# Northern BC Simulated Emergency Test (SET) 2020

## October 31, 09:00 – 12:00 PDT

## *This is an Exercise Only*

**Overall Purpose:** An opportunity to practice/test some aspects of Amateur Service emergency communications in Northern BC as part of the national SET (https://www.rac.ca/update-on-simulated-emergency-test-saturday-october-31/). Just thinking through the scenario and discussing it, as well as on-air practice, is a useful exercise.

**Scenario:** A wide-spread severe winter storm that disrupts normal communications and cuts power for an extended period. It is expected to impact an area from Terrace through to Prince George and into the Peace River region. Emergency Management BC (EMBC) (Northwest and Northeast Regions) and local authorities have requested activation of amateur radio volunteers.

While storm severity may not be accurately forecast in advance, there is usually at least 24-hour advance notice of potential major storms. For this exercise assume we get word Wednesday of potential severe storm coming for Saturday. We decide to stand-by activate to key locations in advance.

**Hypothetical Assignments from EMBC:**

a) Assist within local jurisdictions (via local repeater, simplex, data networks, etc.) from local Emergency Operations Centre to key sites (hospital, police etc., public works, fire, ESS evacuation center, etc.). Most emergency services (volunteer Emergency Support Services (ESS) commonly an exception) have their own local internal radio systems.

   Local groups can decide how far to take this for the exercise. Mostly we will pretend we have been sent to various locations in advance.

b) Provide local authorities and EMBC with key voice/data communications links for official communications from local government EOCs to North West Region (VE7NWZ, Terrace) or North East (VE7PGZ, Prince George) Provincial Regional Emergency Operations Centres (PREOCs), local EOCs, and from PREOCs to Provincial Emergency Coordination Centre (ECC, Victoria). Note that the EMBC Regional boundaries are based on Regional District boundaries (participating stations should familiarize themselves with which Regional District and thus EMBC region they are in).

c) Monitor RAC designated national emergency HF frequencies (see Appendix), check-in to nets if in operation.

## Exercise Activities (subject to modification before or during exercise)

**IMPORTANT NOTE: Follow all provincial, local and organization COVID-19 guidelines if meeting in groups.**

**IMPORTANT NOTE: All communications for the event must include at the beginning: *EXERCISE, EXERCISE, EXERCISE: this is a Simulated Emergency Test Exercise Only.***

**Coordinators Call-Out: Wednesday evening begin call-out (email, social media, phone …., HF Northern Net). All amateurs are invited to participate!**

**On-Air Exercise**: Saturday October 31, 2020 09:00 – 12:00 PDT

(specific times approximate)

1. **09:00 until 12:00:** Activate Northern BC vhf net. Seek check-ins first from official stations (PREOCs, EOCs), then general check-ins.
2. **09:30**: Test that Terrace and Prince George PREOCs can talk to each other via repeater system.
3. **10:00**: Assigned stations Monitor/Check into EMBC HF net frequencies (80/40m, Lower side band 3.735mhz 7.060mhz), Canada-wide nets (if active). From PREOC or assign home stations. Lower side band 3.735mhz and 7.060mhz.
4. **11:00 – Noon :** PREOCs (real or simulated) send formal messages via Winlink system (Peer-Peer, or via Message Pick up RMS Stations like VE7RBH). Others wishing to try Winlink are welcome also. Assume no internet in our regions, but south does. For within our regions (no internet scenario) would need to use Peer-Peer or Message Pick-Up station such as VE7RBH. Since ECC has internet, could use normal RMS stations outside affected region to send them messages. See Appendix.
5. Use APRS text messaging (all stations capable). See Appendix.
6. Exchange verbal messages
7. Exercise coordinators will send Winlink radio email about SET to key contacts (EMBC Regional Managers, local Emergency Coordinators, ARES Section Manager).

**Some things to think about:**

- Are you and your family ready to be self-sufficient for several days? Would you be able to leave home to assist as a volunteer? Are your radios, batteries in operable state?
- Many messages do not need to be formal, but a basic record should be kept by each station. I think of it as what type of communications are we replacing or supplementing?

## Appendix 1. EMBC Regions and PREOC Stations


**North West Regional Districts:** Stikine, Kitimat – Stikine, Bulkley – Nechako, Skeena - Queen Charlotte

**North East Regional Districts:** Northern Rockies, Peace River, Fraser - Fort George, Cariboo, Central Coast

## Appendix 2: National HF Emergency Communications Frequencies (RAC)

The following frequencies and modes have been pre-determined for suggested use of the Amateur Radio Emergency Service during a declared emergency, or a disaster declared or otherwise, occurring anywhere in Canada. These frequencies have been registered with the International Amateur Radio Union (IARU) for its listings of Canadian national emergency frequencies in IARU Region 2.

These are suggested frequencies and should not be construed as meaning that other HF frequencies may not be considered for Emcomm operations.

No Amateur Radio operator or group has exclusive ownership of any particular frequency on any band and, while common sense and courtesy logically would dictate that other Radio Amateurs should keep clear of frequencies being used for emergency or disaster operations, the affected ARES Net Control

Station (NCS) must be prepared to move up or down from the pre-determined frequency, as required, in order to conduct operations. Entering into an on-air argument must be avoided.

| | Single Sideband | | CW | | Digital | |
|---|---|---|---|---|---|---|
| **Band** | **Frequency** | **Tactical** | **Frequency** | **Tactical** | **Frequency** | **Tactical** |
| **80 M** | 3.675 MHz LSB | Alfa | 3.535 MHz | Golf | 3.596 MHz | Mike |
| **40 M** | 7.135 MHz LSB | Bravo | 7.035 MHz | Hotel | 7.096 MHz | November |
| **20 M** | 14.135 MHz USB | Charlie | 14.035 MHz | India | 14.096 MHz | Oscar |
| **17 M** | 18.135 MHz USB | Delta | 18.075 MHz | Juliet | 18.096 MHz | Papa |
| **15 M** | 21.235 MHz USB | Echo | 21.035 MHz | Kilo | 21.096 MHz | Quebec |
| **10 M** | 28.235 MHz USB | Foxtrot | 28.035 MHz | Lima | 28.096 MHz | Romeo |

The frequencies may also be used during a local ARES exercise or for RAC/ARRL Simulated Emergency Test (SET) operations held annually each Fall, provided such operations do not interfere with those of higher priority.

Each frequency has been given a tactical designation to facilitate quick change to another pre-determined frequency and/or mode by simply indicating the designation. Use of the tactical designations, while optional, is encouraged.

In all cases, these frequencies must be considered as being "plus or minus" to allow for QRM or other conditions impeding useful communications.

Should two or more ARES units wish to use a frequency at the same time for a simulated emergency exercise, consideration should be given to making the exercise "joint" and to work together. Failing that, the frequency should go to the ARES group that first began operations there. Of course, if a real emergency should occur during the exercise and the frequency is required, the unit conducting the exercise is expected to cease transmissions immediately, relinquish the frequency and stand by in case assistance is requested.

## Appendix 3: WinLink Radio Email

Winlink and associated software is a sophisticated system and network for exchanging email between radio users or any email address (www.winlink.org). The primary recommended radio-user client email software is *Winlink Express* (has a very good Help menu). Other email clients can also be configured to use Winlink, but do not support all features. The software supports several radio modes, and also Telnet through the internet.

There are three basic methods for a radio user to exchange messages:

- **Peer-Peer** is a direct station to station contact with no intervening infrastructure. This requires both stations to be on same frequency within propagation limits at the same time, and be in peer-peer mode.

- **WinLink  Message Mode is** The most common method. A client connects to an automated RMS (Radio Message Server)  station such VE7RBH in Smithers, and sends or receive email. The RMS connects to a CMS (Central Message Server) that then sends to/from internet email addresses or through other RMS stations to radio users. Hybrid stations can also relay messages via HF radio if internet unavailable.
- **Hybrid Network Radio-Only Messages** does not depend on the internet. Radio users drop off messages at a Hybrid capable RMS which then forwards them (by internet if available, by HF radio if not) to the client-designated Message Pick-Up RMS stations (MPS). The user connects to one of his/her designated Message Pick Up stations to receive traffic.  Thus senders/receivers do not need to be active simultaneously on the same frequency as required for peer-peer. Note, using Winlink Express, designate your MPS stations at least 24 hour in advance.

A nice feature of Winlink Express is the use of HTML forms. This allows use of standard forms without the data transmissions overhead. For the originator, the form opens in a browser window and the user fills in the data. When completed, the fill-in data only (not form graphics) gets attached to the email. When the receiving station gets the email, the form opens in his/her browser.  Note this is only fully available between Winlink Express users, but a plain text version is also included in the email to be readable by other clients.

## Appendix 4: APRS text messaging

APRS (Automatic Packet Reporting System) is designed for much more than just position tracking. One capability is text messaging to/from other radio users, email addresses, or cell phones. The latter two depend on reaching an internet connected gateway stations.

Many amateurs have APRS message capable vhf/uhf mobile radios (eg., Kenwood D710, Yeasu FTM-400DR) or hand-held. This allows them to quickly establish a basic text messaging capability without setting up an HF station for Winlink.

Participants with APRS capability should review how to do this with their particular radio. We will coordinate on-air the exchange of test messages.

VE7MHW near Smithers has a VHF to/from HF APRS gateway we can try for sending messages out-side the exercise region.