SECTION 26: ARES PLANNING

This section provides discussions about planning for your ARES group.

Once you complete this section, you will be able to:

- Design scenarios to assist in ARES planning
- Design operational configurations
- Describe best practices for emergency coordinators
- Make use of SET and other training opportunities.

The task of planning for ARES activities is a responsibility shared by all ARES participants. Planning begins with ARES emergency coordinators but also includes individual operators, station primes, technical support primes, and other participants. Ideally, planning also includes ARES clients who will make use of ARES capabilities during exercises and emergencies.

DESIGNING SCENARIOS

When designing scenarios, consider the following 'learned lessons' about disasters and disaster communications:

During a major disaster

- The extent of the disaster may be difficult to assess, though assessment will be needed to ensure the proper commitment of resources.
- Emergency equipment and field personnel may commit without being dispatched.
- There may be a greater demand for aid than can be met with the units available.
- Communications are likely to be inadequate.
- Trained personnel may become supervisors because they will be too valuable to perform hands-on tasks.
- Responding mutual aid units may become lost, and may require maps and guides.
- Citizens will volunteer, but their commitment will usually be short-term.
- HAZMAT situations may arise unexpectedly.
- The Command Post or EOC will become crowded with non-essential personnel.
- Staging will be essential; the flow of personnel, equipment and supplies may be overwhelming.
- Fuel may not be available if there is no electricity to run the pumps, or if fuel delivery is disrupted.

- The primary police department concern will be law enforcement; there may not be sufficient time or manpower to provide miscellaneous services.
- At night, there may not be enough generators or lights available.
- Many injured people may have to find their own way to medical treatment facilities.
- Volunteer and reserve personnel may be slow to respond; they will put their own families' safety first.
- On-duty public safety personnel will also be concerned about their own families, and some may leave their posts to check on them.
- Law enforcement and the media may clash; all media representatives should be referred to the Public Information Officer (PIO).
- Very few citizens will use evacuation and mass care centres; they will prefer to stay with friends and relatives, or to camp out in their own yards.
- The identification of workers and volunteers may be a problem; it will be difficult to determine who is working where and on what.
- There may not be enough handheld radios, and batteries will run short.
- Critical facilities will have to be self-sufficient, in case gas, lights, water or other essential services are disrupted for extended periods.
- Emergency responders will require rest and must be relieved.
- Equipment may be lost, damaged or stolen, and may never be accounted for.
- Someone will eventually get the bill; record-keeping and accounting procedures are important.
- If phones are working, the number of requests for service will be overwhelming. People will have to fend for themselves; it will be difficult for dispatchers to ignore these pleas for help.
- Some field units may “disappear”; you might not be able to reach them and will not know where they are or what they are doing.
- Security may have to be posted at hospitals, clinics, and first-aid stations to control hysterical citizens demanding immediate attention.
- Representatives from public agencies based outside the affected region may want to come and observe the operations or offer assistance.
- Department heads (EOC) staff may not have a working knowledge of their assigned areas of responsibility, and might tend to “play it by ear.”
- Management may not be familiar with field response procedures, and may attempt to change standard operating procedures.

- Emergency responders (public safety and medical alike) may not be adequately trained to respond efficiently.
- Needed supplies, materials and equipment needed may not be readily available in the chaos of the initial response.
- There may be a general lack of necessary information; coordinators will want to wait for damage or casualty assessment information before establishing priorities.
- General information may be offered in response to specific questions when field units cannot verify the requested information.
- There may be an overcritical desire to "verify" all incoming information. If it is received from a field unit, it should be considered as verified.
- Some EOC and Command Post personnel may become overloaded; some will not be able to cope with the volume of activity and information they have to deal with, and some will not be able to cope with the noise and distractions.

In an earthquake

- Fires are likely to occur, caused by electrical shorts, natural gas, fireplaces, stoves, etc.
- Fires in collapsed buildings could be very difficult to control.
- Water could become contaminated and unsafe for drinking. Tankers may be needed for firefighting and for carrying drinking water.
- Electric power could be interrupted.
- It might be difficult to shut of the gas; valves that are seldom, if ever, used will be difficult to find, and may not work when they are found.
- There is likely to be an epidemic of flat tires; police, fire, and emergency medical vehicles will require repair in the field.
- Fires will need to be investigated; mutual aid will include arson investigators.
- Search dogs will be needed early in the operation.
- Riveted steel (oil and water storage) tanks may fail.
- Streets could become impassable in some areas; it will be necessary to clear streets of rubble in order to conduct emergency operations.
- There will be aftershocks; they will hamper emergency operations, create new fears among the citizenry and may cause more destruction than the original shock.

- Structural engineers will be needed to evaluate standing buildings for use as evacuation centres, command posts, information centres, first aid stations, etc.

- Many fire hydrants may become inaccessible (covered or destroyed by rubble) or inoperable.

OPERATIONAL CONFIGURATIONS

Frequency coordination

A key issue that needs to be addressed during planning is frequency coordination. This involves the selection of channels that will be used during exercises and emergencies. Channels will include repeater and simplex frequencies on 2m or 70cm, and HF frequencies.

Channels need to be prioritized in terms of reliability, availability, and coverage. It is particularly important that all operators know which channels to check during a callout. While individual channels can be allocated during an emergency by a net control station or EC, the need for task-specific channels needs to be mapped out ahead of time.

Determining repeater coverage

An important issue to deal with prior to exercises and emergency operations is coverage. Every repeater has a specific footprint, inside which you can reliably access the repeater. The footprint varies depending on the type of equipment (transmit power, receive sensitivity, and antenna characteristics), and operating conditions (outside, in-car, or inside buildings).

To determine repeater coverage for a given area, it is recommended that you use:

- a mobile transceiver with typical power output, high and low power settings, and a typical mobile antenna

- a handheld transceiver with high and low power settings, and a 'rubber duck' antenna

Arrange a period of time when a second station that has good coverage into the repeaters is available for comm checks. Drive around the area and at specific checkpoints, check communications on each repeater channel with each transceiver on high and low power settings. Mark the results on a roadmap for each checkpoint and each repeater.

Once the survey is complete, consider also the characteristics of each repeater. For example, find out which repeaters are equipped with emergency power, which may be affected by weather (such as high winds), and which can be considered 'highly reliable'.

Look at the footprint for each repeater and compare it to your operational scenarios. If you identify areas that will require communications but fall into different footprints (meaning that they will not be able to use the same repeater to communicate), consider assigning a relay station that can communicate reliably into both repeaters.

Determining simplex coverage

Identifying issues with point-to-point communications on simplex channels may be complex, particularly if you don't have direct access to some of the locations (for example, at an EOC).

You need to actually try communications between each high-value endpoint using the modes, frequencies and preferably the equipment that will actually be used during an exercise or emergency.

If you do not have direct access to a facility or location, attempt communications from near the location using equipment similar to the equipment that will actually be used.

Create a checklist of connections between endpoints, and check off each link with information about the quality of the link.

Addressing coverage and link issues

If you identify a dead spot (where no repeaters are available) in a critical area, or if you have a low-quality link, there are several steps you can take to rectify or work around the problem:

- Use higher-powered equipment or better antennas in that area.
- Inquire with repeater managers to see if there are any options for improving coverage.
- Use a mobile or portable repeater during the event.
- Establish a relay station that can take traffic from the affected area or can communicate with both ends of the bad link.

On specific point-to-point links, you may also consider using alternate bands or modes (such as packet, HF voice, 10 metre FM, or SSB on 2 or 6 metres), if equipment, antennas and qualified operators are available.

EC BEST PRACTICES

Address vulnerabilities

When planning your ARES response, remember that your team will suffer its own vulnerabilities. Consider the following guidelines:

- Running an ARES group should not be the responsibility of a chosen few. Get everyone involved as much as possible, and delegate.
- Do not hamstring participants unnecessarily with titles. It is the responsibility of everyone in your group to ensure that your system functions properly.

- Focus on doing a proper job. Spend the time needed to do it right.
- Look for single points of failure or weak links in your organization or practices, to ensure that you are able to provide services reliably during a crisis.

Keep an open mind

As an emergency coordinator, your role is to listen to all the members of the group and then make educated decisions based on those inputs.

Remember the following guidelines:

- Every one of us is a volunteer. We spend our own time and use our own equipment and money preparing for emergency communications duties.
- Make everyone feel that their voices have been heard. Remember: you need them, not the other way around.
- Always open your meetings to anyone who is interested in attending, including the public. Nothing should be closed, by invitation only, or secret.
- If your meeting location or operations centre cannot hold the anticipated number of people in your group, then find another place to hold your meetings. Most public libraries or schools have rooms that you can use at little or no cost.
- Work to develop as large a membership as possible. A larger pool of operators will make your communications group more effective. Even operators who wouldn't be suitable as net control operators or shelter station operators could be useful as an at-home loggers or runners.
- If you cannot maintain a high profile with your membership and within your community, then try to find someone else who can take over the role. All ECs and AECs need to be both active within the community. This means attending local non-emergency events and all training and general meetings. You also need to attend all the local area amateur radio club meetings, even if you aren't a member. The face you show will dictate how many people will turn out for an event.
- Do not assume that people will automatically show up to do your bidding during an emergency.
- Listen, take notes and get back to anyone who may have a question.
- Publish an email address and encourage people to contact you regarding problems, questions or suggestions.

Even though ARES is a volunteer group, in an emergency the members will have to quickly follow the directions of the EC. In an emergency there will likely be no time for discussion or for personal likes or dislikes.

Take identification seriously

Make sure that each and every participant in your group has a photo ID that verifies their membership in your organization. On the ID, include an expiration date and fields for your signature and the holder's signature.

Ensure that the photo ID cards are as professional looking as possible, and comparable to any official government or served agency ID. There are many places that offer "passport" size photos.

Make it the responsibility of each member to supply you with two photos. One is for the ID, the other is for your records.

Make sure all IDs are properly laminated to prevent tampering.

There are templates in some computer programs that allow importation of photographs from a camera in to an ID card. These can be printed out on photographic paper and then laminated to produce a high quality ID card.

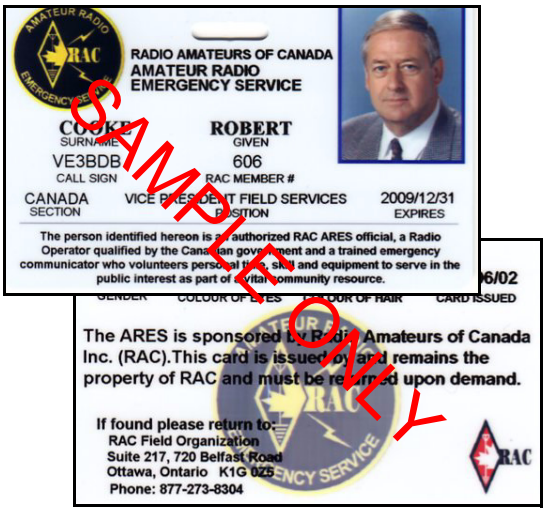
Formal identity cards for ARES appointed officials (such as ECs or DECs) are available from RAC. To order cards, complete the form available from http://www.rac.ca/fieldorg/racaresleaderIDcard.htm.

Cards may also be available for AECs, depending on demand.

If you look at your current ID and wonder if it's good enough, then it isn't.

During deployment, make sure that each member hangs his ID on a lanyard around his neck so that the ID can be seen.

Use the same style lanyards for everyone in your group. A lanyard from an amusement park or another 'branded source' is not acceptable. An official ID will make it easier for your operators to reach their duty sites, especially in sensitive areas.



Getting in during a drill and getting in during an emergency are two different things. Many officials may be unaware of our existence. A professional-looking ID will help cement your legitimacy. Proper IDs also make your members feel that they belong to an official, professional group, instilling them with a sense of professionalism that will help them fulfill their duties.

If possible, provide served agencies with sample of your ID card so they can include it in their directives.

Train your volunteers using different resources

There are never enough resources at your disposal when you hold training classes. Make sure that the information you provide is current and comprehensive.

Remember the following guidelines:

- Take the time to investigate what materials would best suit the training needs of your group, based upon locale and known weaknesses in your area. For instance, do not stress earthquake rescue if your area never has earthquakes.
- When you train, make sure you supply your members with plenty of handouts they can refer to after the training sessions.
- Host question and answer sessions.
- Never assume that everyone understands everything you might have presented. When you do train using drills, vary the drills and break down the drills so that each phase of your group's communications duties can be tested and reviewed.
- When each drill is complete, host a review. During the review, ask your team members what they think could be done better.

Reliable communications requires reliable equipment

It is unlikely that all your members will have the same equipment, and you will probably face some challenges related to that equipment. Equipment failure is one of the greatest vulnerabilities in any communications system. Frayed cables, a failure to pre-program operating frequencies, and antenna shortcomings can all present serious challenges during operations.

Remember the following guidelines:

- Assess each member's equipment for suitability and susceptibility. Each rig, cable, mic, antenna and power system should be inspected at least once a year. Look for patched-up cables, frayed power cords, questionable connectors or beat-up looking radios.
- ECs should offer to take an inventory of each member's equipment to facilitate deployment planning based on equipment capabilities.
- If you have prearranged locations, consider preinstalling antennas and coax cables to reduce setup times.

Consider setting up an SOP for each site you may be manning with all the details need for the site.ARES operators should not be dispatched to hospitals or other critical sites with makeshift equipment and antennas that may or may not work. Your partners and served agencies will notice. If a member goes into a duty site and their equipment looks professional, and they are able to become operational without visible issues, this too will be noticed. Every station must work right the first time.

Use what works

Amateur radio is a hobby of experimentation, and new modes are constantly being developed and promoted by various individuals, clubs and organizations. Some new modes and technologies might seem well suited for emergency communications work. However, you should remember that an emergency deployment is not an opportunity to test new modes, methods or technologies.

The main mode of communications used during almost every emergency is voice communications. Anyone can be properly trained to use a microphone. It takes much more knowledge, training and equipment to use a laptop, modem and software.

Another issue is the availability and reliability of equipment. Will all your members be equipped to service a laptop that stops functioning?

Test your sites

Visit every site that your group could possibly be assigned to and create a master book listing each site, the probable location within each building where the station setup will be, how easy it is to reach any repeaters you have at your disposal, and the simplex range from each location.

Share information

If you expect adjacent ARES groups to support you, send them copies of all information and updates so they can be assigned locations on initial callouts.

Stay up to date

Your operational plans should be reviewed annually to correct any shortfalls detected during the past year. Every five years the operational plan should be fully reviewed and, if necessary, rewritten completely.

Mutual aid

There may be times when your group's resources will be stretched beyond its capabilities. When the severity of a situation reaches a point that you can no longer offer the complete services or manpower needed, you will need to request mutual aid response from either another emergency communications group located within your service area or a group further away. It is imperative that your group develop mutual aid agreements with adjacent communications groups. Simple cross training would also be very beneficial. Develop a good working relationship with other groups, and remember that the National Emergency Coordinator (NEC) is available to help you develop these relationships. (The NEC must also be called in whenever you activate a mutual aid agreement during a disaster response.)

Once a year, practice a “mock drill” together. This is a good way to learn from each other. Also note that when a mutual aid request comes from another group and you are the one supplying the additional service, you will be doing so under their umbrella and are responsible to their EC. Do not take over. Just assist as requested.

Sell your group

To make your ARES group an effective tool for served agencies, you need to do a "selling job". Not everyone is aware of ARES, its capabilities, or its role during disaster responses. You can change that by interacting professionally with your served agencies and other responder groups. It is very important to avoid being overly zealous.

Document what you do and how you can help. Take photos and write a short account of how your emergency communications group has played a role during past events.

When dealing with the media, only one person should serve as spokesperson for your group. This will avoid mis-quotes and mis-information.

Delegate and build teams

Where possible, delegate responsibility to others in your group. Do not try to do everything yourself. Delegating responsibility not only makes your job easier and allows you to do more, it also helps to engage your members and promotes participation and skills building.

If possible, create RED teams or jump teams within your group. A core of committed and readily available members allows you to plan with greater certainty and demonstrate a reliable minimum capability to served agencies.

Get organized

To be effective, you need to be organized. You should:

- Keep a list or database of members, tracking licensing status, current address and contact information, and availability
- Keep a description of equipment and SOPs for each official emergency station (for example, at an EOC).

You may also wish to offer members the option of including their equipment in a common ARES equipment database. By recording serial numbers, you can help facilitate the return of equipment in situations where an owner's label is defaced or lost during a deployment. An equipment database can also help you demonstrate functional capabilities and plan your responses (for example, by knowing in advance which operators have cross-band repeat capable transceivers, or packet-capable stations).

MAKING USE OF SET AND OTHER EXERCISE OPPORTUNITIES

A simulated emergency test (SET) is a training exercise used to test plans, procedures, policy and equipment under simulated disaster conditions. SETs can also serve to demonstrate the value that ARES provides in times of need to served agencies such as the Canadian Red Cross, Emergency Preparedness organizations, and to the public.

The annual ARES SET is a North America wide exercise administered by the ARRL in the United States and RAC in Canada. Both ARES and the National Traffic System (NTS) components are involved. The SET gives communicators the opportunity to focus on the emergency-communications capability within their communities, while interacting with NTS nets.

SETs may range from simple table-top exercises involving ARES members to full-scale exercises involving a number of emergency service organizations.

SETs provide learning experiences for operators and emergency coordinators, allowing them to gain experience in communications using standard procedures and a variety of modes under simulated emergency conditions. Lessons learned during SETs help you maximize your readiness and address any issues before you face a true disaster response.

To be effective, SETs should be well-planned and should use scenarios that are relevant to the community or region served by your group. You need to get as many people involved as possible, especially newly licensed amateurs. Promote your SET on nets and repeaters.

For more information about SETs, see http://www.rac.ca/fieldorg/ARES_set.htm.

BEST PRACTICES FOR EMERGENCY COORDINATORS

The following best practices may make you a more effective emergency coordinator:

- Compile a list of phone numbers (home, office, cellular) for all key personnel associated with your served agencies and partner organizations.
- Get into digital communications. The more you can do with digital, the more useful you will be in a disaster.
- Provide SOPS to help operators perform each role with which they might be tasked.