Emergency Radio Communications Plan

Yukon Amateur Radio Association

2019

Contents

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Numerous officials from Yukon and municipal governments and NGOs have been consulted and contributed to the development of this document., including:

Linda Rapp – Manager, City of Whitehorse
Bev Buckway – Executive Director, Association of Yukon Communities
More …

Members of the Canadian Military who have been involved in Operation Nanook contributed to the concepts. Operation Nanook is designed to train the different elements of the Canadian Armed Forces along with other government organizations in disaster training and sovereignty patrols in the Canadian Arctic Archipelago and northern Canada.

This document was modelled after the Emergency Radio Communications Plans of amateur radio organizations in British Columbia and the contributions of many amateur radio operators there.

Updates

This plan will require constant updating as people move and equipment or conditions change. For changes or suggestions please e-mail: George Privett VY1GP glprivett@yahoo.com or Allen Wootton VY1KX awootton@uniserve.com

Introduction

The purpose of this document is to establish an Amateur Radio emergency radio communications plan for Yukon communities. Common HF and VHF networks are regularly used by the Radio Amateurs in the Yukon that form a backbone for emergency communications. As an organization YARA, with the generous support of government and industry partners has come together on repeater projects and emergency preparedness issues for many years. Two levels of governments have developed emergency preparedness plans but have little information on the role for amateur radio operators in event of emergencies.

The communications structure in Yukon in unique. Although cell phones and Internet is available in most communities the service is not available far from the city and town boundaries. Most government agencies have state of the art communications, but some are dependent upon an operating Internet and some are not compatible with other agencies which could be problem in events involving multiple agencies.

It was a hot summer in 2004 with the worst forest fire season on record in Yukon and Northern BC. Evacuation plans were underway in for the community of Swift River. At 4 am five YARA radio operators were awakened and asked if they could go to the area to provide emergency communications support. They quickly packed personal gear, HF and VHF equipment, and a multi-frequency government radio. They arrived in the area and set up a communications centre at a local campground in a personal camper and trailer and operated there for 3 days before relocating to a high spot at a nearby microwave site.

While there, they passed messages between several inter-agency groups fighting the fires and preparing for evacuation (BC, Yukon and Ontario fire crews, Dease Lake air control, the RCMP), and between the EMO office in Whitehorse. They also talked to the helicopter pilots and passed messages to the Dease Lake air controller via VHF to convey location information. There was no injuries or property damage and evacuation of the community was averted. Fortunately, YARA radio operators and their equipment were able to quickly drive to the emergency location and provide critical communications until they were able to stand down a few days later. The Minister of Community Services sent thank you letters to all participants. See example in Appendix K

In October 2012 the YARA infrastructure and practice again demonstrated the practicality of amateur radio emergency communications support. The entire Yukon telephone and Internet service became inoperable for many hours. The YARA radio network continued to work throughout Yukon. The net control operator, Terry VY1AK, set up an emergency net at his home in the early hours of the morning, then relocated to the EMO headquarters by 7:30 am. Within 60 minutes, 4 operators were deployed to the CBC, the Firehall, the airport tower and as a floater downtown. By the end of another 30 minutes, a total of 20 YARA members from Whitehorse, Haines Junction, Dawson City, Carmacks, and one on the Klondike Highway (mobile) had called in to the net, ready to be deployed if required, showing the effectiveness of an emergency net.

Several times over the last few years where no cell phone coverage has been available, YARA radio operators have come across vehicle accidents or break-downs or issues in recreation areas. They were able to reach other operators who were monitoring the YARA wide area network and who relayed information to appropriate authorities, and in some cases, patched them through to the on-site YARA radio operator.

Recently some Yukon emergency responders were engaged in an exercise on the Skagway Road. YARA radio operators were not involved in the exercise. The participants had communications difficulties for a couple of reasons: no cell phone coverage and their handheld radios did not have the necessary range. With the YARA wide area network and low powered handheld radios, YARA radio operators could have provided some communications support for the exercise.

Not all incidents or simulations require the support of amateur radio operators, and they may not be invited to assist. This plan covers emergency communications for territorial and municipal governments, public safety (health and welfare) messages and emergency communications support for essential services and industries. Messages will be prioritized and handled accordingly. The facilities and frequencies described in this plan may be used with other frequencies, personnel and equipment as assigned.

Emergency Radio Communicators (ERCs) are radio operators only. They are not interpreters, evaluators, field commanders or media liaison. Their sole purpose is to transmit messages given to them by responsible officials, usually through the Incident Command System or YARA supervisor. ERCs are prohibited from transmitting personal observations or opinions, unless specifically requested to do so by a responsible official. This avoids misinterpretation. (including by citizens who may be listening in on scanners).

Overview

YARA Organization

The Yukon Amateur Radio Association (YARA) is a Yukon registered society with about 25 members throughout the Yukon. This is about half the authorized amateur radio operators in the Yukon.

People are involved in amateur radio for many reasons: for social activities, to develop technical skills, the challenge of the radio-sport of contesting, to make contacts and have conversations with long-distance and sometimes foreign operators, for enjoyment of different modes of radio communications,

to build radio kits and equipment, to combine portable radio operation with other recreational pursuits, the thrill of distance communications with very low power and simple equipment, and some to provide volunteer community service in community events and emergency communications. Not every radio operator is interested in being involved emergency communications and this same for YARA members. A few YARA members, however, are interested in volunteering to provided emergency communications support if it is required.

Those members of YARA who are interested in emergency communications are involved in emergency communications preparedness in several ways. First, some members participate in a nightly emergency preparedness net. Others have completed certification in the Incident Command System (ICS) and others are members of Amateur Radio Emergency Service (ARES).

They also ensure that their equipment is working, and they hone their communications skills by participating in community events such as the Kluane Chilkat International Bike Race and the Klondike International Road Relay and other partners that require communications support.

YARA puts on training sessions for its members and for the public and conducts field communications exercises.

YARA issues plasticized wallet membership cards to current members, showing the valid year.

YARA Radio Coverage

Wide Area Network

YARA has built and maintains a Yukon-wide linked repeater system that is powered by batteries and solar power and can provide communications support for simulated and real emergencies. It was built by volunteers with generous financial and in-kind support from partners in government and the private sector.

Emergency Setup Project

Since 2016 Terry Huff V1YMAP has been leading a group of volunteers in mapping the VHF radio coverage around the Yukon, using handheld, mobile and base stations on various repeater and simplex frequencies and operating from a mobile communications trailer and personal vehicles.

In 2017 and 2018 Yuuri Daiku led a group of volunteers to test portable HF conditions in winter, spring, summer and fall with various portable shelters and various modes of transportation, including: backpacking, SUVs and small cars.

D-STAR

YARA also operates a D-STAR repeater on 3 frequencies for voice and documents on Haeckel Hill and this provides coverage in the Whitehorse area.

IRLP

IRLP (Internet Radio Linking Project), a Canadian invention, uses Voice-over-IP (VoIP) custom software and hardware to allow amateur radio operators around the world to connect to each other via the

Internet. Yukon amateur radio operators, with a simple VHF handheld, mobile or base station radio can communicate with other amateur operators through IRLP nodes in many countries. Murray Adams VY1MA manages IRLP nodes in Whitehorse, Dawson City and Haines Junction.

EchoLink

EchoLink is another Internet-linked system that allows licenced radio operators around the world to connect with each other using their radios and from a computer without a radio. YARA has one EchoLink station in Whitehorse for conversations initiated outside of Whitehorse. The ability to initiate connections from the Whitehorse area by radio has been disabled to minimize conflicts with other systems. Charlie Gale VY1CC maintains the EchoLink system

APRS

YARA, under the direction of David Musselwhite VY1XY maintains APRS digipeaters that are accessible on Highway 1 (Alaska Highway): from south of Teslin, north to near Beaver Creek, Highway 2 (Klondike Highway): from Whitehorse and north to Dawson City, and Highway 2: from Whitehorse and south to the Alaskan Border.

Winlink

YARA in cooperation with VY1CO operates an HF Gateway/Hybrid system on 40 meters. More …

YARA Emergency Support Group

Executive

President - John Brooks - VY1JY
Vice President - - Scott Williamson - VY1SW
Secretary - Allen Wooten - VY1KX
Treasurer - Pam Buckway - VY1PJB
Past President - Bob Melanson - VY1MB

YARA Directors

Several YARA directors are responsible for leading development and maintenance of the repeater system and other technical matters, for managing volunteers, and for managing the nightly Emergency Preparedness Net.
http://yara.ca/contact/contact.htm

Net Control Operators

Net Manager - Terry Maher - VY1AK
Assistant Net Manager - Ray Fugard - VY1RF
Assistant Net Manager - Pam Buckway - VYPJB

Emergency Communications Coordinators and Assistant Coordinators

VY1GP – CEC

Other members may be designated as Assistant Coordinators on a case by case situation for their technical expertise, or in their roles as net control operators

Emergency Radio Communicators (ERCs)

YARA maintains a roster of radio amateurs who are available to assist if required for emergency communications or in support of public events. Many of these operators participate in a nightly net check-in as part of emergency communications preparedness. See Appendix B.

Emergency Communications Training

YARA offers emergency communications training which addresses unique situations in Yukon. One of the programs is the **YARA Certified Emergency Radio Communicators Program**. YARA Radio operators who complete the training successfully are issued Emergency Radio Communicators (ERC) identity cards, certificates, and special ERC vests which may be worn during events or incidents requiring amateur radio communications support.

ICS: Some members of YARA have completed up to three levels of Incident Command System (ICS) training. ICS is an international standardized on-site management system used to manage an incident or a non-emergency event and can be used equally well for both small and large situations. It offers several levels of training for responders, agencies, and radio operators.

ARES: ARES is a public service organization that delivers communications services during emergencies. ARES (pronounced AIR-EEZ) provides qualified communications personnel who establish ad-hoc radio communications links where and when they are needed. Several members of YARA are members of the Amateur Radio Emergency Service (ARES).

Communications Operating Centres

EMO Building

YARA has fully-equipped communications abilities co-located with government communications equipment in a room of the EMO building located at 60 Norseman Road, Whitehorse Airport. The equipment incudes: three VHF radios including one D-STAR capable radio, one HF radio, Morse Code key, PACTOR 4 modem, sound card, and computer for digital communications including Winlink, RTTY, PSK, and other modes. It has a 20 to 10-meter rotatable beam antenna and a 80-20 meter multiband dipole antenna.

During 2012 communications outage four YARA radio operators were at their stations in the radio room and had contacted radio operators outside of Yukon via HF radio and within Yukon via the YARA VHF wide area network and Whitehorse repeater. They were in direct communications with three other YARA operators at assigned locations in Whitehorse. The larger meeting room was used for meetings with joint agency and Government Department officials.

City of Whitehorse Fire Hall

YARA has a back-up radio room in the Fire Hall which contains a VHF radio and a HF radio and is supported by 20-10 meter rotatable beam antenna.

Mobile Communications Trailer

YARA has equipped a mobile EMO communications trailer with two VHS, D-STAR capable radios, an HF radio, a portable generator, and with VHS and high-performance HF screwdriver antennas.

Winlink Stations

To do …

Personal Home Stations and Mobile Stations

All YARA members own and regularly use VHF hand held radios, some have mobile VHF radios and used them on the wide area network in communities and traveling outside of communities. A few members have HF stations capable of Morse Code, Single Side Band and digital modes, including Winlink. Some members have "go-kits" which are radio and power packs which can be grabbed at a moment notice if they are called out for emergency communications service. They often use their go-kits for outdoor recreational activities away from their home stations.

Failure of A Critical YARA Repeater Link

YARA repeater system has about 35 transceivers in repeater locations. Some of them are key links between one end of the system to the other. Although most repeaters are in remote areas on mountain tops and not likely bothered by human vandals, there have been times when one or two sites have failed due to natural forces like high winds and lightning strikes, an inconvenience but not always urgent. The repeaters normally have been fixed when helicopter time and the weather permitted.

In event of failure during emergencies, backup plans are in place. YARA has a portable backup repeater and maintains a reserve fund that can be used to engages services of a helicopter and other support services. The portable repeater system that can be deployed by vehicle or helicopter for temporary operation. There are also simple repeater systems for localized use that operate on small batteries and can be carried by hand and set up on nearby higher ground.

Insurance Coverage

All amateur radio operators and volunteers are covered by Yukon Workers Compensation when they involved in activities organized by YARA or in which YARA members are participating. Application for Task Numbers are required in advance of participation in these activities and reports are required following the events. The person in charge of a project must discuss with the President of YARA about getting a Task Number.

Communications Modes

Emergency Radio Communicators (ERCs) will pass messages in one or more modes most appropriate to the event and the exercise they are involved in, and appropriate for their skill and training:

- Voice - using hand held, mobile and base radios for VHF or HF
- Radio email and radio forms using Winlink or D-STAR
- Other digital modes including: Packet Terminal, RTTY, PSK, MT63 and more
- Morse Code - CW

Voice

Handheld radios using voice will most likely be used in all types of emergencies and exercises. All YARA members own handheld VHF radios and most participate in conversations on the YARA repeater system. Some YARA members also have VHF mobile radios in their vehicles and base radios in their homes. Many use their radios in voice mode to support public events and have provide support to highway travelers and for incidents where there is no cell phone service.

Winlink

Winlink is an email and document system that can handle messages via radio and the Internet from communications centres or from field operations via VHF or HF radios linked to computers with sound cards or PACTOR modems. YARA communication stations with HF Winlink capabilities include: EMO radio room, mobile communications trailer, and … Some YARA members have Winlink capabilities in their personal stations.

There is also a Winlink gate station and server located at …. It is capable of both, connecting to the Internet and if the Internet is not operating, to store and forward messages to the other Winlink communications stations.

Message handling with Winlink is efficient and accurate and relatively confidential. With it, email messages can be sent back and forth between agencies, printed and stored. Winlink also has several templates to generate standard forms used by ICS and agencies. These templates enable radio operators to quickly and accurately pass messages between stations. These forms can also be printed and kept for official records. Files such as graphics files, pdf documents and Word documents can be transferred via Winlink. Winlink maintains a log of all incoming and outgoing messages, forms and attachments.

YARA ERCs are trained in the use of Winlink and can help other radio operators, clerks, and officials who may be working with them.

D-STAR

D-STAR is a digital mode technology enables crystal clear voice communication as well direct connection to a computer to securely transmit documents "over the air" to another computer connected via D-STAR equipment. D-STAR equipment can also be connected to the Internet to provide world wide connections with voice and electronic documents.

APRS

APRS (Automatic Packet Reporting System) is a radio packet system that is generally used for reporting the location of a station, based on GPS coordinates of a radio – hand held, mobile or base station. The location information can be read by other stations or displayed on Google maps on the Internet. This information and APRS may be considered for applications where vehicles or even individuals need to be tracked on an ongoing basis (for example, for tracking the locations of evacuation buses, or for mapping positions during ARES-support search and rescue operations). APRS can also be used to send short text messages between stations.

Fldigi

Fldigi is software supporting a suite of digital modes that operates on many computer operating systems: Windows, Apple, Android, Raspberry Pi, and Linux. It is popular with contesters and is also used to pass messages in real and simulated emergencies, although less prevalent than Winlink.

CW

CW, although not used as often, is considered a reliable method of passing messages and works well with simple and low-powered equipment which is less prone to failure than equipment using other modes. It requires more skill than other modes and there may be fewer operators available to operate this mode during exercises and real emergencies.

ICS – Incident Command System

ICS is an international standardized on-site management system used to manage an incident or a non-emergency event and can be used equally well for both small and large situations. Although none of the Yukon Government and municipal emergency preparedness plans mention ICS specifically, training for the program is available from ICS Canada. The Yukon Government EMO had been encouraging and facilitating courses for all departments. Several YARA members have completed up to three levels of ICS training and YARA operators will be able to integrate into the system.

Although previous real incidents involving YARA emergency communications or communications support did not involve the ICS structure or protocols, it is likely that in future exercises and real incidents the ICS will be followed, especially where multi-agencies are involved. In smaller incidents, involving only a couple of YARA emergency radio communicators, the ICS would not likely used.

In the ICS organization structure, which can accommodate from only a couple of individuals to a multi level organization, there is a command function and four other functions: operations, planning, logistics, and finance & administration.

- **Command -** The Incident Command (IC) is responsible for all activity. The size and complexity of the incident determines which other management functions are needed. The command staff assists the IC and reports directly to the IC.
- **Operations -** Operations directs tactical actions. There is only one Operations Chief (if activated by the IC), but the Chief may have deputies.

- **Planning - T**he Planning function collects, evaluates and reports information about the incident. Planning also keeps track of resources and prepares the IAP and other documentation.
- **Logistics** – The Logistics function ensures that adequate services and support are available to responders and other ICS personnel.
- **Finance & Administration** – The Finance & Administration function manages incident-related costs, tracks personnel, and maintains equipment records. It also administers any procurement contracts associated with the response.

There are number of features why ICS has proven to work in real emergencies and major disasters:

- *Scalability* - Standard but flexible organization structure can grow and shrink from one person to many inter-agencies working together, depending upon the incident or the phases of an incident as the resource requirements grow or are needed less.
- *Unified Command* - allows multiple jurisdictions to agree on objectives and strategies. ICS makes this possible without any loss of authority, responsibility or accountability.
- *Chain of Command* - there is a clear line of authority, with lower levels subordinate to and connected to higher levels.
- *Unity of Command* - each worker has only one supervisor. This eliminates confusion and the possibility of conflicting orders.
- *Span of Control* - no one individual is required to supervise or manage more than seven other individuals (and ideally, only five).

Another important feature of ICS is a single, coordinated Incident Action Plan (IAP) is used, including the following elements:

- What are the objectives of the team or what do we want to do?
- Who is responsible for accomplishing what tasks?
- How does the team communicate?
- What is the team safety plan or how do we take care of a person who becomes injured?

The ICS communications plan in ICS can be very simple or even verbal, or it could be complex enough to become part of the written IAP. The plan lists the communications methods to be used for the response.

Emergency communications is a support function and falls under the logistics function of an ICS structure. ICS does not alter the way any unit performs its internal function. For example, ICS does not dictate how the police does its policing, how firefighters fight fires, nor how communications units accomplish their tasks. Amateur radio methods and procedures remain unchanged. However, ICS does provide an organization and reporting structure, with a clearly defined chain of command and span of control for communications to operate in.

Amateur radio operators may be assigned to report to a ICS Communications Unit Leader or they may be assigned as a Technical Specialist in another area. Radio operators may also be asked to perform non-radio activities and could conceivably be assigned anywhere. If an operator is assigned to a non-radio

unit, operators need to comply with the directions of the unit supervisor, understand the mission, and report actions back to that unit supervisor.

ICS requires the use of plain English in all communications, avoiding special codes, prowords or jargon. It also provides several standardized communications forms and communications reports. The Winlink organization has developed templates for many of these forms for its software. The templates are updated periodically, and this is source of most of the downloading activity when the Winlink program updates are made.

Different Types of Emergency Communications Scenarios in Yukon

Small Remote Incidents

A YARA member may come across an emergency along a highway or in a recreational area where there is no cell phone coverage.

Organized Public Events

YARA members may be involved in providing communications support for planned public events like the Klondike International Road Relay and the Kluane Chilkat International Bike Race

Small Scale Simulated Disasters and Emergencies

YARA members may be asked to provide communications support for remote localized exercises involving one or more agencies.

Operation Nanook

YARA may be involved in the annual Operation Nanook, organized by members of the Canadian Military, and designed to train the different elements of the Canadian Armed Forces along with other government organizations in disaster training and sovereignty patrols in the Canadian North.

Real Disasters and Emergencies Where Normal Communications Have Been Disrupted

YARA amateur radio volunteers may be involved in a variety of real disasters.

Not all disasters will compromise the communications infrastructure nor will take place in areas where normal communications do not function, and amateur radio emergency communications may not be required by emergency responders. None-the-less radio operators should monitor repeater frequencies in case a net is called.

In other situations where there is wide spread communications infrastructure disruption, like what occurred in October 2012, radio operators should monitor repeater frequencies in case a net is called.

Activation

Small Remote Incidents

An Emergency Radio Communicator at the scene of an incident will:

- Investigate an incident to see if anyone needs assistance.
- Identify them selves, explain their communications capabilities, and offer assistance
- Attempt to make contact with another radio operator who may be monitoring the repeater frequencies
- Relay details of the situation
- Remain at the location until a responder has arrived and taken control of the situation
- After the incident is over, provide a brief written or verbal report to a YARA Communications Supervisor

A radio operator who receives the message and who has access to local normal communications infrastructure will:

- Contact appropriate authorities (tow truck, Wild Fire Management, RCMP, 911, etc.)
- Relay the message accurately to the responder
- Provide responder's information to the originating radio operator
- Monitor the situation until the incident is closed or the appropriate responder has control of the situation.

Organized Public Events

YARA Volunteer Coordinators are normally involved in the planning and operation of events.

- Radio communications will be activated by the Volunteer Coordinator working with the event organizer.
- Communications protocols of the event will be followed by all radio operators involved
- Volunteers will ensure that their radio equipment and personal gear is ready for use in the event
- The Volunteer Coordinator will provide debrief at the end of the event and prepare a short report for the regular YARA meeting

Simulated Disasters and Emergencies

In Yukon most agencies have staff trained in the Incident Command System (ICS) and this protocol will be likely be followed. Some exercises will not require the support of amateur radio communications.

Other exercises may take place where the usual methods of communications will not normally work for a variety of reasons including: no cell phone coverage, difficulties with inter-agency communications infrastructure, and outside of the range for normal agency communications. Some exercises may require only one or two radio operators, other more. In some cases, the radio communications personnel will be involved in planning the exercise.

If invited to participate in emergency exercises, Emergency Radio Communicators will:

- Before the exercise, understand the nature of the exercise, and what radio equipment and personal gear would be required.
- Bring all radio and personal gear appropriate for the exercise (go-kit)
- Report to the appropriate official on site
- Receive a briefing on the exercise
- Set up a radio communications centre, appropriate for the exercise (car, tent, table, etc.)
- Pass messages as required (locally or from exercise site to a central location)
- When exercise is completed – packed up equipment
- Participate in a debriefing
- Provide a short written or verbal at a regular YARA meeting

Operation Nanook

YARA Communications Supervisors will be involved in the planning activities prior to the event taking place.

YARA Emergency Radio Operators will be briefed on the planned exercise, what is required and protocols.

YARA Emergency Radio Communicators will:

- Before the exercise, understand the nature of the exercise, and what radio equipment and personal gear would be required.
- Bring all radio and personal gear appropriate for the exercise (go-kit)
- Report to the appropriate official on site
- Receive a briefing on the exercise
- Set up a radio communications centre, appropriate for the exercise (car, tent, table, etc.)
- Pass messages as required (locally or from exercise site to a central location)
- When exercise is completed – packed up equipment
- Participate in a debriefing
- Provide a short written or verbal report at a regular YARA meeting

Real Disasters and Emergencies

Most agencies in Yukon are trained in the Incident Command System (ICS) and will follow the protocols in ICS.

In situations where the normal communications infrastructure is not functioning, a YARA Communications Supervisor will:

- Call an emergency Net on the designated repeater frequency
- Attempt to contact appropriate emergency measure officials
- Determine where the radio operations will be location (ECO, remote, etc.) and what equipment will be required.

- Assess what type of message is required (voice, Winlink, digital, CW)
- Dispatch radio operators to pre-designated locations (Fire Hall, Ambulance Station, RCMP, radio stations, utility services, etc. that are normally involved in the municipal or Yukon Government plan.
- Dispatch radio operators with equipment to remote locations.
- Go to an appropriate communications centre or emergency operating centre (EMO, Fire Hall, etc.) and invite additional radio operators to help with message handling.
- If an ICS managed operation, report to and sign in with the appropriate official
- Establish VHF and HF links if required
- Pass messages between officials as required
- Maintain a radio log and copies of all messages passed

In situations where most normal communications are working, the YARA Communications Supervisor will:

- Connect with the appropriate authority as designated by the municipal or Yukon Government emergency preparedness plan.
- Call an emergency Net on the designated repeater frequency
- Go to an appropriate communications centre or emergency operating centre (EMO, Fire Hall, etc.) and invite additional radio operators to help with message handling.
- Assess what type of message is required (voice, Winlink, digital, CW)
- Dispatch Emergency Radio Communicators to pre-designated locations (Fire Hall, Ambulance Station, RCMP, radio stations, utility services, etc. that are normally involved in the municipal or Yukon Government plan.
- Pass required messages between officials as required
- Maintain a radio log and copies of all messages passed

Deactivation

Deactivation is am important function in any amateur radio emergency communications support activity:

Small Remote Incidents

An Emergency Radio Communicator/s will:

- The emergency radio operator will stay at the scene of the incident until it has been resolved satisfactorily or until a responder or responding agency has control of the situation.
- After the incident is over, the two operators in involved will confer to confirm the facts of the incident: when, who, what, and results
- A short verbal or written report or email will be given to a member of the YARA executive or emergency communications coordinator. The incident may also be reported to members at a YARA meeting. These incidents are sometimes used as learning tools.

Organized Public Events

There is no formal deactivation process for organizes public events, but several practices are followed:

- Radio operators advise the Volunteer Coordinator or Net Control that their station will be closing soon and again, when it is formally closed/
- They will pack their radio equipment and personal gear and return home
- The Volunteer Coordinator will prepare a short report for the regular YARA meeting

Simulated Disasters and Emergencies

The organizing agency will provide guidelines for deactivation and YARA volunteers will follow them

In exercises organized by YARA, the organizers will discuss the process for deactivation during planning for the exercise and will convey this information to all the members involved in the exercise. In some cases, it may follow the ARES guidelines.

Operation Nanook

Deactivation will be discussed in the planning session for Operation Nanook and will be follow by all agencies and organizations involved.

Real Disasters and Emergencies

YARA emergency communications volunteers may not be required for all disasters or emergencies, but if they are invited to participate in the emergency response activities, they will follow the deactivation protocols adopted by the lead agency.

Radio Communications Communicators Duties

Communications Supervisors

YARA radio communications supervisors may include: Certified Emergency Coordinator, a Member of the YARA executive, Assistant Emergency Coordinators, Net Control managers or operators, or a Volunteer Coordinator. They will be:

- Be knowledgeable about the communications requirements and plan for the activity or event they are involved in.
- Ensure that necessary YARA radio infrastructure is operational or backup alternatives are available.
- Maintain a list of Emergency Radio Communicators and other volunteers and related details appropriate to the event or incident.
- In event of a simulated or real emergency, arrange to call a Net directly or through a Net Operator.
- Maintain liaison and communications with designated event or incident officials.
- Maintain contact with Net Control Operators as required

- Provide clear directions to subordinates.
- Maintain supplies of forms and distribute to operators as require.
- Monitor activities of event or incident and their subordinates.
- Prepare final reports on the communications activities for the event or incident.

Net Control Operators

The role of a net control operator varies depending upon the activity or incident, but generally performs the following duties:

- Announce controlled nets, stating purpose, and provide directions (see script)
- Call the roster of net Emergency Radio Communicators
- Maintain a record of available Emergency Radio Communicators
- Manage message handling and pass messages as required
- Forward the list of available operators to the appropriate authority
- Close the net and announce the return to norm frequency operation

Emergency Radio Communicators (ERCs)

The responsibilities of Emergency Radio Communicators (ERCs) include:

- Maintain their radio equipment in operating condition.
- Program all YARA frequencies in their radios.
- When at home, always keep their radios on low volume, on the local repeater frequencies. It may be turn off for a while if there is a lot of radio traffic that they are not involved in.
- When traveling away from their home community, carry a working radio with them.
- Maintain a radio go-kit.
- Maintain their personal emergency go-kit.
- Report to the Communications Supervisor or Net Control for the event or exercise they are involved in.
- Travel to the assigned location where messages will be passed.
- Pass messages in keeping with the nature of the event or exercise they are involved in (voice, radio email, CW).
- Advise the Net Control Operator if they need to be away from their operating positions for a period.
- Maintain and complete forms for each event or incident as required. (see message clerk duties)
- Operate in the time periods required for the event or incident. Longer events may require extended hours and relief operators may be required.
- Brief relief operators and transfer all documents reports and forms.

Note: it is legal for non-amateurs to talk to each other on Amateur Radio as long as an amateur radio operator is present.

Message Clerks

Message clerks may be required in larger operations to transfer written or printed messages between the radio operator and officials who require the messages and reports. This enables busy radio operators to maintain their positions at the radios. Duties of message clerks include:

- Log all (amateur and commercial) messages received by radio operators in Incoming Message Register
- Deliver or arrange delivery of every incoming message
- Does not need to be a licenced amateur radio operator, but should know proper message formatting
- Check all (amateur and commercial) outgoing messages prior to giving them to the radio operators and ensure that all required information is included in the message
    - Addressee name and location
    - Sender name and location
    - Date (yyyy, mm, dd)
    - Time (24-hour format)
    - Class of message (Emergency, Priority, Routine, Welfare)
    - Sequential message number
- Log all messages that are to be sent in the Outgoing Message Register
- Deliver messages to the radio operators

Message Handling

Message handling is the *raison d' etre* for amateur radio emergency communications support. It takes different forms, depending upon the nature of the emergency scenario, but it has common features in all situations: accuracy, speed, discretion, and recording keeping.

Small Remote Incidents

- A YARA member on camping trip or traveling along the highway is not likely carrying official communications forms and or reports, nor is a member at home. None-the-less, the exchange of information conveys the situation accurately.
- There is some discretion. Although the conversations probably take place on the wide area network, they are not normally heard by the public – maybe someone with a scanner. The operators do not casually talk about the incident with other operators on the network.
- After the incident is over the operators involved will consult each other and confirm the details of the incident: where, when, who, and the results. A verbal or written report is provided to a communications supervisor (YARA executive, or Emergency Communications Coordinator), or at a meeting of YARA.

Organized Public Events

- In Yukon communications support for most public events is provide by email, cell phones, and outside of cell coverage - by voice on the wide area network radio system.

- There is usually no formal communications “paperwork” for these events. None-the-less, accuracy is required. Radio operators receiving a message will repeat back to the sender to confirm the requests or reports.
- In some cases, an event official or volunteer will take the mic of a radio operator in order to talk directly to another event official in another location. This ensures accuracy of the transfer and confirmation of the information.
- There are normally no formal reporting requirements, but the YARA volunteer coordinator or net control will provide a report on the event, incidents if any, and recommendations for future events

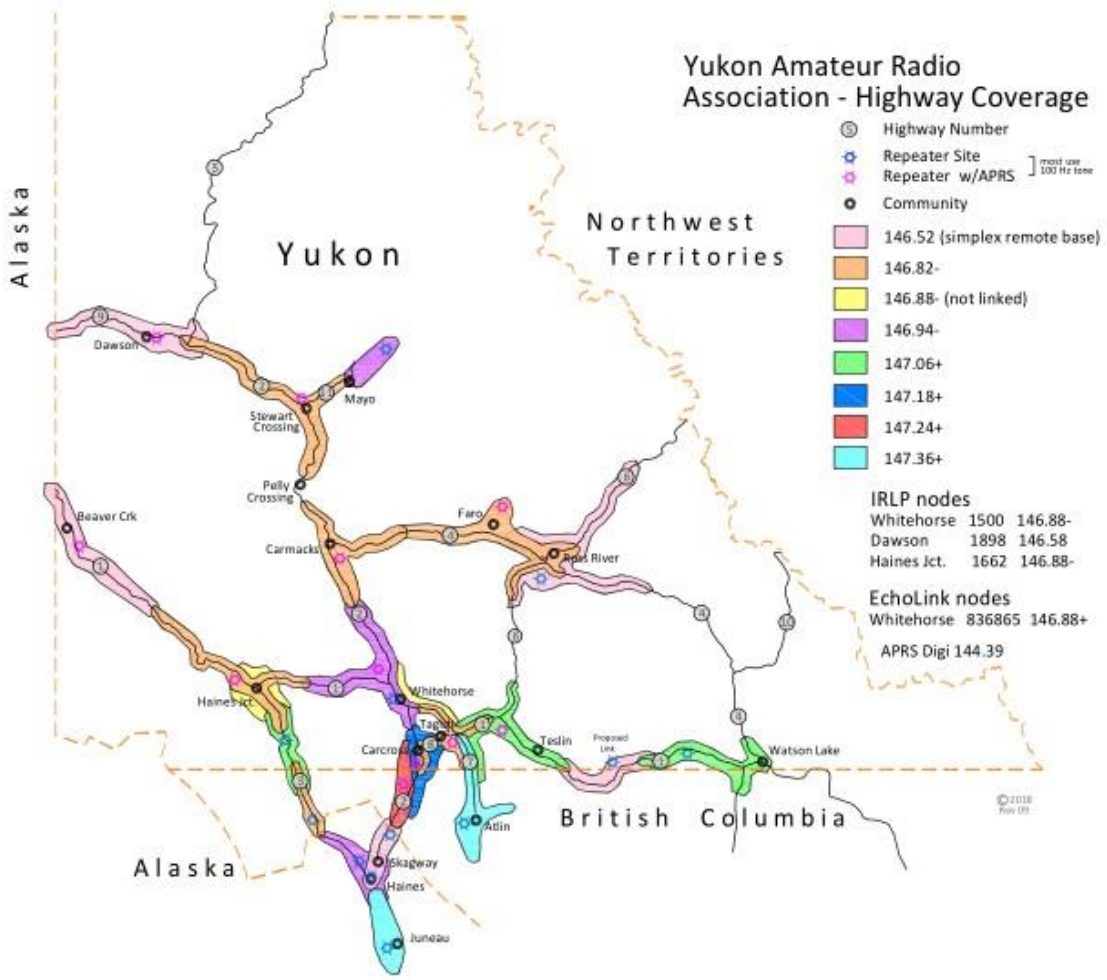
Simulated and Real Disasters and Emergencies

- In practice exercises or a real emergency where emergency communications support is required, YARA radio communications volunteers will normally part of a larger group and integrated into the structure and protocols.
- In practices, various agency representatives will likely be involved in planning prior to the event and will confirm organization structure and communications protocols. In some cases, the lead agency will provide communications forms and documents.
- Where agency communications protocols, forms and reports are not provided, for formal message handling, YARA will use or modify commonly followed ARES practices and use ARES forms or ICS forms and Winlink templates.

YARA Net Operation Frequencies

VHF Net Frequencies

YARA repeater frequencies for each community and highway route are shown in the map that follows, and details are provided in Appendix A: Yukon Amateur Radio Association Repeaters.



YARA Winlink Frequencies

The Yukon Winlink operates on 40 meters and the centre frequency is 7.xxx. Alternate Winlink frequencies are listed in Appendix XX.

Standby HF Frequencies

The BC Public Service Net normally operates on 3729 kHz. In the event of an emergency and 80m is not available, please tune to 7065 kHz at 17:30 Pacific Standard Time in "winter" and 18:30 Pacific Daylight Time in "summer" (01:30 UTC).

The Alaska Pacific Net operates from 9:30 – 10:00 am Alaska Time, Monday through Friday on 20 meters with frequency of 14.292 kHz.

Appendix A: The YARA Roster List and Contact Information

Yukon Amateur Radio Association

Yukon and Southeast Alaska Emergency Preparedness Net Roster

January 2019

http://yara.ca/

Frequency – 146.940 MHz - Whitehorse

Time: 1900 Yukon Time
Sunday - Saturday

NET MANAGER
VY1AK Terry - Whitehorse

Assistant Net Managers:
VY1PJB, Pam, Whitehorse, VY1RF, Ray, Teslin

Webmaster
VY1GP, George – Whitehorse

NET CONTROL STATIONS

Sunday	VY1RF	– Ray, Teslin
Monday	VY1PJB	– Pam, Whitehorse
Tuesday	VY1GP	– George, Whitehorse
Wednesday	VY1GP	– George, Whitehorse
Thursday	VY1PJB	– Pam, Whitehorse
Friday	VY1PJB	– Pam, Whitehorse
Saturday	VY1RF	– Ray, Teslin

If others would like to practice their net operator skills and take one evening occasionally, please contact:
Pam VY1PJB buckway@northwestel.net, or
Ray VY1RF, rayfugard@yahoo.ca.

Note: Shaded stations on the roster are regular participants of the net and should be called, others can check in as late, missed or visitors.

	Alaska & YUKON – Jan 2019				AVAILABLE for Call-out						
Gray rows – operators usually respond to call in if in town, others occasionally											
STATION	**FIRST NAME**	**LAST NAME**	**LOCATION**	**Day/Date**							
Wide Area Network – Pilot 147.940											
KL4OB	John	Barnett	Douglas								
KL7IWC	Larry	Walter	Juneau								
KL7SKA	Robert	Hufford	Haines								
NL3A	Bill	Andre	Juneau								
VY1AK	Terry	Maher									
VY1CC	Charles	Gale									
VY1DW	Doug	Watts									
VY1FC	Malcolm	Farrell									
VY1EY	Ed	Florian									
VY1FNS	Fearon	Steele									
VY1GHR	George	Repetowski	Tagish								
VY1GP	George	Privett									
VY1IRM	Ian	MacDonald									
VY1JC	James	Cleary									
VY1JY	John	Brooks									
VY1KX	Alan	Wooton									
VY1MA	Murray	Adams									
VY1MAP	Terry	Hauff									
VY1MB	Bob	Melanson									
VY1MK	Mark	Bowers									
VY1PJB	Pam	Buckway									
YV1RF	Ray	Fugard	Teslin								
VY1RT	Ron	Tull									
YV1SLZ	Tyson	Schmidt									
VY1TT	Dennis	Alfaro									
VY1YU	Yuuri	Daiku									

NET OPERATOR SCRIPT

Good Evening. This is VY1___. My name is _____ located in _____. I will be calling roll for the Yukon Amateur Radio Association, EMERGENCY PREPAREDNESS NET.

This is a directed net that meets Monday through Sunday, @ 1900 hrs Yukon time. The purpose of this net is to record who is available for emergency call out during the next 24 hrs.

Please do not break in during roll call except to help with a relay. We will pick up LATE, MISSED and VISITOR check ins after roll call is complete.

Are there any traffic listings or bulletins at this time?

Are there any mobile or low power stations?

Any relays?

ROLL CALL FOLLOWS! (Read from roster)

Are there any LATE, MISSED and VISITOR check ins?

That concludes this evening's net. The frequency is now clear.

Appendix B: Government and NGO Contact Information

Appendix C: YARA Repeaters

Repeater Coverage by Highway Location

YARA maintains a wide area network of voice repeaters to cover Whitehorse, Beaver Creek, Carcross, Dawson City, Faro, Haines Junction, Johnson's Crossing, Stewart Crossing, and Watson Lake in Yukon as well as Bennett and Atlin in British Columbia, and along most highways between the communities. Juneau, Haines, and Skagway in Alaska can also connect to this wide area network. You can print a **map** of the entire system of repeater coverage along the highways.

All repeaters in Yukon require a 100Hz Tone to be activated.

All highway KM markers increase from south to north or east to west unless otherwise stated.

The NO COVERAGE designation does not mean a total lack of coverage. The repeaters may work beyond the listed points, but the coverage will be spotty (hilltops usually) and the signal very noisy.

Alaska Highway (Hwy 1)

The linked repeater system now provides 759 km (470 miles) of continuous Alaska Highway coverage. The coverage will be approximately 1,076 km (650+ miles)!

Frequency	Description
147.06+	Watson Lake (KM 1008) to Logjam Creek (KM 1210). Note that this a stand-alone repeater and does not connect to the network.
147.06+	Swift River, through Teslin, past Johnson's Crossing to Jakes Corner (Alaska Highway and Atlin Road Junction)
146.82-	Squanga Lake to the Caribou RV Park, near the junction of the Alaska Highway and Carcross Road (Highway 2 South)
146.88-	Whitehorse area, south to Jakes Corner, west to Takhini River Crossing, north to Lake Lebarge (not linked to network, also handles IRLP)
146.94-	Whitehorse, south-east toward's to the Yukon River bridge, and west to Mendenhall. It is very sporadic on the Alaska Highway around Marsh Lake (KM 1550).
146.82	Alaska Highway west from the Kusawa Lake turnoff to Haines Junction, Destruction Bay, and Burwash Landing and northwest to the Donjek River
146.52	Beaver Creek (Horsecamp Hill) Remote Base - Donject River to Alaska just across the Canadian-US border
	See Arctic Amateur Radio Club .The Northway Junction Alaska repeater (103.5 PL) can be used from Snag Junction (KM 1913) north into Alaska. Be aware that

	you may still "hear" the Mt. Decoli repeater (146.82) on the same frequency and this may cause noisy interference on receive.

Klondike Highway (Hwy 2)

Full coverage is on the South Klondike Highway and most of the North Klondike Highway.

Frequency	Description
146.52 simplex	Skagway to Canada Customs (Remote base and simplex)
147.24+	US/Canada border to Bove Island pull out, Carcross to Emerald Lake, but poor quality.
146.82-	BC/Yukon border to Carcross and north to Carcross Desert. Also covers Tagish Road (Hwy 8) from Carcross to Jakes Corner
146.88-	Annie Lake Road to Whitehorse, to Lake Lebarge turnoff (also, handles IRLP. Not Linked to the network, Whitehorse area only.)
	Coverage between Carcross Desert and Annie Lake Rd is very sporadic. You will need to try 146.82, 147.24 or 146.88
146.94-	Annie Lake Road to Braeburn (greater Whitehorse area)
146.82-	Braeburn Lake to 10 km south of Pelly Crossing (KM 450). There is bit of a dead area around Pelly Crossing
146.82-	10 km north of Pelly Crossing, west to Dempster Highway Junction (KM 678), including Stewart Crossing, and east to Mayo
146.52 Simplex	Dawson City including from Dempster Highway to Dawson, to Clinton Creek turnoff (Remote base connected to repeater system)

Haines Highway (Hwy 3)

Frequency	Description
146.940	Haines, AK - Chilly Ridge, connected to Yukon network
146.52 Simplex	Haines (from the drop north of Skagway, but it has limited coverage up the Haines Highway)
146.82-	Alaska/BC border to BC/Yukon border
147.06	From Chilkat Pass to Kathleen Lake

146.82-	Dezadeash Lake to Haines Jct.
146.82-	Haines Jct.

Juneau, AK

Frequency	Description
147.360 + offset	Juneau (from Eagle-Crest), connects to Yukon repeater system

Robert Campbell Highway (Hwy 4)

Frequency	Description
147.06+	Watson Lake, to Km 50
	NO COVERAGE from KM 50 to Finlayson Lake
146.52-	Finlayson Lake (including Ross River) to Faro
146.82-	Ross River to Little Salmon Lake
146.82-	Little Salmon Lake to Carmacks

Dempster Highway (Hwy 5)

NO COVERAGE except lower 20 KM on 146.52-.

Canol Road (Hwy 6)

Frequency	Description
147.06+	Johnson's Crossing (KM 0) to Quiet Lake?
	NO COVERAGE from Quiet Lake to Lapie Lakes
146.52-	Lapie Lakes (including Ross River) to Jackfish Lake. Note: as an alternative, most of this is also covered by 146.82.
	NO COVERAGE from Ross River to YT/NWT Border (KM 463)

Atlin Road (Hwy 7)

Frequency	Description
147.36+	Atlin area north to Mt Minto and Jakes Corner (Linked to the repeater system)
146.82- & 147.06+	Sporadic coverage from the BC/Yukon border to Jakes Corner on these frequencies

Tagish Road (Hwy 8)

146.82- Jake's Corner (KM 0) to Carcross (KM 55).

Dawson Boundary Road (Hwy 9) (Top of the World Highway)

Frequency	Description
146.52	From Dawson almost to the US/ Canada Border
146.94- (103.5 PL)	The Alaskan side of the border is covered by the repeater in Eagle. This repeater may cover some of the Canadian side of the border as well. This has NOT been tested to our knowledge, let VY1SW or VY1RF know if you can work this repeater in Canada

Nahanni Range Road (Hwy 10)

NO COVERAGE on the Nahanni Range Road.

Silver Trail (Hwy 11)

The KM markings go from west to east on this road!

Frequency	Description
146.82+	Stewart Crossing (KM 0) to Mayo Flight Strip (KM 55) including Mayo.
146.94-	Mayo to Keno (KM 111)

Appendix D: Winlink Gateway Station Frequencies

Frequencies listed are Centre Frequencies – the transceiver's display should show the frequency to be 1.5 kHz lower. This is only a small selection of the PMBOs (gateways) available worldwide.

(Note: this station information is an example only and needs to be modified for Yukon)

Primary Gateway Station		
VE7RAH CFB	CFB Esquimalt, Victoria	D 3591.5, 3615.0, 3691.5, 7091.0
		7068.9, 7103.7#
Other Gateway Stations		
VE6DXI	Edmonton AB	3591.5, 3615.0, 3691.5, 7091.0
W7IJ	Olympia WA	B14069.4, B14110.0#, LW 3591.0, LW 3591.0#,
W7BO	Portland OR	D7067.9, D 7071.9, D 7101.2#
W6IM	San Diego CA	D 7073.9, B135 dgs - 14073.9, B135 dgs -
WX4J	Jacksonville FL	Stn-1: D3593.0, D3593.0#, 7066.9 Stn-2: D14066.9# 14098.7#
VO1CRC	St. Johns NL	D3568.0, D3568.0#, D3696.5, D3696.5#, 7098.5, 7098.5#, 14110.0, 14110.0#
VE1YZ	Halifax NS	D3565.0, D3565.0#, D3631.9, D 3631.9#, D7096.5, 7096.5#, 14114.0, 14114.0#

D = the gateway station has a dipole antenna on that band
B = the gateway station has a beam antenna on that band
B = the gateway station has a Long Wire antenna on that band
# = the gateway station has Pactor III capability
For a list of Winlink2000 stations, frequencies and capabilities, and current status go to https://www.winlink.org/RMSChannels

Appendix E: Forms

Emergency communications forms are available in three formats: printed, electronic and Winlink templates:

Net Roster Check-in Form
Radiogram
Communications Log

Winlink Form

Yukon SE Alaska Emergency Preparedness Net Check-In

Regular Preparedness Net
REAL EVENT

Day
2019-01-26 23:34:56Z
Saturday Time 15:34:56 Date
UTime

Net Control Report prepared by - Net Control Other: Callsign, postion

Operator Location Whitehorse Other: Other location

Sender Call Sign VY1GP

The following checked in as available for the next 24 hours:

Juneau:
- ☐ KL4OB John
- ☐ KL7IWC Larry

Haines:
- ☐ KL7SKA Bob

Tagish:
- ☐ VY1GHR George

Teslin:
- ☐ VY1RF Ray

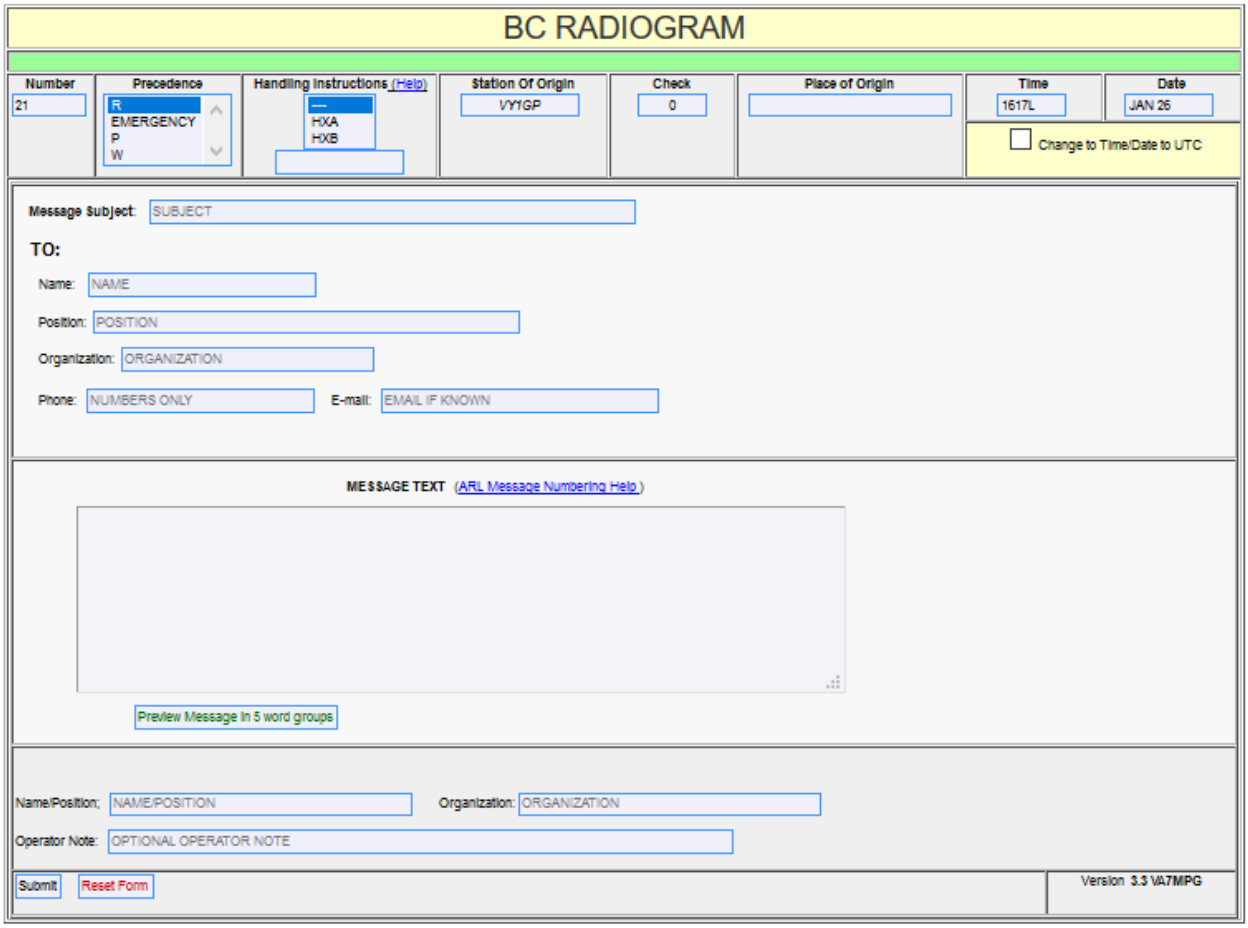
Whitehorse:
- ☐ VY1CC Charlie
- ☐ VY1DW Doug
- ☐ VY1FC Malcolm
- ☐ VY1GP George
- ☐ VY1IRM Ian
- ☐ VY1JC James
- ☐ VY1JY John
- ☐ VY1KX Allen
- ☐ VY1MAP Terry
- ☐ VY1MB Bob
- ☐ VY1MK Mark
- ☐ VY1PJB Pam
- ☐ VY1RT Ron
- ☐ VY1TT Dennis
- ☐ VY1YU Yuuri (Away until April)

Guests:
- Callsign, Name
- Callsign, Name

Comments:

Submit Reset Form

Winlink Ver. 1.5.18.0 Form Version: 2019-01-07 VY1GP


BC RADIOGRAM
Number
21
Precedence
R
EMERGENCY
P
W
Handling Instructions (Help)

HXA
HXB
Station Of Origin
VY1GP
Check
0
Place of Origin
Time
1617L
Date
JAN 26
Change to Time/Date to UTC
Message Subject:
SUBJECT
TO:
Name:
NAME
Position:
POSITION
Organization:
ORGANIZATION
Phone:
NUMBERS ONLY
E-mail:
EMAIL IF KNOWN
MESSAGE TEXT (ARL Message Numbering Help)
Preview Message in 5 word groups
Name/Position:
NAME/POSITION
Organization:
ORGANIZATION
Operator Note:
OPTIONAL OPERATOR NOTE
Submit
Reset Form
Version 3.3 VA7MPG

Communications Log (ICS 309)

1. INCIDENT NAME	2 OPERATIONAL PERIOD From: Date _____ Time _____ To: Date _____ Time _____
3. RADIO NETWORK NAME	4. RADIO OPERATOR (Name, Call Sign)

5.FREQUENCY/CHANNEL

Time (24:00)	FROM		TO		Message
	Call Sign/ID	Msg #	Call Sign/ID	Msg #	

6. PREPARED BY (Name, Position) SIGNATURE 7. DATE & TIME

PREPARED ICS 309-CAN

Appendix F: Emergency Go-Kit

This information comes from the ARES manual and describes a go-kit as a Ready Pack (emergency pack).

"A Ready Pack is a portable package of equipment and supplies that will let you operate comfortably from any location for at least 24 hours (and hopefully longer).

You should keep the Ready Pack somewhere accessible, such as the closet close to your front door, or in your car's trunk (so that it is accessible while you are at work).

When deciding what to include in your Ready Pack, remember that you may have to carry your pack some distance, depending on where you are deployed. Try packing your Ready Pack with everything you would take on an actual emergency, and then take a 10-minute walk with it to make sure you will be comfortable carrying it when the time comes.

If you are not comfortable carrying the pack, and cannot minimize the contents of the pack, consider leaving it in the trunk of your car. In most situations, you will use your car to get to your deployed location."

Suggested contents:

- *backup handheld radio with antenna, microphone or headset, and spare alkaline or high-capacity batteries for 12 hours operation*
- *speaker mike with earphone, or a headset*
- *2m magmount (or mini-magmount) with antenna adapters for handhelds*
- *extra 25' of coax cable with connectors (more is better!)*
- *barrel connector to mate mag mount cable to extra coax*
- *cigarette lighter cord & extra fuses*
- *cigarette lighter female to car battery adapter*
- *printed copy of ARES procedures*
- *printed ARES/NTS forms*
- *reflective identification vest or tactical harness/vest*
- *Ziplock bags (for packaging and for preventing exposure of gear to water, weather or contamination)*
- *If you are working outside in wet weather, a Ziplock bag over the radio and an elastic band around the antenna will keep the equipment dry. After the assignment, remove the radio from the bag to air out and dry it.*
- *water for 12 hours (2 litres)*
- *any required medications*
- *snack food for 12 hours or longer (snack bars, chocolate, trail mix, etc.)*
- *single-serving sugar packets*
- *sunhat or ball cap*
- *sun block and sunglasses*
- *insect repellent*

- *small first-aid kit*
- *'disposable' rainwear (sold by Canadian Tire for about $3)*
- *flashlight and spare batteries*
- *large pad of paper, pens x3, mechanical pencil, black heavy permanent marker*
- *clipboard*
- *electrical tape*
- *duct tape*
- *basic set of tools*
- *Swiss army knife or multi tool*
- *3m string*
- *10m of #10 wire*
- *Velcro adhesive 'buttons' or strips*
- *permanent black marker with fine and coarse tips*
- *set of FRS/GMRS handheld radios with batteries*
- *breath mints*
- *nametag*
- *good photocopies of photo identification (such as your driver's license)*
- *any identification cards or documents provided to you by ARES or EMO*
- *business cards (or some sort of cards with your name, phone number and email address)*
- *regional street map*
- *$60 in cash (useful for coffee, snacks, etc.)*
- *primary radio equipment, antennas, microphone or headset, power supply and spare batteries*
- *cell phone and spare batteries*
- *ARES access keys for designated station, centre, location or vehicle (if any keys have been issued to you)*

Consider adding the following items, if convenient:

- *garden tractor battery (if it can be transported safely), gel cell, or other portable battery system*
- *charger for your battery system*
- *simplex repeater module*
- *GPS*
- *second flashlight (preferably a long-life LED type)*
- *12-to-120V auto inverter/adapter for your power supplies*
- *disposable camera*
- *tape recorder with batteries and tape*
- *wet naps or wash napkins*
- *blanket*
- *foldout seat*
- *sleep mask (the type provided on long-distance flights to aid sleep)*

Appendix G: Technical Notes

Mobile Communications Trailer

Portable Repeater System (Vehicle or Helicopter Unit)

Portable Repeater System (Hand Carried Units)

Appendix H: Community Emergency Preparedness Links

Government of Yukon Emergency Preparedness Plan (Website Link)

https://yukon.ca/en/emergencies-and-safety/emergency-preparedness

City of Whitehorse Emergency Preparedness Plan (Website Link)

https://www.whitehorse.ca/home/showdocument?id=98

https://www.whitehorse.ca/home/showdocument?id=96

https://www.whitehorse.ca/departments/fire-department/emergency-notifications

Town of the City of Dawson Bylaw #11-10 Civil Emergency Measures Commission and a Municipal Civic Emergency Plan

http://www.cityofdawson.ca/images/municipal-info/bylaws/11-10%20Emergency%20Measures%20Bylaw.pdf

Village of Teslin Bylaw #14-208 Civil Emergency Measures Commission and a Municipal Civic Emergency Plan

https://static1.squarespace.com/static/5a1355c8d74cff26eb78da29/t/5a5d3eb671c10bc09429dc34/1516060348851/Bylaw+%2314-208+EMO.pdf

Village of Haines Junction Emergency Measures Bylaw #46-92 (not online)

Village of Mayo Bylaw #188 Emergency Plan and Civil Emergency Measures Commission

http://villageofmayo.ca/wp-content/uploads/2013/12/188-Village-of-Mayo-Emergency-Measures-Bylaw.pdf

Appendix I: References

Alaska Pacific Emergency Preparedness Net
http://alaskapacificnet.org/

Amateur Radio Digital and Voice Emergency Communications - 2nd Edition
https://www.amazon.ca/Amateur-Radio-Digital-Emergency-Communications-ebook/dp/B072N5H8TC

ARES (Amateur Radio Emergency Support) Manuals (Website Link)
https://wp.rac.ca/ares/

BC Public Service Net
http://www.bcpsn.com/index.htm

D-STAR
http://www.dstarinfo.com/home.aspx
http://www.icomamerica.com/en/products/amateur/dstar/dstar/default.aspx

Digital Mode - MT63
https://en.wikipedia.org/wiki/MT63
https://www.w0btu.com/wm2u/mt63.html

Operation Nanook
http://www.forces.gc.ca/en/operations-canada-north-america-recurring/op-nanook.page

Winlink Global Radio Email
https://www.winlink.org/

Winlink Book of Knowledge
https://www.winlink.org/content/winlink_book_knowledge

Winlink Training Videos
https://www.winlink.org/content/k4ref_how_to_video_series_winlink_winlink_express

YARA Administration Webpage
http://yara.ca/members/admin.htm

YARA Emergency Communications Webpage
http://yara.ca/EmComms/EmComms.htm

YARA Photos Webpage
http://yara.ca/photo_gallery/photo_gallery.htm

YARA Radio Email Webpage
http://yara.ca/radio-mail/radio-mail.htm

YARA Partners
http://yara.ca/partners/partners.htm

Appendix J: Glossary

Appendix K: Thank you Letter from Minister

Yukon
Office of the Minister
Box 2703, Whitehorse, Yukon Y1A 2C6

November 12, 2004

Mr. Geoff Grant
Yukon Amateur Radio Assocation
c/o Emergency Measures Organization
C-19

Dear Mr. Grant:

The 2004 wildfire season was the most active on record. With record-breaking temperatures and a hot, dry summer, more than 270 fires and close to 2 million hectares of Yukon forest burned this season.

Many organizations and agencies stepped forward to provide support in this unprecedented year. With your assistance and professionalism, we collectively proved our capability to manage this season's rapidly changing emergency and wildfire situation across the territory.

Our combined efforts and hard work are evident in the fact that there was minimal personal injury and minimal loss of property.

In recognition of your outstanding efforts in assisting Yukon during the 2004 fire season, the Yukon Government is very pleased to present you with this commemorative pin and medallion.

Thank you on behalf of the Yukon Territory for a job well done!

Sincerely,

Glenn Hart
Minister of Community Services

Thank you Geoff