

EMERGENCY COMMUNICATIONS AMATEUR RADIO SUPPORT PLAN

PREAMBLE

1. Amateur radio is under all circumstances a back-up means of communication for emergency workers or evacuees whose normal means of communication are either saturated or not currently available. It is therefore anticipated that the only likely requirements for amateur radio in emergency operations at level 1 or 2 are:
 - a. To provide supplemental VHF/UHF tactical voice communication and location/mapping services to Incident Commanders when requested; and
 - b. To provide specific communication services on request in isolated areas not having the required commercial communication facilities.
2. For emergency operations at level 3 and above, it is anticipated that amateur radio will be incorporated into the EOC, and in addition to the services above will develop and maintain digital and voice 'back-haul' communications to higher level EOC's. Traditional formal messaging capability will be maintained at this level.

OBJECTIVES

1. To provide tactical mobile/portable VHF/UHF voice communications between emergency operations personnel and the EOC/ICC (including providing inter-operability capability between first responder organizations), augmented by Amateur Packet Reporting System (APRS) where desired. ;
2. To provide EOC/ICC staff with voice and digital communication (email/file transfers) to other EOC/ICC centers, and email to any valid email address anywhere in the world outside the local area, in the absence of normal local internet availability;
3. To monitor any commercial tactical communication frequency as requested by EOC Operations;
4. To provide amateur radio resources to pass traditional welfare traffic in support of evacuees and their families, either from the Emergency Social Services (ESS) Reception Center or elsewhere, as may be required by ESS.

ORGANIZATION AND ROLES

1. **Overview** . The amateur radio support group consists of interested amateurs under the general direction of the North Okanagan Emergency Communications Group (NOECG), and is supported by the North Okanagan Radio Amateurs Club (NORAC). It consists of a core group, with four operational sections:
 - a. The EOC/ICC Support Section
 - b. The APRS Mobile Section
 - c. The VHF/UHF Tactical Comms Section
 - d. The Evacuee Messaging Section

Separating the sections provides not only for effective support, but also for the differing levels of interest and ability in the amateur radio community. It also provides for separation of training and equipment readiness requirements.

2. **Pre-Emergency.** As an ongoing function, the NOECG will:
 - a. Maintain the Area Amateur Radio Emergency Organization Chart and the Area Amateur Call Out List;
 - b. Monitor the organization and training activities carried out by each section;
 - c. Maintain liaison with the Vernon and the North Okanagan Regional District (NORD) Emergency Coordinators on an ongoing basis.
3. **Activation.** Amateur Radio support will be activated through the NOECG, who will mobilize the support requested. Activation may be requested by a local Emergency Coordinator, EOC/ICC Director or Operations (Ops) Officer.

ACTIVITIES

1. **Ongoing**

a. NOECG

- 1) Meets regularly to review and update policy, and pass information to/from EC's and Operational Sections;
- 2) Appoints Section leaders and approves Section 2ic appointments;
- 3) Maintains the Organization Chart and the Master Call-Out List;
- 4) Liaises with and reports as requested to Regional and Community Emergency Co-ordinators;
- 5) Liaises with other Regional and Provincial Amateur Radio Emergency Communication Groups.

b. Section Leaders

- 1) Develop and maintain training plan for section members, and carry out training exercises;
- 2) Develop/Maintain a desired equipment list for section members;
- 3) Maintain a 'fan out list' of section members, and their personal and equipment capabilities/limitations;
- 4) Report as requested on section capability/limitations to the NOECG.

c. Section 2ic's

- 1) To be informed on all matters pertaining to the Section, and be capable of taking over as Section Leader at any time;
- 2) To assist the Section Leader as required.

2. Activation

a. NOECG

- 1) Determines the exact nature of the services being requested, the expected operating conditions (eg., field or otherwise, if otherwise power/antennae etc, rations/quarters provided/not) and duration;
- 2) Advises the EOC/ICC Support Section and other Section leaders as required of the tasking. (**Note that since amateurs have to be at both ends of a communication, any call out for field mobile personnel will also require an amateur at the ICC/EOC.**) Determines briefing location and time for all amateurs initially being mobilized;
- 3) Briefs Section Leaders and their Sections on the tasking.

b. Section Leaders

- 1) On receipt of the tasking, call out members of their Section as required for initial operation, advising them of the briefing location and time, and to the maximum extent possible confirm their equipment and personal requirements;
- 2) Following the briefing, establish shift schedules, and mobilize additional amateurs/equipment as indicated.

3. Operation

a. NOECG

- 1) Assumes the function of Amateur Radio Co-ordinator in the EOC, and maintains liaison with Ops O and Logistics Officer (Log O);
- 2) Advises the amateur radio community at large (including amateurs outside the local area) of the tasking, and attempts to broaden the amateur support base available to the emergency;
- 3) Supports the Duty Amateur in the EOC/ICC as he/she may require.

b. EOC/ICC Duty Amateur. The EOC/ICC Duty Amateur, reporting administratively to the Communications Officer of the Logistics Section, but taking operational instruction from the Operations Officer, is the senior amateur on the shift. He/She will monitor all amateur communications, act as net control on all local amateur emergency nets, and provide technical direction to all amateurs on shift. Specific tasks will include:

- 1) Ensuring relevant EOC/ICC communication and administrative procedures are known and followed by all amateurs on shift;
- 2) Maintaining a station log of significant events, actions requested and taken, and any tactical messages passed on behalf of others;
- 3) Monitoring all amateur communications, and non-amateur tactical frequencies as required;

- 4) Establishing and maintaining knowledge of the current status of all amateur facilities that may be used, for example the Southern Interior Repeater Group (SIRG), the Telephone Pioneers Amateur Radio Club (TPARC) packet system, Internet Radio Linking Protocol (IRLP), and specific local radio repeaters. Maintains a roll of all amateurs currently on shift including their call signs and associated tactical call sign if applicable;
- 5) Provide APRS tracker driven route/perimeter mapping as required;
- 6) Providing digital communication means to the EOC/ICC where practical and required;
- 7) Passing and receiving formal voice message traffic as may be required.
- 8) Briefing EOC/ICC Operations/Planning staff as required.

- c. **APRS Mobile Amateurs.*** These individuals will normally accompany designated first responders as requested by Operations. While possibly APRS capable, their primary task may simply be voice communication. They may provide portable APRS beacons; these beacons need not be accompanied by the amateur. Any mapping required will take place only on the direction of the EOC/ICC Duty Amateur.
- d. **Tactical Comms Amateurs.*** These individuals will accompany (shadow) designated first responders as requested by Operations.
- e. **Evacuee Messaging Amateurs.*** These individuals will provide formal messaging means to evacuees and concerned citizens. They will normally be located at ESS Reception Centers, and operate independently, in co-operation with the ESS staff. Formal message logs and records shall be maintained. Should circumstances require, they may also provide tactical communications for the Reception Center.

4. Demobilization.

Appendices:

Appendix 1 - GLOSSARY

Appendix 2 - AREA AMATEUR RADIO EMERGENCY ORGANIZATION CHART

Appendix 3 - AREA AMATEUR CALL-OUT LIST

ANNEXES:

Annex A - SIRG NETWORK DIAGRAM

Annex B - LIST OF AMATEUR REPEATERS

Annex C - TPARC NETWORK DIAGRAM

Annex D - IRLP Node List for British Columbia

Annex E - FORMAL TRAFFIC HANDLING MANUAL

References:

1. EOC PROCEDURES (Vernon Emergency Plan?)

PREPARED BY VA7RMM 18 MAY 2010

Revised 9 Jul 2010

Revised 12 Nov 2010

GLOSSARY OF TERMS

AMATEUR RADIO – a non-commercial radio service as defined by a government agency (Industry Canada) which facilitates self-training, intercommunication and technical investigations for amateur radio enthusiasts with the sole aim of providing a service of personal interest and for non-pecuniary (not for profit or payment) interest.

A radio service group that may be called upon for Emergency Radio Communications in the event of Regional Disasters, Emergency Preparedness Planning, or Community Crisis where a backup or replacement radio service may be required in the event that other communications systems are no longer functional or available.

AGWPE – a computer -radio based packet (data) program used by Amateur Radio Operators that facilitates the transmission and reception of documents or typed messages between distant points over a radio system.

AGW TRACKER - a radio based program which enables the tracking of a GPS in a mobile or handheld radio. Program is similar to APRS system.

APRS “Amateur Packet Radio Service” – a Global Position System based program used by Amateur Radio Operators that is combined with a radio to provide a two-way tactical real-time digital communications system that can also monitor location of a transmitting mobile or handheld radio on a given frequency (144.390 MHz). System can transmit data (packets) related to Latitude/Longitude, speed, temperature, altitude) and facilitates typed messages to be sent or received.

APRS LINKED - APRS radio is linked to a message transmission or reception program. May also define the linking of APRS hubs or rebroadcast repeaters over a large area

AUTOPATCH – a device that connects an individual amateurs’ radio to the telephone system to permit the user to make telephone calls

CW “Continuous Wave” – Term used by Amateur Radio Operators that indicates Morse Code usage or communications over a radio for message transmission or reception. Utilized on selected portions or band widths of High Frequency (HF) radio bands as designated by Industry Canada

EOC/ICC -“Emergency Operations Center/Incident Command Center” – a central command structure as set up within a community for coordination of a critical or emergency situation. Amateur Radio may be called upon to provide emergency radio communications within this structure at a designated location

HF “High Frequency” (Short-Wave) – defined Radio Bands for transmission or reception of communications that includes CW, Radio Telephone (voice), digital on radio frequencies as set out by Industry Canada

NORAC – “North Okanagan Radio Amateur Club” – amateur radio club members who are licensed as Amateur Radio Operators and prepared to establish emergency radio communications in the event of need or call-out by the EOC

PACKET – a data package (a message) that needs to be transmitted over a computer+TNC+radio based link on a predetermined frequency to a given point or receiver in another community.

PACLINK – a packet (data) computer based program which facilitates transmission and reception of typed information between two sites over HF or VHF radio.

RADIO (HANDHELD) – an amateur radio station that is a small, light weight handheld transceiver radio device that can be carried by an individual and operates on a lower power level than mobile or portable radios

RADIO (MOBILE) – an amateur radio station installed in a vehicle which may be utilized while a vehicle is in MOTION

RADIO (PORTABLE)– an amateur radio station designed to be moved from one location to another but used only while STOPPED.

SIRG – “Southern Interior Radio Group” – a preselected set of radio repeaters located in the Okanagan-Kootenay that are interconnected for radio transmissions

TNC – “Terminal Node Connector” – a device that facilitates a connection between a computer and a radio and enables the ability to transmit data (packet) communications at a prescribed speed/rate over HF or VHF frequencies over a distance between two or more radio operators

TPARC – “Telephone Pioneers Amateur Radio Club” – an acronym defining a collection of amateur radio repeaters in selected communities between Vernon, Kamloops, Merritt, Hope, Vancouver, Cowichan and Victoria British Columbia as set up by the TPARC which facilitate PACKET communications.

A data transfer system operating on predetermined radio frequencies for each community which allows for computer based information to be transmitted and received in the event of loss of local internet connections.

UIVIEW – a computer based mapping program that is combined with an APRS-GPS based radio which facilitates tracking of a beaconing mobile or handheld radio

VHF Very High Frequency” - Defines Radio Bands or frequencies for radio communications that includes Radio Telephone (voice) or digital communications as set out by Industry Canada (30-300 MHz). Usually identified as FM radio communications.

UHF “Ultra High Frequency” - Defined Radio Bands or frequencies for radio communications that includes Radio Telephone (voice) or digital communications as set out by Industry Canada (300-3000 MHz)

VAAECC – “North Okanagan Emergency Communications COORDINATOR” - individual responsible for organizing Amateur Radio Operators and facilitating planning, training and assignment in event of Emergencies in Vernon – North Okanagan area.

WIFI CAPABLE- wireless computer access through a local router using a predetermined email address for each individual computer which possesses a wireless card

WINLINKRMS – “Winlink Remote Mail Server” - a computer based HF Packet (data) system that facilitates an ability to send typed data over radio to 4 Internet links around the world and where the transmitted data is reintroduced to Internet system for reception by designated addressees.

WINLINK/WINMOR – a computer based HF Packet (data) system that facilitates an ability to send typed data between two or more sites for reception by designated addressees.

WEBSITE REFERENCES:

Amateur Packet Radio Service (APRS) – www.aprs.org/

North Okanagan Radio Amateurs Club (NORAC) – www.norac.bc.ca

PACKET RADIO – www.wikipedia.org/wiki/Packet_radio

Radio Amateurs of Canada (RAC) – www.rac.ca

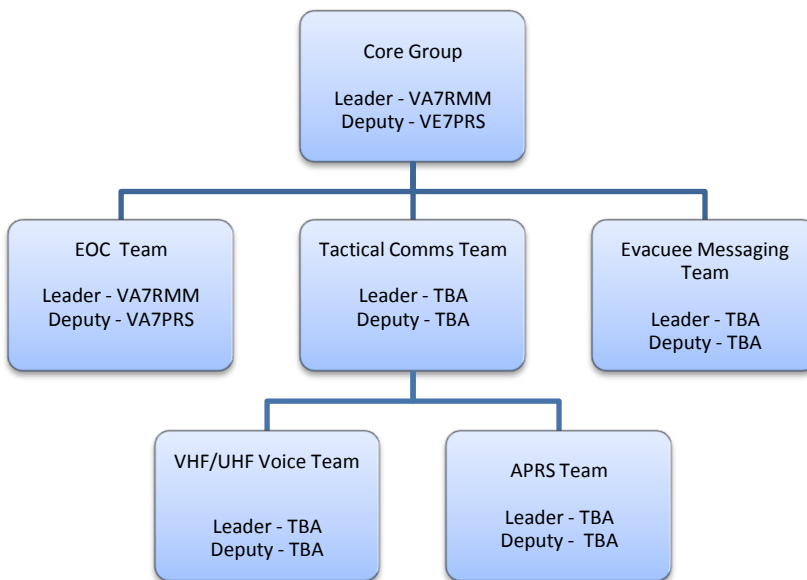
Southern Interior Radio Group (SIRG) – www.norac.bc.ca/sirg/index.htm

Telephone Pioneers Amateur Radio Club (TPARC) – www.tparc.org/

UIView – www.ui-view.org/

Winlink – www.winlink.org/

Amateur Emergency Communications Organization



ECOMMS Tactical Team Priority Call Out List Updated

November 12, 2010

		HOME	CELLULAR
George Copley	VA7PRS	250-542-8671	250-260-0053
Robert Murray	VA7RMM	250-546-2154	250 540 5791
Vernon Phillips	VE7VPL	250-545-3857	250-309-6828
Vic Shewchuk	VE7TOR	250-545-1133	
Todd Sandrelli	VA7MTS		250-307-2187
Jesse Lloyd	VE7LYD		250-212-6064
Blake Tweddle	VE7DO	250-545-5860	
David Skelton	VA7SKN	250-549-7367	250-309-3440
John Mitschke	VE7DLF	250-545-5225	
Muriel Sanderson	VE7EGB	250-542-9491	250-307-0717
Gord Hunt	VE7OPO	250-541-0091	250-307-4312
Bob Motion	VA7MOT	250-545-5285	250-309-2783
George Hutchison	VA7GWH	250-503-1860	250-870-8152
Terry Rudersdorfer	VE7TRZ	250-549-6750	
Nicholas Rudersdorfer	VA7AZZ	250-549-6750	
Paul Garneau	VE7PNM	250-541-0071	250-241-0090
Terry Shoobridge		250-260-4330	250-307-3256
Gary McLean	VA7GMM	250-546-4880	250-803-1977
Bob Byrne	VE7EZI	250-549-4318	250-309-4763
Pierre Pharand	VA7JMP	250 547-6468	