

## **Working Draft: VE3ERC Emergency Radio Communications Guide**

**Submitted by: Rich VE3DCC, August 2014 REVISION 2.1**

### **BACKGROUND:**

VE3ERC is currently party of the Township of Woolwich Emergency Plan as specified in section 4.6 and 16.9 of The Plan. It is understood that HAMS (Amateur Radio Operators) whose Woolwich Volunteer form is on file with the township are covered under the Township insurance when they are on-site participating in the Emergency Plan. It is also noted that only licensed HAMS can operate the equipment and frequencies licensed to them. This document is an internal working VE3ERC plan that clarifies the structure and protocol within the official plan and within the reasonable expectations of a volunteer.

The current official plan includes the following notations:

#### 4.6 Amateur Radio (HAM Operators)

The EOC coordinator may request Amateur Radio to provide back-up communications at key locations. Police, Fire, Ambulance and Public Works are responsible for their radio systems. Should the phone and/or radio systems become inoperable, the Radio Group may be requested to report to the operating EOC and or the Duty Officer/Communications Manager and await further instructions regarding the emergency response

#### 16.9 Elmira Amateur Radio Club

The role and responsibilities of the Elmira Amateur Radio club during an emergency are as follows:

- (a) To provide volunteers and mobile radio equipment to enable a radio communication net to be established between the reception/evacuation centres, the Message Centre (located with the Social Services Support

Group), the Red Cross Headquarters, and other locations as required (ie Public Health and Treasury Services).

- (b) To ensure that radio club volunteers report to designated sites at the direction of the Duty Officer/Communications Manager.
- (c) To provide direction to the Duty Officer/Communications Manager regarding communication equipment requirements/needs, ability to transmit data and other areas of concern regarding the communication net.
- (d) To maintain a list of volunteers and contact numbers.
- (e) To ensure that radio club volunteers are registered using the Township of Woolwich Volunteer Registration Form (Appendix 7) and that such forms are forwarded to the Duty Officer/Communications Manager who is responsible to forward these forms to the Director of Recreation and Facilities Services.

The following is intended to provide a structure for the involvement of HAM volunteers during a community emergency:

### **ERC 1.1 Primary Use of Amateur Radio in time of Emergency/Disaster**

It is anticipated that government services communications equipment WILL NOT fail. This means that the role of the Amateur Radio community can focus on the traditional function of providing Health and Safety communications with the intent of reducing the load on cell phone towers, the telephone system and the official response services radio pool. For example, It is anticipated that if residents are evacuated to a safe location, perhaps on short notice, ham radio operators will be able to provide communications so evacuees can inform family elsewhere of their locations and safety status. Messages are intended to be of public service only... that is, personal, short, factual and informative with the sole intent of relieving stress and confusion among those directly affected by the disaster evacuation. Federal regulations require the licensed operators to be in direct care and control of equipment licensed to them; hence, the operators must physically be with their equipment at all times.

**ERC 1.2:** Radio Amateurs participate in a continent-wide “field day” exercise each June where emergency message-passing is conducted in “field” conditions with

makeshift antennae and power generators. Other exercises are conducted by Radio Amateurs Canada (RAC). The scale of a disaster can be local, regional, provincial or national. HAMS anticipate that our efforts will be directed towards local and regional support. Catastrophic national or international events are beyond the scope of our support. Consequently, VE3ERC will collaborate within local evacuation centres to provide an information conduit via our repeater system to local, base-stations who can access Amateur Radio networks at various frequencies to pass third-party traffic within the region, across the province or across the country. It must be absolutely clear that “Hams” will operate out of the relative safety of an evac centre or their own home. In certain conditions and in the event of dire urgency, a field operation could be set up as is done in the June emergency simulations. In similar fashion, a portable/mobile simplex repeater can be set up in null zones, within buildings or geographic locations.

The goal is to provide immediate assurance of family status in the after-math of a disaster so victims of a tragedy are not subjected to more stress and unhappiness.

### **ERC 1.3 FRAMEWORK**

The Fire Chief in initiating a CAER telephone notification to residents, will also inform the designated VE3ERC emergency coordinator of the event and the location of the evacuation centres. The coordinator will then activate the Ham call-out so that volunteer operators close to the centres who are able to, can report for duty, and operators at bases, who are able to, can activate their stations. An off-site operator, perhaps the emergency coordinator, will assume the role of repeater net control (UHF/VHF) to ensure that reporting evacuation site stations can pass information directly to listening HF base stations. The HF base station will access the appropriate ham radio net frequency, request a contact in the target location then QSY to another frequency to pass the traffic. Reciprocal agreements can eventually exist with other Radio Clubs in Kitchener-Waterloo, Fergus, Guelph, Cambridge and elsewhere—that is, we can provide the remote HF bases which can access repeater systems in other non-Elmira disaster sites. This role is consistent with similar philosophies and procedures within RAC ARES (Radio Amateurs Canada --Amateur Radio Emergency Service).

The essence of this plan is to establish a radio link to a non-local site that is unaffected by the local disaster so messages can be handled using uncorrupted services ( electricity, internet etc. ) to service mobiles/portables at evacuation centres at the bulls-eye of the disaster.

Message/Traffic from remotes received by HF Base Stations can be passed via:

- message-grams using ARRL/ARES type messages as described below in ERC2.1 ; that is, third party traffic as governed by Radio Act and government regulations in the target county
- direct contact with the intended recipient via the telephone network if the call is local or toll-free
- an IRLP link to the local repeater in the target area
- an email to the intended recipient if an email address is specified by the sender
- posting to a bulletin board or BLOG

### **ERC 2.1 MESSAGE FORMAT:**

**\*\* a modified ARRL or ARES format needs to be developed here....**

To: name, address, telephone, email address

From: name, address, telephone, email address

Current location of sender:

Current status: one of Safe, seeking medical

Contact me at: ???????

### **ERC 2.2 Mobile/Portable stations need:**

- IRLP codebook
- handheld UHF/VHF with charger
- mag-mount antenna for use within a building
- optional mobile

**ERC 2.3 Base HF or VHF/UHF stations will need:**

- low band equipment and appropriate antenna
- uhf/vhf capable radios to work portable/mobile stations
- list of nets, frequencies and band conditions
- telephone
- generator if a field operation is required

**ERC 2.4 Accreditation:** The attached sample ID card was used within the Waterloo Region Emergency services in the 1970's to allow Hams to access disaster zones, supposedly to help with radiation detection. This is a bit extreme.. however, we will require a "card" or a letter indicating that the portable/mobile stations have been given permission to set up a desk at the evac center, access power and mag mount a small antenna. In a worse case scenario, a simplex repeater will have to be plugged into the power so written "permission" is crucial. (sample scan here). RAC ARES id exist for trained ARES operators.



PROPOSED “PASS” on Township Letterhead and signed by fire chief and mayor:

<NAME> has been assigned an emergency task and should be allowed access to the evacuation/safe center and/or communications centre as well as access to a power outlet, a table and a place to set up an emergency radio station—this may necessitate the use of a magnetic, short emergency antenna. The licensed operator will be sending health and welfare messages. It is important to note that the person named is a licenced radio operator and under federal law is the sole individual allowed to possess or operate VHF/UHF/HF equipment on the radio frequencies allocated to the Amateur Service ie HAM radio.

Authorized by: Fire Chief and Mayor (signatures)

**ERC 2.5 List of HAM net frequencies and times of operation:**

3.750 MH ONTARS ( Southern Ontario)

3.775 MH Laurentian Net (Northern Ontario)

## 7.055 Trans-Provincial Net

### **ERC 2.6 List of local repeaters, access tones and approx.. range**

**VE3ERC**

**VE3KSR**

**VE3RCK**

**ERC 2.7 IRLP CODES:** a current copy of the American Radio Relay League Repeater Directory is required.



**ERC 3.1 List of VE3ERC HAMS: who have completed the Woolwich Volunteer forms-- name, city and equipment status**. This form is necessary as it includes HAMS in the insurance umbrella when they are on-site acting within the framework of the Woolwich emergency plan.

**ERC 4.1 List of OFFSITE HAMS: name, city and HF equipment status-X indicates that a Volunteer form is on file**

**Erc 5.1 List of HAMS with ARES accreditation**

**Erc 6.0 EMAIL Correspondence**

## Erc6.1 email from CAO Woolwich re: insurance and support

**Date:** Tue, 16 Sep 2014 09:06:07 -0400  [All headers](#)  
**From:** David Brenneman <dbrenneman@woolwich.ca>   
**To:** "raclausi@kw.igs.net" <raclausi@kw.igs.net>  
**CC:** Dale Martin <dmartin@woolwich.ca>, Rick Pedersen <rpedersen@woolwich.ca>  
**Subject:** RE: Elmira HAM radio emergency plan

Hi Rich:

I met with Dale Martin, Deputy Fire Chief/Community Emergency Management Co-ordinator for the Township, concerning your email below and I can advise as follows:

1. If the Township declared an emergency, the HAM radio club members would have appropriate coverage under WSIB, and you will see that is noted in brackets on Appendix 7.
2. In a declared emergency situation, the Township may ask for the HAM radio club members participation, and if we did for the purpose of what you have outlined below your club members would be under the supervision of Regional Social Services at the evacuation centre. I would note that we agree with your assessment of the role that the club members would provide.
3. In a declared emergency situation, that includes your club's involvement, the Township would communicate the involvement to the appropriate emergency services personnel. To make sure that a member is able to get through something like a police barricade, a club member would have to show the police appropriate club membership and personal identification.
4. Dale is willing to participate in the event you have planned for October 4th. You should contact him to obtain the appropriate authorization.
5. Dale also believes that Appendix 14 (HAM Radio Club Contact Info) of the Emergency Plan needs to be updated. We saw that you are not listed and that made us think that it needs to be updated. Also, his primary contact to date has been Alan MacDonald, and he would like know if you are now the primary contact and liaison between him and the club?

I believe the above addresses all of the issues outlined in your email. If you wish to discuss any of the above I would encourage you to contact Dale Martin because he is our Community Emergency Management Co-ordinator.

Regards,



David

David Brenneman  
Chief Administrative Officer  
Township of Woolwich  
24 Church Street West  
P.O. Box 158 Elmira, Ontario N3B 2Z6  
Office: 519-669-1647  
Office: from 648 exchange 519-664-2613  
Direct: 519-669-6002  
Fax: 519-669-1820  
Email: [dbrenneman@woolwich.ca](mailto:dbrenneman@woolwich.ca)  
Website: [www.woolwich.ca](http://www.woolwich.ca)

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-----Original Message-----

From: [raclausi@kw.igs.net](mailto:raclausi@kw.igs.net) [mailto:[raclausi@kw.igs.net](mailto:raclausi@kw.igs.net)]  
Sent: Wednesday, September 10, 2014 2:00 PM  
To: David Brenneman  
Subject: Elmira HAM radio emergency plan

Hello David: I am putting on my HAM radio hat in this note.

As you may know, our Amateur Radio Club (ie the Hamsters, as Keiren Kelly likes to call us) is part of the official Woolwich Emergency Plan (sections 4.6 and 16.9). I am currently updating our club memo regarding our role in an emergency--I have attached a discussion copy to this email for your reference. We are assuming that official police, fire communications are secure and , most definitely, we do not want our members in harms way. We are volunteers who happen to hold substantial radio knowledge and legal spectrum access with the equipment to complete international radio communications. That said, a little old lady evacuated in the middle of the night, may want to ensure that her son in Northern Ontario or British Columbia knows that she is safe and can be reached at.....This is the role we see for ourselves. We are setting up an AD HOC emerg plan; that is, it kicks in as necessary with as little complexity as possible ( because COMPLEX CRUMBLES WHILE SUPER SIMPLE SURVIVES)-- this network is also a PEER to PEER network relying on licensed operators transmitting from SAFE evacuation centres or home base stations away from the disaster. The plan is to set up a portable station, as needed, so messages regarding health and welfare can be relayed to any where in the world via base station HF stations in K-W, Guelph, Fergus, Simcoe and anywhere else that can access out UHF linking transmitters.

In the event of an evacuation, ELMIRA hams would need written authorization to enter safe evacuation centres, set up a table, stick up a magnetic mount antenna, access the power outlet and pass written SIMPLE Health and Welfare messages thru our local UHF ERC repeater.

I am unsure of the process to secure such written authorization-- as you can see from the memo, in the past, I had a "red" card to pass thru' roadblocks to conduct radiation tests (yeah, seriously..... cold war stuff, eh!!!). I would see a simple letter fulfilling the same role for those who have filled out the volunteer, appendix 7, form. You should have some of these on file already.

We also have a national HAM radio SET (simulated emergency test) scheduled for October 4th. I would like to have our hams briefly operate out of potential evac centres to check repeater penetration, coverage etc. This would be very discrete and quick. Could you advise me of the protocol to secure permission for October 4th, and to acquire the required authorization documents.

cheers, Richard Clausi, VE3DCC, President, Elmira Amateur Radio Club VE3ERC

-> This email (and its content) is confidential and proprietary.

-> If you have received this by mistake, please advise by return email.