RANDOM CHARACTER EXERCISE SEQUENCE FOLLOWS
X ARZGB JRUPF 54DQT ZVOTO
R95QZ X END OF RANDOM
CHARACTER MESSAGE X REGARDS

Signature: ARTHUR W CLEAVES YKEMA

**Radiogram Routes**

| | |
|---|---|
| **1** | York EMA (Alfred) - Cumberland - Androscoggin - Sagadahoc - Lincoln - Knox - Waldo - Hancock - Washington EMA (Machias) |
| **2** | Lincoln EMA (Wiscasset) - Knox - Waldo - Penobscot EMA (Bangor) |
| **3** | Oxford EMA (So Paris) - Franklin - Somerset - Piscataquis - Penobscot - Aroostook EMA (Caribou) |
| **4** | Kennebec EMA (Augusta) - Lincoln - Knox - Waldo EMA (Belfast) |
| **5** | Hancock EMA (Ellsworth) - Washington - Aroostook EMA (Caribou) |
| **6** | Lincoln EMA (Wiscasset) - Knox - Waldo - Hancock - Washington (Machias) |

*See map on following page.*

**Recommended references and forms**:

Traffic Operations Reference "the Pink Card":
http://radio-relay.org/wp-content/uploads/2017/05/RRI-TRAFFIC-OPERATIONS-AID-1720r3.pdf

Radiogram form: http://radio-relay.org/wp-content/uploads/2016/11/RRI-Radiogram-Form-1602.pdf

RRI Message Log:
 http://radio-relay.org/wp-content/uploads/2020/03/Exercise-Message-Log-2019-2-1-Approved.pdf

**Training Videos**

Matthew Curtin KD8TTE in Ohio has been putting together a series of YouTube videos on message relaying.

https://www.youtube.com/playlist?list=PLvYr6g3seaV36sBZUvCV7Y9nibFVQAmPF

**#3 Originating a message for transmission by radio**.
https://www.youtube.com/watch?v=2ECeXtc6yFc&list=PLvYr6g3seaV36sBZUvCV7Y9nibFVQAmPF&index=10&t=0s

**#9 Avoiding Common Mistakes in Message Relay**
https://www.youtube.com/watch?v=aj6CugRcgE8&list=PLvYr6g3seaV36sBZUvCV7Y9nibFVQAmPF&index=7

**#10 Receiving Radiograms from a National Traffic System Net**
https://www.youtube.com/watch?v=b2MdcnwDdEg&list=PLvYr6g3seaV36sBZUvCV7Y9nibFVQAmPF&index=9&t=0s
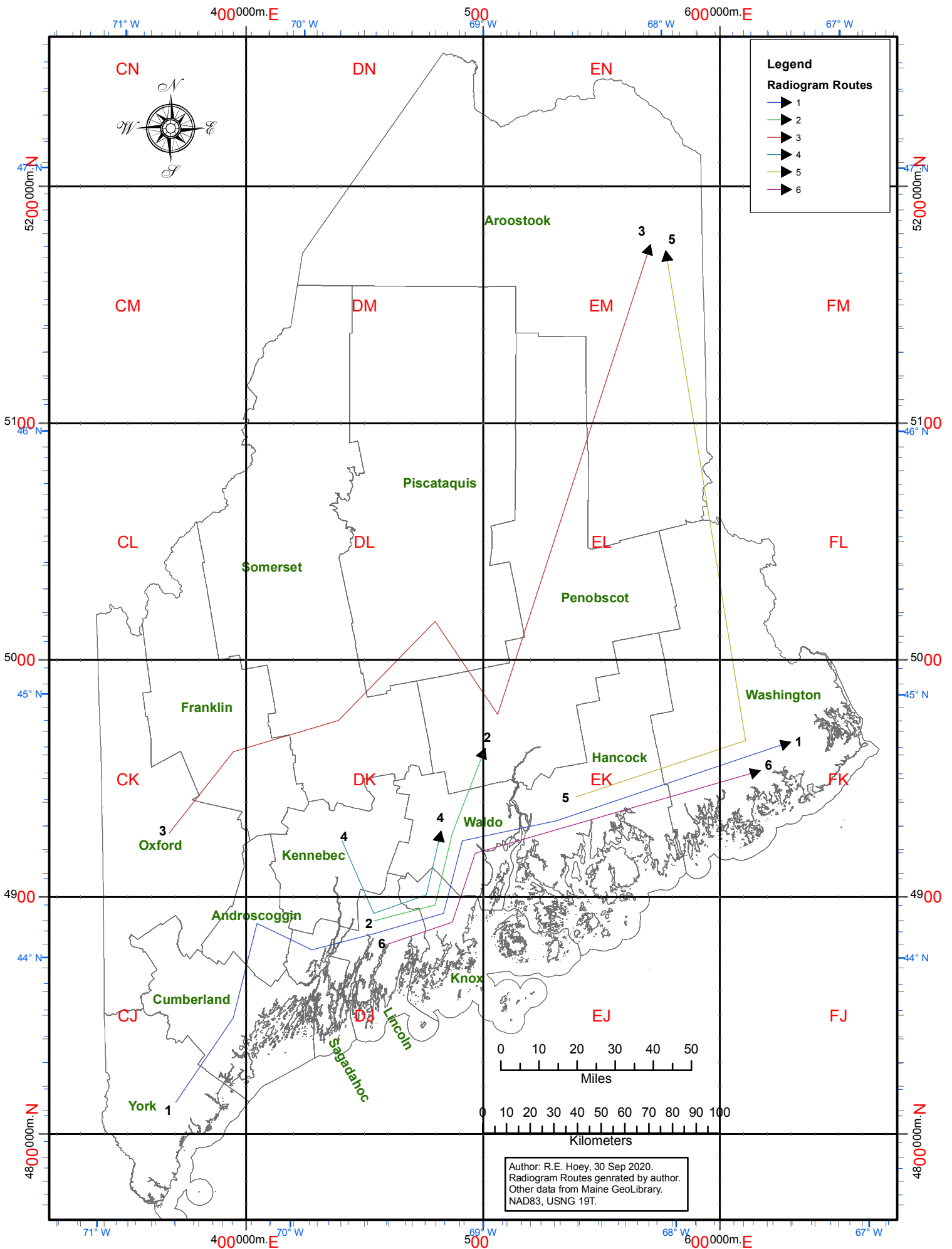
**#8 Hip Pocket Training: Relay, Don't Edit**
https://www.youtube.com/watch?v=TcNj2KET3v4&list=PLvYr6g3seaV36sBZUvCV7Y9nibFVQAmPF&index=7&t=0s

**#18 Radiogram Punctuation**
https://www.youtube.com/watch?v=3pGy7vS3Lo8&list=PLvYr6g3seaV36sBZUvCV7Y9nibFVQAmPF&index=12&t=0s

# Radiogram Routes for 2020 SET



Author: R.E. Hoey, 30 Sep 2020.
Radiogram Routes genrated by author.
Other data from Maine GeoLibrary.
NAD83, USNG 19T.

## TASK 11 – Voice Radio Checks with other Counties on Amateur HF

This task is a bit of a radio contest. It involves amateur radio operators trying to see how many County EOCs or County ARES members that they can contact. Record who you contacted and let us know! Record the County and the call signs reached. You can use any form you want to collect this information or you can use something like the below chart.

| Call Sign of Originator | | Location  (Town/County) | |
|---|---|---|---|
| **Time** | **Call Sign** | **Location** | **Frequency** |
| | | | |
| | | | |

**Use 7262.0 kHz**.

## TASK 12 – Voice Radio Checks with nearby Counties on Amateur VHF simplex

This task is a bit of a radio contest. It involves amateur radio operators trying to see how many County EOCs or County ARES members that they can contact. Record who you contacted and let us know! Record the County and the call signs reached. You can use any form you want to collect this information or you can use something like the below chart.

| Call Sign of Originator | | Location  (Town/County) | |
|---|---|---|---|
| **Time** | **Call Sign** | **Location** | **Frequency** |
| | | | |
| | | | |

**Use the 2020 Maine ARES Frequencies Chart Primary frequency for each County.**

## TASK 13 – Voice Radio Checks with hospitals and shelters in your County

If you have the time and interest, we recommend that each county EOC or ARES members perform radio checks with local hospitals and local shelters. See if you can use simplex (no repeaters) to contact these agencies. You will need to coordinate with your local agencies to make sure they will be open so that you can deploy a Ham radio Operator to those locations. This will not be recorded for the Statewide SET.

Frequencies will be locally determined.

**TASK 14 – SHARES Winlink Task**

The SHAred RESources HF Radio Program is part of the Cybersecurity and Infrastructure Security Agency (CISA) under DHS. A number of Maine entities are SHARES members. SHARES uses a broad range of data modes as well as voice. The most common data methods include Winlink, NBEMS and ALE.

Stations that are registered SHARES members and who have a SHARES Winlink account are asked to submit a Winlink Express Check In form to NCS915@winlink.org. This is the same form as used for the Amateur Radio Winlink and Packet tasks. The form subtitle should be "Maine SHARES Winlink Test."

Please note that anyone who is authorized by the agency may operate on SHARES channels. They do not have to have an amateur license. This would be a good task for regular agency employees to participate in.

For this task, HF may be used (Pactor 3/4) or telnet. The message may also be sent at any time on the Thursday or Friday before the exercise.

For Winlink operators that are not affiliated with SHARES. The Amateur and SHARES Winlink systems are interoperable between the two services. Ham Winlink operatorsmay submit the SHARES Winlink Check In form.  Simply address your message to NCS915.

**Exercise Guidelines**

- All message traffic that transmits simulated disaster data should be preceded by and end with "This is an Exercise." Simple radios checks do not require "This is an Exercise."

- If possible, operate on Emergency Power sources.

- If you are having difficulties trying to reach someone by any method, feel free to take an exercise timeout and call them on the landline telephone to coordinate a resolution. The most important thing is to make successful contacts using the emergency communications.

## (Annex 1) EMA COMMUNICATIONS WORKSHEET

| Means <br> EMA Radio, Ham Voice, Ham Data, NAWAS, Satellite | Channel <br> Name or Frequency | Readability <br> Readable or Unreadable | Signal Strength <br> Strong or Weak | Contact Made <br> Yes or No |
|---|---|---|---|---|
| **Your County Name Here** | | | | |
| **EMA Radio Repeaters** <br> (Harris, RegionNet, Other County Repeaters) | Harris Mtn | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| **EMA Simplex** <br> (Other Counties' Simplex Channels) | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

| System | County Called | | Success? | |
|---|---|---|---|---|
| **NAWAS** | | | | |
| **Satellite Phone** | | | | |

When completing the NAWAS and Satellite Phone Test, pick the County that follows you alphabetically. If you get no answer, try the next alphabetic County. York will call Cumberland. For your own purpose, record on a separate sheet, those towns, hospitals, shelters, CAP, VOAD and others that you successfully contacted.

## (Annex 2) AMATEUR RADIO COMMUNICATIONS WORKSHEET

| Means<br><br>EMA Radio, Ham Voice, Ham Data, NAWAS, Satellite | Channel<br><br>Name or Frequency | Readability<br><br>Readable or Unreadable | Signal Strength<br><br>Strong or Weak | Contact Made<br><br>Yes or No |
|---|---|---|---|---|
| **Your County Name Here** | | | | |
| **Voice<br>HAM VHF Radio Repeaters** | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| **Digital Data (Packet and/or SHARES)** | | | | |
| | | | | |
| | | | | |
| **Voice<br>HAM VHF Simplex Radio** | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| **Voice<br>HAM HF Radio** | | | | |
| | | | | |
| | | | | |
| | | | | |

Print off additional worksheets, as needed

**Annex 3 – EMA Repeater Programming Schedule**

| Repeater Name | Rx | PL | Tx | PL |
|---|---|---|---|---|
| FN Mosher | 158.8275 | D612 | 154.8525 | D612 |
| FN Mt Blue | 158.8275 | D624 | 154.8525 | D624 |
| HKEMA | 155.8350 | 151.4 | 151.2050 | 127.3 |
| KCEMA North | 155.8050 | D612 | 151.2500 | D612 |
| KCEMA Central | 155.8050 | D712 | 151.2500 | D712 |
| KCEMA South | 158.2350 | 123.0 | 151.2500 | 123.0 |
| LNEMA | 155.9175 | 229.1 | 150.7750 | 229.1 |
| PS SO | 155.8425 | 136.1 | 153.7625 | 136.1 |
| STEMA | 154.9950 | D731 | 153.9650 | D731 |
| WOEMA | 156.1425 | 123.0 | 158.9700 | 123.0 |
| HARRIS Mountain | 156.1725 | 123.0 | 159.0825 | 123.0 |
| YCEMA | 159.7800 | 156.7 | 159.7800 | 156.7 |

# RADIOGRAM

| MSG. NO. | PRECEDENCE | HX | STATION OF ORIGIN | CHECK | PLACE OF ORIGIN | TIME (UTC) | DATE |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

TO: _____

_____

_____

_____

_____

MESSAGE:

_____ _____ _____ _____ _____

_____ _____ _____ _____ _____

_____ _____ _____ _____ _____

_____ _____ _____ _____ _____

_____ _____ _____ _____ _____

FROM (SIGNATURE): _____

_____

Form 1602

| RECIVED FROM (CALL) | TIME | DATE | TRANSMITTED TO (CALL) | TIME | DATE |
|---|---|---|---|---|---|
| | | | | | |

# RADIOGRAM

| MSG. NO. | PRECEDENCE | HX | STATION OF ORIGIN | CHECK | PLACE OF ORIGIN | TIME (UTC) | DATE |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

TO: _____

_____

_____

_____

_____

MESSAGE:

_____ _____ _____ _____ _____

_____ _____ _____ _____ _____

_____ _____ _____ _____ _____

_____ _____ _____ _____ _____

FROM (SIGNATURE): _____

_____

Form 1602

| RECIVED FROM (CALL) | TIME | DATE | TRANSMITTED TO (CALL) | TIME | DATE |
|---|---|---|---|---|---|
| | | | | | |

Radio Relay International (RRI) is a nonprofit, public benefit corporation dedicated to providing emergency communications services. RRI operates 365 days a year, 24-hours per day. During normal conditions, RRI conveys routine "telegram" type messages on behalf of both radio amateurs and the public. These routine messages ensure that our network infrastructure is maintained in operational readiness to transition into emergency operations during major natural or technological disasters.

In time of emergency, RRI networks are available to support local, state and Federal emergency management efforts, relief agencies and individuals isolated by disaster or communications outage. Messages conveyed via RRI are conveyed free-of-charge and on a voluntary basis; therefore, no guarantee of accuracy or timeliness of delivery can be provided.

FCC licensed radio amateurs interested in volunteering with Radio Relay International are encouraged to review our training material to properly prepare themselves to convey important emergency messages when needed. Those who are not radio amateurs are encouraged to file a reply message when appropriate. It may also be helpful to retain the name and contact information of the radio amateur delivering this message should it be needed in time of emergency.

Radio Relay International: www.radio-relay.org info@radio-relay.org

RRI Form 1602

| Radio Relay International - Exercise Message Log | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Please print neatly - All data must be legible. | | | Submit log within 7 days of exercise conclusion. | | | | | | |
| | | | | | | | | | |
| Name:_____ | | | | Call:_____Exercise Date:_____(UTC) | | | | | |
| | | | | | | | | | |
| **Msg No.** | **Originator:** | **Transmited To:** | **DTG** | **Received From:** | **DTG** | **Relayed To:** | **DTG** | **Delivered To:** | **DTG** |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

# Maine EMA/RACES Radio Network



**Legend**
- EMA Repeaters
- MSCN Repeaters
- Ham 2M Repeaters
- EMA EOCs

DRAFT

DRAFT

CN

DN

EN

CM

DM

Aroostook

EM

FM

CL

DL

Piscataquis

EL

FL

Somerset

Penobscot

CK

Franklin

DK

Kennebec

Waldo

Hancock

EK

Washington

FK

Oxford

Androscoggin

Lincoln

Knox

Sagadahoc

Cumberland

DJ

EJ

FJ

CJ

York

CH

DH

FH

0 10 20 30 40 50
Miles

0 20 40 60 80 100
Kilometers
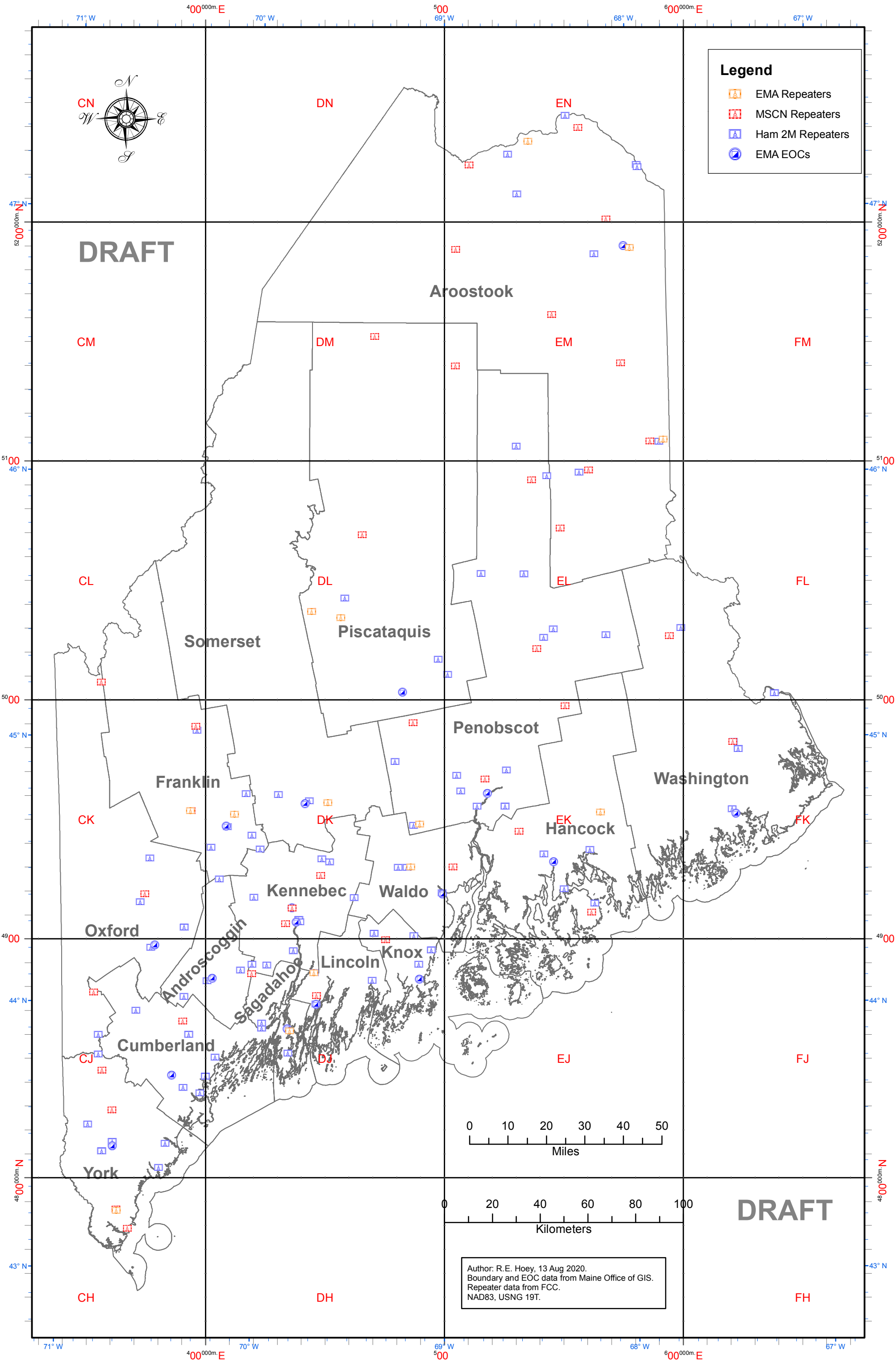
# 2020 Maine ARES Frequencies

| VHF/UHF | | | | | | | |
|---|---|---|---|---|---|---|---|
| **County** | **Mode** | **Primary** | **Secondary** | **Tertiary** | **Primary Repeater** | **Secondary Repeater** | **Notes** |
| Androscoggin | Analog | 146.460 | 147.540 | 146.430 | 146.610(88.5Hz) | 147.315 (103.5) | |
| Aroostook | Analog | 146.475 | 147.510 | 146.505 | 146.730 | | |
| Cumberland | Analog | 146.415 | 147.525 | 146.535 | 146.730 (100.0) | | |
| Cumberland-ECT | Analog | 146.580 | 146.595* | 147.585 | 147.090 (100.0) | UHF x-band: 446.500 | |
| Franklin | Analog | 146.535 | 147.570 | 146.580 | 147.180 (123.0) | | |
| Hancock | Analog | 146.565 | 147.495 | 146.535 | 146.910 (151.4) | | |
| Kennebec | Analog | 147.480 | 146.475 | 147.450 | 145.390 (100.0) | | |
| Knox | Analog | 147.540 | 146.475 | 147.450 | 147.060 (91.5) | 145.490 (91.5) | Linked |
| Lincoln | Analog | 147.510 | 146.505 | 147.450 | 146.985 (136.5) | | |
| Oxford | Analog | 146.550 | 147.435 | 146.505 | 146.880 (100.0) | | |
| Penobscot | Analog | 147.565 | 146.550 | 147.555 | 145.450 (67.0) | | |
| | | 446.050 | 446.150 | 446.250 | | | |
| Piscataquis | Analog | 146.400 | 147.450 | 146.565 | 147.105 (103.5) | 147.150 (71.9) | |
| Sagadahoc | Analog | 146.490 | 147.555 | 146.565 | 147.210 (100.0) | | |
| Somerset | Analog | 147.420 | 146.430 | 147.525 | 146.730 (91.5) | | |
| Waldo | Analog | 146.430 | 147.465 | 146.460 | 147.270 (136.5) | | |
| Washington | Analog | 147.525 | 146.460 | 147.570 | 147.330 (118.8) | | |
| York | Analog | 147.570 | 146.445 | 147.540 | 145.410 (103.5) | 147.345 (123.0) | |
| State Coord. | Analog | 52.525   146.520   223.500   446.000 | | | KQ1L System | | dhawke.com |
| Statewide | DMR | 145.790 | 145.510 | | | | maine-dmr.org |
| HF | | | | | | | |
| 3940.0 kHz | Night | Statewide HF Coordination. | | | | | |
| 7262.0 kHz | Day | 1900L: MECN (Sun) and SGN (Mon-Sat). 0900L: MPSN (Sun) | | | | | |
| 3583.0 kHz | Night | Digital Modes (NBEMS)  flamp recommend with flmsg attachments | | | | | |
| 7071.0 kHz | Day | Net ops: THOR16. File transfers THOR50x1; THOR22 or THOR16 in poor conditions. | | | | | |
| HF Interoperability | | | | | | | |
| 60 meter channels | | 5332.0, 5348.0, 5358.5, 5373.0 and 5405.0 kHz. USB dial, digital modes must be centered at 1500 Hz. | | | | | |
| Winlink (via CMS) | | With served agency coordination, Amateur and SHARES Winlink are interoperable via the CMS. | | | | | |

Notes:

Analog = analog voice, can also accommodate digital data and image.

Frequencies in red have been allocated to possible repeater usage per the January 2015 NESMC 2 meter band plan.

*Cumberland-ECT and Gray NWS will use Cumberland's secondary simplex for Skywarn.

Created by Bryce K1GAX, N1EP and KB1TCE.  Updated October 9, 2019 by David WE1U and KB1TCE.