

Maine ARES/RACES
Maine Emergency Communications Course, Level II
(Revised 10/08/07)

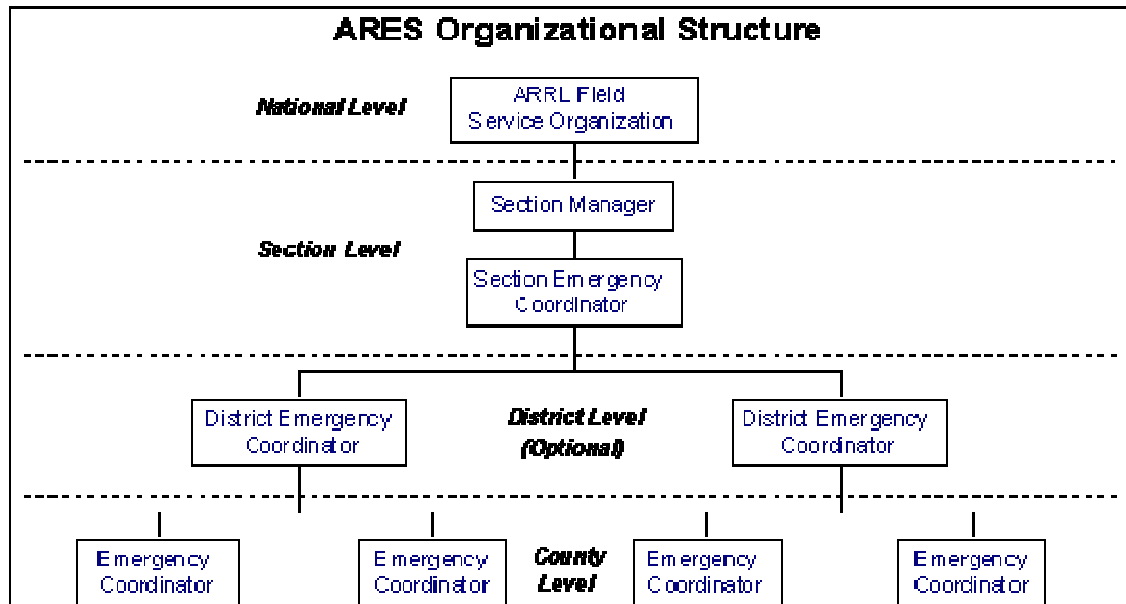
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Key ARES Management Positions

The ARES Team

The ARES Team represents the core of the emergency communication effort within a given locale. For purposes of administration, the country is divided into Sections. In all, there are seventy-one such Sections. Within each Section, the ARES Team is organized along the following lines:



As shown above, the Section Emergency Coordinator (SEC), District Emergency Coordinator (DEC), and Emergency Coordinator (EC) constitute the core of the ARES management team. All are appointed by, or at the direction of, the Section Manager. Minimum qualifications include full ARRL membership and a Technician Class license or above.

General Job Qualifications

All management team members should be experienced and well-trained emergency communicators. Actual operating experience at all levels during emergency operations and periodic drills, while not essential, is a real plus. They should have demonstrated people management and leadership skills, and be able to work in a team environment. The ability to work under pressure for long periods and remain calm and objective is essential. Diplomacy in dealing with others is important, as management-level staff members will almost certainly need to deal with difficult or challenging people who may become more troublesome under stress.

The Section Emergency Coordinator

The Section Emergency Coordinator is an assistant to the Section Manager. This person is appointed by the SM to take care of all matters pertaining to emergency communication and the Amateur Radio Emergency Service (ARES) on a section-wide basis, and must have considerable time and energy to devote to this critical position. There is only one SEC appointed in each Section of the ARRL Field Organization.

SEC Job Responsibilities:

- Recommend appointments for Emergency Coordinator and District Emergency Coordinator positions to the Section Manager. Also, determines the areas of jurisdiction of each appointee. At the SM's discretion, the SEC may personally make (and cancel) these appointments. Additionally, the SEC may also personally handle or delegate the Official Emergency Station appointments.
- Encourage all local Amateur Radio groups to establish an ARES organization for their area and assist in their establishment.
- Advise the SM on all Section emergency policy and planning, including the development of a "Section Emergency Communication Plan".

- Work with the Section Traffic Manager to ensure that emergency and traffic nets in the Section present a united public service front, particularly in the proper routing of traffic in emergency situations.
- Work with other Section leadership officials, particularly with the State Government Liaison and the Public Information Coordinator.
- Develop or promote ARES membership drives, meetings, activities, training events, tests and documentation of procedures, within the Section.
- Collect and consolidate Emergency Coordinator (or District Emergency Coordinator) monthly reports. Submit monthly progress summaries to the SM and ARRL Headquarters. Such summaries include timely reports of emergency and public safety communications handled within in the section.
- Maintain contact with other communication services and serve as primary liaison at the Section level with all agencies served in the public interest. Such contact is particularly important in connection with state and local governments, civil preparedness and such organizations as the Federal Emergency Management Agency, Red Cross, Salvation Army and the National Weather Service.
- Work with the State Government Liaison to build productive governmental relationships.
- Appoint Assistant Section Emergency Coordinators (ASEC) as needed to assist with any or all duties listed above.

The District Emergency Coordinator

The ARRL District Emergency Coordinator is an optional position for larger Sections, appointed by, or recommended for appointment by, the Section Emergency Coordinator. The DEC's major function is to supervise the efforts of local Emergency Coordinators in their assigned district. Ideally, the SEC or a single DEC should not be responsible for more than five to seven EC's. This varies widely in practice.

DEC Job Responsibilities:

- Recommend EC appointments to the SEC.
- Coordinate the training, organization, and participation of ECs in their district. This includes the coordination of mutual aid between ARES units within the district.
- Make regional decisions, in consultation with his ECs, regarding the allocation of available Amateurs and equipment during an emergency.
- Coordinate local emergency plans to liaise with any District-level nets.
- Serve as backup for local areas that have no EC and maintain contact with governmental and other agencies within the District.
- Coordinate the reporting and documentation of ARES activities within the district.
- Set a good example through dedication, reliability and job performance.
- Know the locale including the role of all government and volunteer agencies that could be involved in an emergency.

The Emergency Coordinator (EC)

The ARRL Emergency Coordinator is the key team leader in ARES on the county or similar level. Working with the SEC (or the DEC, if one exists), the EC prepares for, and manages overall communication activities during disasters.

General Organization: To be effective, the EC must hold periodic meetings with his team for training and discussion. Meetings *do not* have to be monthly, but should be *often enough to meet the training and operational needs of the group and its mission*. Each meeting should have a specific and valid purpose, or team members will stop participating.

Organizational duties of the EC:

- Appoint assistant ECs (AEC) for specific towns, cities, or tasks.
- Maintain a current roster of team members denoting the skills, equipment and availability of each.
- Develop a notification system for drills and emergencies, with backup methods.
- Issue and cancel ARES identification cards (may also be done at District or Section level in some areas).
- Recommend Official Emergency Station (OES) candidates for appointment.
- Develop an emergency communication planning committee of all local agencies that would be involved in a disaster. Special emphasis should be placed on agencies with which ARRL has agreements (e.g., American Red Cross, Salvation Army, NWS), and any other local communication response groups such as REACT.
- Provide served agencies with contact information to allow for activation, and for general communication between the agency and ARES
- Submit regular reports to the SEC and DEC covering ARES news, achievements, events, problems and contacts with served agencies
- Provide prompt "after-action" reports to affected agencies as well as to the SEC and DEC following incidents and drills.

Planning: The EC is responsible for developing all ARES emergency communication plans for his area. He works with representatives of served agencies, the SEC or DEC, NTS, and his volunteers to see that a plan is developed that will allow the group to respond efficiently and effectively when an emergency occurs. This does not mean that he has to do it himself - only that he is responsible for getting it done. An effective EC learns to delegate much of the work to others.

Recruiting and Training: One of the EC's most critical jobs is recruiting and training a team of effective emergency communicators. It is impossible to overstate the importance of a well trained, dedicated, and involved team.

Training begins with a comprehensive course such as this one, but must also include:

- realistic drills and simulations
- regular training nets for traffic handling and net procedures and
- occasional classroom sessions and workshops to develop specific skills needed to make the plans work.

The EC's job is to build the organization that makes all these things possible.

Emergency Operations: In time of disaster, the EC coordinates the response efforts of his team. He continually evaluates the communication needs of the served agencies and responds quickly to new challenges.

The EC is responsible for all the volunteers who serve in his organization and their interactions with other agencies and the public. He must deal with any interpersonal or public relations issues that come up, either personally or through a qualified assistant.

The EC also works with other non-ARES communication provider-groups to establish both (a) mutual respect and understanding and (b) a coordination mechanism to foster an efficient and effective overall communication response.

ARES Staff and Support Positions

ARES Staff Positions

Within the ARES organization are a number of optional positions appointed by the Section Manager to assist ARES leaders in various ways with day-to-day activities, or to reduce the "span of control" in large organizations.

Span of Control -- A Key Concept for ARES Organizations

While the titles and general responsibilities of ARES management team members are similar from Section to Section, the number of District Emergency Coordinators (DECs), Emergency Coordinators (ECs) and their assistants will depend on the size and scope of the emergency communication commitment in that area. To put it another way, the number of ARES staff members required to provide effective leadership and management depends on the number and size of cities and the number of served agencies within a given area.

The "span of control" is defined as the number of people one person can effectively supervise. Management studies have shown that the ideal maximum is five, but that up to seven can be managed effectively. Accordingly, a DEC should have between five and seven ECs in his district, while an EC should similarly have no more than five to seven AECs. These numbers are only a guideline - the local situation should dictate your specific span of control. Remember, what might be a manageable span of control in normal times will likely be too great during a disaster.

Using Assistants or OES Appointees to Handle Specific Tasks: There are just too many tasks involved with the operation of a busy ARES organization for one person to handle. The ARRL field organization allows for other appointees to assist the SEC, DEC and EC. In years past, most of these functions were assigned to an Official Emergency Station (OES). Many Sections now use direct "assistants," such as an Assistant Emergency Coordinator (AEC), instead. This provides a more conventional management structure that is more compatible with the Incident Command System (ICS). The choice is up to the SEC.

The OES's can also be assigned to specific functions under an assistant-level leader. For instance, if the SEC appoints an "ASEC for Net Management," the ASEC may then assign a particular OES handle a specific net, node, or packet BBS.

ASEC, ADEC, AEC, and OES Assignments

Functions assigned may include, but are not limited to, the following six major areas of responsibility:

Operations - Responsible for specific, pre-determined operational assignments during drills or an actual emergency. Examples include:

- Serve as NCS or net liaison for a specific ARES net;
- Manage operation of a specified ARES digital BBS or MBO;
- Operate the station at a specified emergency management office, Red Cross shelter or other served agency operations point.

Administration - Responsible for specific, pre-determined administrative tasks assigned by their ARES superior. Examples include:

- Recruit ARES members
- Serve as liaison with the Public Information Officer to coordinate information for the media
- Maintain ARES registration data base and/or victim/refugee data base
- Manage equipment inventory
- Conduct training
- Undertake post-event analyses and develop reports

Liaison - Responsible for specific, pre-determined liaison responsibilities as assigned by the EC or DEC. Examples include maintaining:

- Contact with assigned served agencies
- Liaison with specified NTS nets
- Liaison with ARES officials in adjacent jurisdictions
- Liaison with ARESMAT or "rapid response" teams

Logistics - Responsible for specific, pre-determined logistical functions. Examples include:

- Procure and manage transportation such supplies as food, fuel and water.
- Procure and maintain core operating elements such as antennas, batteries, computers, generators and radios.

Management Assistant - Responsible for serving as an assistant manager to the EC, DEC or SEC for specific functional assignments or for geographic areas of jurisdiction.

Consultant - Responsible for providing expert advice or recommendations to ARES officials involving a specific area of emcomm expertise.

- Technical areas, such as digital communications or management software
- Operational issues such as were encountered on 9-11
- Human resource issues, such as morale and volunteer welfare planning

In general, this is an excellent position for former SECs and other higher level or experienced former appointees.

Official Emergency Station (OES): The OES is appointed to handle specific functions designated by the EC. The OES and the EC develop a plan for the OES that makes the best use of the individual's skills and abilities.

During drills and actual emergency situations, the OES is expected to conduct their assigned duties with a high degree of professionalism and with minimal supervision.

The appointment may be made by the:

- A) Section Emergency Coordinator (SEC) or
- B) Section Manager (SM) at the recommendation of the EC (or DEC if there is no EC).

The OES must be an ARRL member and must demonstrate high standards of emergency preparedness and exceptional operating skills. The OES is expected to make a more active commitment to the ARES program than the average ARES member.

The requirements and qualifications for the position include the following:

- Full ARRL membership
- Experience as an ARES team member
- Regular participation in the local ARES organization including drills and tests
- Participation in emergency nets and actual emergencies

For more information on qualifications, please visit the ARRL website.

Assistant Section Emergency Coordinator (ASEC): The SEC has a broad range of responsibilities, too many to handle on his own. By assigning ASECs to handle specific tasks, he multiplies his effectiveness. An ASEC may have responsibility for training, logistics, liaison with specific agencies at the Section level, or a variety of other tasks. For instance, many Sections have an ASEC-Red Cross, an ASEC-State Emergency Management, an ASEC-Skywarn, and an ASEC-Training. The ASEC is a staff assistant and not presently an official ARRL appointment.

Assistant District Emergency Coordinator (ADEC): While less frequently assigned than ASECs, ADECs also multiply the effectiveness of the DEC by taking responsibility for specific, assigned tasks. The need for ADECs varies with the section's organizational requirements. For example, if training is handled at the District level, an "ADEC for Training" may be assigned. The ADEC is a staff assistant and not presently an official ARRL appointment.

Assistant Emergency Coordinator (AEC): AECs contribute to the success of the local ARES Team by filling a number of needs. Few ECs can effectively function without them. For instance, he may appoint an AEC to handle a city, a group of smaller towns, or a specific served agency. Other AECs might handle training, logistics, local net management, recruiting, public information, or agency liaison. AECs are appointed by their EC.

Section Staff and Support Positions

In addition to ARES resources, the Section Manager employs other individuals to assist in various day-to-day operations. During an emergency, these individuals may be called upon to assist ARES management.

Section Traffic Manager (STM): The STM is appointed by the Section Manager to coordinate all Section-level formal traffic handling efforts. Tactical nets are not generally managed by the STM, but by the ECs or their assigned Net Managers. The main responsibilities of the STM are to ensure that formal traffic flows efficiently (a) within the Section and (b) to and from affiliated networks and digital traffic nodes. The SEC must work with the STM to ensure that the net structure is adequate to meet the needs of the served agencies.

State Government Liaison (SGL): The State Government Liaison (SGL) is an Amateur who keeps abreast of state legislative and regulatory proposals. The SGL also responds appropriately to those proposals which can affect Amateur Radio. This is an active, responsive mission, not merely a passive, "stand by the sidelines and watch" function. The SGL also works closely with the SEC and ARES staff to ensure that any new state legislation dealing with emergency response and communication preserves the role of ARES in assisting its served agencies.

Public Information Coordinator (PIC): The ARRL Public Information Coordinator (PIC) is a section-level official appointed by and reporting to the Section Manager (SM). The PIC serves as the Section's expert on public information and public relations matters. The PIC is also responsible for organizing, training, guiding and coordinating the activities of the Public Information Officers (PIOs) within the Section.

Public Information Officers (PIO): Public Information Officers (PIOs) are appointed by and report to the ARRL Section Public Information Coordinator (PIC). The appointment is generally based on the recommendation of an affiliated club and approved by the Section Manager (SM). PIOs are usually club publicity chairpersons and must be full ARRL members. During an emergency, the PIO can act as the local ARES Team's point of contact for the press, providing information on the Amateur Radio contribution to the relief effort. PIOs should restrict their comments to Amateur Radio and never comment on the efforts of served agencies. Served agencies have their own public relations staff to handle such questions.

Official Observer Stations (OO): The Official Observer program helps Amateurs to keep their transmitting equipment and operating procedures in compliance with the regulations. The mission of the OO program is to notify Amateurs by mail of operating/technical irregularities *before* they come to the attention of the FCC. The OO works closely with the FCC's Amateur Auxiliary. Where hard-core violations of FCC rules are encountered, OOs refer problems to the Amateur Auxiliary and may assist in collecting evidence for possible FCC enforcement actions. OOs may be certified to become a member of the Auxiliary. To gain such certification, each OO must pass a formal examination. In time of emergency, OO stations and the Amateur Auxiliary can assist in tracking down intentional or unintentional interference to nets. They can also help to resolve interference issues.

The Net Control Station

Types of Nets

Each net has a specific mission, or set of missions. In a smaller emergency, all the communication needs may be met by one net. In a larger emergency, multiple nets may be created to handle different needs. Here are some examples:

Traffic Net -- Handles formatted written messages between served agency locations or between other nets.

Resource Net (ICS – Logistics Nets) – This is the net hams arriving on scene would check into to receive assignments, or to be reassigned as needs change. A resource net may also be used to locate needed equipment, or operators with specific skills. Several different resource nets may be used in large-scale events. One might be used for collecting new volunteers over a wide area, and other local nets could be used for initial assignments. If required due to geography or high net activity, a third net could handle on-going logistical support needs.

Tactical Nets (ICS – Operations Nets) - The tactical net(s) handle the real meat of on-site emergency communication. It is considered the front line net employed in an emergency. Their mission may be handling communications for the served agency, weather monitoring and reporting, river gauging, or a variety of other tasks that do not require a formal written message. Although commonly used in most emergencies, they are not always employed.

Health and Welfare (H&W) Nets - These nets usually handle messages between concerned friends and family, and persons in the disaster area. Most H&W nets will be on HF bands, but local VHF or UHF "feeder" nets may be needed within in a disaster area.

Basic Net Control Station Concepts

Characteristics of a good NCS operator

- Good communications skills and fluent command of language
- Good voice quality
- Good hearing capabilities
- Good listening capabilities
- Good ear-to-hand copying skills
- Understands what *service* means
- Has knowledge of the Incident Command System
- Willing to take and carry out direct orders
- Is a strong team player
- Is self-assured but not overbearing
- Decisive, with the maturity to make good judgment calls
- Physically able to tolerate high stress for extended periods
- Constant concern for the safety of participants
- Organizer
- Sense of humor
- Ability to absorb new terminologies quickly
- Decent (readable) penmanship
- Generally neat of appearance
- Consistently demonstrates above average operating techniques
- Knowledge of band characteristics

Learning to be an NCS

Many of the skills used in contesting are applicable to NCS. Both activities involve coordinating several stations on the same frequency at the same time. The contesteer running a pile-up will try to contact as many stations as possible in the least amount of time. A busy NCS will attempt to move as much traffic as possible in the least amount of time.

NCS techniques include:

- * When asking for reports or soliciting traffic, *listen!*
- * Take down as many calls as you can identify before you acknowledge anyone!
- * Acknowledge all stations that you heard then, yield the frequency to a single station. When that station is finished, hand the frequency to the next station on the priority list, without soliciting more traffic. Follow this pattern until you've completed your list, then repeat.
 - **** The exception to this is in handling routine traffic during an emergency net. With routine traffic, break between messages to solicit any emergency/priority traffic and handle that first.
- * The net-name/function and the NCS call sign, should be announced several times at the beginning of the net and every eight to ten minutes during the net.
- * When acknowledging check-ins, list the call signs as letters (not phonetically). The purpose of this acknowledgment is to confirm to each check-in that his/her call was heard. Phonetics used on all acknowledgments simply slows the net. *Note:* Phonetics are an excellent way to clarify questions about the call received (was that a B or a D, etc.). Reciting all of the check in information (beyond the call) simply wastes time.
- **Do Not* make editorial comments about the traffic or information being passed unless it will speed or enhance the information flow! Chattiness, especially early in the net, degrades the effectiveness of the net. For scheduled nets, NCS's goal should be to run the script top to bottom and handle all of the listed traffic, business/comments as quickly as possible, without rushing.

If someone tunes up on the net frequency during the net (SSB, CW, etc.), remind them **one time** that this constitutes harmful interference and should be done off the net frequency. Repeating this notification will only serve to encourage those attempting to interfere with the net.

When there is a double, try to get something unique from one or more of the stations. Then call for clarification from those stations **only**. The alternative approach is to acknowledge the check-ins you could understand and then call for check-ins that tried in the last round but were not acknowledged.

If your net is passing NTS traffic, remind participants to read the variable information in order without the redundant field identifiers such as: "Check", "phone figures", etc. Most participants will catch on quickly to the pattern. If they do not, take the time to explain. Things get done much faster if everyone uses the same techniques.

Be as concise as possible. Use the fewest words that will completely say what you mean. This will minimize the need for the repeating of instructions.

Take frequent breaks. While you may not recognize the stress that being an NCS produces, it will become evident in your voice. If you are asking yourself when your last break was, **you** know it is time for one.

Turn over the net to your backup at least every two hours and **rest**. Do not listen to the net. **Rest!** Then, when rested, listen to the net for a few minutes before resuming your station.

Control the tone of your voice. Be as calm as possible. Tension tends to make our voices raise in pitch and this change **will** be picked up by the net. Use a calm tone and members of the net will tend to remain calm.

Speak in first person. It is "recognizing KD1ZZZ, *not* the NCS would like to recognize"

The ability to remain cool, calm and collected will buy you more than anything else. There is no doubt that being an NCS is a high-pressure assignment and it is easy to become frustrated or angry. If you have a frustrating problem, ask for help from other members of the net. Knowing when to delegate is the mark of a good leader.

Net Discipline: In many ways your job as NCS can be equated to that of a traffic cop for the frequency. This analogy carries over to the duties of enforcing net discipline. You can reasonably expect net members to:

- Report to the NCS promptly as they become available.
- Ask clearance from NCS before using the frequency.
- Answer *promptly* when called by NCS.
- Use tactical call signs.
- Follow established net protocol.

All of the above expectations are great. However you must remember you are dealing with volunteers with a vast range of knowledge and experience. This means you cannot order their compliance. You can only ask their cooperation. Probably the best way to enlist the cooperation of the net is to explain what you are doing in a calm and straightforward manner. This may involve supplying a small amount of real-time training.

The one thing you *never* do is **dress down** someone over the air. It is better to lead by example and produces much better results.

One way of classifying a net is the level of net discipline used, or the "style" of the net. The two acknowledged styles are:

Open (Informal) Nets

During an open net most any type of traffic or communication is permitted. Conversations (ragchews) are permitted provided they break every so often to allow incident related traffic to flow.

Directed Nets

A Directed Net is created when there are a large number of stations needing to use the frequency or the volume of traffic cannot be dealt with on a first-come first-served basis. The NCS will determine who uses the frequency and what traffic will be passed first. Casual conversation is discouraged and tactical call signs will be used as applicable.

Like anything else, being a good NCS requires practice. Contact your local ARES EC for opportunities in your area!

NCS Hints and Kinks

- * If it is a scheduled net, start on time!
- * Use a script when/where possible. If you have time, make notes to yourself to help with the information in the script - before you start the net.
- * Be friendly yet in control - speak slowly and clearly with an even tone, not a monotone.
- * Sound confident, even if you are not. Above all, don't worry. Just give it an honest try.
- * Ask *specific* questions, give *specific* instructions! You can make it much harder on yourself with nebulous questions and instructions.
- * **Do Not** make editorial comments about the traffic or information being passed unless it will speed or enhance the information flow!

* Have pencil/paper ready and write down **all** calls. It helps to practice with writing down calls when you are not the NCS.

* Read your owner's manual and understand how to use your microphone. The worst sounding NCS is one that cannot be heard or sounds like a train huffing and puffing into the microphone as they speak. From the ARRL Field Resources Manual: "Articulate, don't slur. Speak close to your mike, **but talk across it, not into it.**"

* When there is a double, try to get something unique from one or more of the stations. Then call for clarification from those stations **only**.

* During check-ins, recognize participants by name whenever possible.

* Acknowledge check-ins and **all** messages.

* Be sure to frequently identify the purpose of the net (let people know what they are checking into!) and advise all listeners of the sub-audible frequency required if applicable.

* Ask for assistance if/when you need it. If this is not a weekly net, delegate responsibilities. You cannot do it all.

* If this is an emergency net, remind listeners to listen and tell them where the staffing net is. Someone checking in to say they are listening only slows the net.

* Don't be afraid to say "**oops**" if you get flustered and mumble a bit. Pause, take a deep breath, and go back at it. If you make a mistake, remember this is not Brain Surgery. Do your best to **calmly** recover. Nothing more will ever be asked of anyone.

* ***Don't think on the air!*** If you need a moment to consider what is needed next, say something like "**Stand by**" and unkey your mic.

* Keep transmissions as short as possible. Resist the tendency to ragchew or ramble.

* Transmit only facts! If there is need to make an educated guess or speculate, make sure it is **very** clear that it is speculation. ***First choice is to not speculate at all.***

* Avoid becoming the source for general information about the event. If it is an emergency, refer event status questions to the served agency Public Information Officer (PIO).

* When necessary, use standard ITU phonetics. There is no such thing as "common spelling". Send all numbers as individual numbers, e.g., 334 is three three four not three hundred thirty four.

* Speak in first person. It is "recognizing KD1ZZZ, **not** the NCS would like to recognize"

* For voice nets, use plain English. "Q" signals are for CW.

* If the net has been quiet for more than ten minutes, check on operator status. This keeps the net running more smoothly and insures you know about equipment failures as soon as possible.

Opportunities are often things you haven't noticed the first time around

NCS Questions (Before a Net Begins)

The following is a list of questions an NCS operator should ask themselves *before* starting a net. If you cannot answer at least two thirds of the questions in the affirmative, you should seriously consider having some one else run the net.

Emergency Nets

Is the NCS location away from the Command Post?

The noise and commotion at CP degrades your ability to run a good net and the noise you generate only adds to the confusion there.

Do you have the best performing antenna for the conditions?

A "rubber duck" is not adequate unless you can see the repeater antenna. That does not *mean* see the mountain the repeater is on, it means see the antenna. For HF, polarization of your antennas *will* affect your signal to others.

Are you running off battery power?

If you are running from battery: Do you have at least an hours of charge on the battery?

Most desired is to have a battery with at least 90+% charge but if you are the only choice for NCS then make sure you can run the net long enough to have some one else get ready.

Are you using a headset with noise canceling microphone?

Even from home the background noise will affect how well you can hear and be heard.

Do you have pencil/pen and paper sufficient to run the net for a full shift?

You will *not* be able to remember enough about the traffic to be effective unless you *write it down*.

For VHF/UHF; ***Do you know the characteristics of the repeater system you are on?***

Your effectiveness as NCS will be adversely affected if you do not. For example; The Falmouth repeater (147.09) in the *net mode* has a very long squelch tail, but the squelch tail does not need to drop to reset the timer.

Do you have a runner, liaison or logging person to support you?

For large-scale events all three are required. You *cannot* handle the net and run messages.

Do you have a designated relief operator?

Everyone gets tired and NCS must be the most alert operator on the net.

Scheduled Nets

Is the NCS location away from the event operations?

Noise and commotion degrades your ability to run a good net and the noise you generate only adds to the confusion there.

Do you have the best performing antenna for the conditions? (See comments for Emergency Nets)

Are you running off battery power? (See comments for Emergency Nets)

Are you using a headset with noise canceling microphone? (See comments for Emergency Nets)

Do you have pencil/pen and paper sufficient to run the net for the full net? (See comments for Emergency Nets)

For VHF/UHF; ***Do you know the characteristics of the repeater system you are on?*** (See comments for Emergency Nets)

Do you have a runner, liaison or logging person to support you? (See comments for Emergency Nets)

Only weekly and daily nets are exempt.

Do you have a designated relief operator? (See comments for Emergency Nets)
Only weekly and daily nets are exempt.

Contingency plans

Contingency Plan: n. a plan for possible, unforeseen or accidental occurrence

A somewhat thread bare saying that is very true, tells us a lot about Contingency planning.

"Those who fail to plan, plan to fail". Or as Murphy put it - "Anything that can go wrong, will. Anything that can't go wrong, still will".

How does this relate to Emergency Communication? Simple, as you begin your planning for emergency operation, be sure you have redundancy of equipment and back up people available when ever possible. As NCS it is up to you to plan for your backup, have backup equipment available for your use and try to obtain more volunteers than you have positions to fill. But wait, more volunteers than you have need for? Yes, on average, for every ten volunteers you get, there will be at least one that will develop equipment problems, or have transportation problems, or have personal emergencies that develop. If you have only "just enough" volunteers, you actually are short ten percent for the event. Having one or two "floaters" who can act as relief for almost any of your operators **will** help the event run more smoothly. In addition, having an extra person to act as - runner - handling message transportation to/from your served agency will help your group function more efficiently. The side benefit is that should one of the volunteers prove to not have sufficient training, they can become the backup on that job and have a successful training experience during the event.

Handovers

During the course of every event that lasts over two hours (and most of the others) you will have need to turn over operation of one or more of the locations in the net to a relief operator. As NCS it is in the best interest of the net and your sanity to do likewise with the net to another NCS operator at least every two hours.

To facilitate this change of operators the new operator will need:

- * List or note of outstanding messages to/from the location
- * Log of traffic to/from the location
These two items may be one log, properly annotated
- * Status of open queries
- * Local and remote contacts for the location (served agency and others as necessary)
- * Any other information the outgoing operator feels necessary
When ever possible, both operators should handle the location for at least ten minutes to allow smooth transition.

Coverage breaks

Coverage breaks are, as the name implies, failures of a station to handle traffic as required during a net. These will usually take the form of equipment failures, power supply failures or overly tired operators who fail to pay attention. In **all** cases, prior agreement of how the coverage breaks are to be handled, should be announced in the pre event briefing.

NCS Coverage Breaks

The best way to handle NCS coverage breaks is with a known NCS backup. This person is known to the net and has a duplicate copy of the operational log for the event and thus is able to pick up operation of the net in just a few moments.

When there is not sufficient resource to have a backup NCS then the person with the best NCS skills and most complete staff at their location should take over the net. This person will start with a call for emergency traffic, handle that, then go to roll call to establish continuity. After which regular net traffic will resume.

NOTE: As this person takes over the net they will no longer be available to handle the previous assignment. A relief operator will need to be dispatched to handle the new NCS's previous assignment!

Non NCS Coverage Breaks

When a station fails repeatedly to respond to calls from NCS an assessment must be made of the criticality of the traffic. If there is critical traffic holding for that station then a relief operator will need to be dispatched immediately. If the traffic can be held for several minutes then a reevaluation should be made at that time. If the coverage break was from equipment failure and that can be corrected, then the relief operator may be recalled. If the coverage break was from inattentiveness, the relief operator should take over.

Handling an irate participant

This is one of the toughest problems you will face. If handled incorrectly, it can cause net participants to 'take sides' and erode the morale and effectiveness of your net. People can get their feelings hurt over very little, especially when they are tired and in unusually stressful circumstances. Your first reactions need to be:

- * Slow up. Don't respond instantly. Take a deep breath.

- * Do a quick review of what you know about this person.

- * ***DO THE NEXT THREE STEPS ALL IN ONE STATEMENT.***

- Acknowledge the problem. Give in to the 'Problem' whether they are right or wrong!

- This acknowledges that there is a problem and that you are recognizing that fact. Once you agree that there is a problem, the 'fight' is gone.

- Empathize with them!

- Whether you understand or not, tell them that you can understand how they can feel that way and that, were the situation reversed, you would probably feel the same way.

- Ask them to suggest a simple yet reasonable solution.

- Listen intently! This is where they will reveal the real problem. Everything they have said up to now may have been a loud smoke screen. Somewhere in their suggestion, they will tell you what they really want from you.

- If their suggestion/solution is reasonable, tell them that you will try to put it into play. If it is not, make a counter-suggestion that will satisfy the real problem that they have revealed to you.

- If the problem cannot be resolved quickly and reasonably, quietly send someone to replace this individual and relieve him from his post. If there are no posts involved in the operation, give up let him win . . . Politely explain that the net must continue, thank the person for his services and tell him he doesn't have to stick around. You tried to solve the problem reasonably and he refused. He wins the fight and you win the battle. The rest of the net will respect what you did and morale will remain intact.

Handling malicious interference

Most people that interfere with net operations or with casual conversations are poor, weak individuals that think the only way to get recognition is to behave improperly. The best way to handle them is to ignore them. When they can evoke no response, at all, they tend to leave. Let them leave without comment. If you comment in any way, these people will persist.

Unfortunately, there are people who prove there is need for more chlorine at their end of the gene pool. To overcome the interference from these individuals you will have to plan for it. Plan by having alternate frequencies announced at the pre event briefing. Should the interference become intolerable, move to the alternate frequency. When you move to another frequency, do so under pre announced set of conditions (at the briefing) and ***without*** saying anything on the primary frequency. Another very successful method involves the use of your local "fox hunters" to track down the offending station. This will need to be a well-coordinated effort that is not announced on the net frequency.

Shortcut to being a good NCS - Practice, Practice Practice

- * Be willing to learn.
- * Accept constructive criticism politely.
- * Contact your ARES Emergency Coordinator and volunteer.
- * Contact the person in charge of your local traffic net and volunteer.
- * Contact your local Amateur Radio club to see if they have a net. If so, volunteer. Look for the group that handles public service events in your area. Many times this will not be the ARES group, so volunteer.
- * Work with the best NCS you can find. This person will be able to show you (if you care to watch) a lot of subtle techniques.
- * Work as NCS as often as you can.

Serving Served Agencies

Meeting the communications needs of "served" agencies is a challenging, and often daunting proposition in today's complex disaster/emergency relief arena. The proliferation of emergency relief organizations and their increasingly sophisticated needs, all competing for that scarce resource--the volunteer--is enough to make the member of any amateur emergency organizations' head spin. The activity of other non-amateur volunteers makes the picture even more complicated. As more of the population moves to disaster-prone areas, and less government funding is available, more pressure is consequently placed on agencies to use (and sometimes abuse) the volunteer sector for support of their missions in disasters. Toes are sometimes stepped on and volunteer morale can be undermined.

What to Do?

The answer is not the same for every ARES unit everywhere. How you develop your relationships with served agencies depends upon many factors, and these factors will not be the same from state to state, county to county or even city to city. The best that can be done in this short lesson is to explore possibilities, so that you are aware of all approaches to your problem. In the end, the adaptation of solutions to problems of serving agencies is up to the local Emergency Coordinator (EC).

However, two general approaches have developed over the years. Both have proven to be useful and both are in use right now. These two approaches are not mutually exclusive, and elements of one can be found in the other. They are separated here only for ease in study. So, when you decide to go one way or the other with your ARES unit, do not forget about the good points in the alternative approach.

For want of better titles, we will label the two approaches Traditional and Emergency Management. Here are the differences between the two in short:

1. Traditional - potential served agencies are solicited by the EC. When enough are found, agreements are made and the ARES unit tries to serve them during emergencies.
2. Emergency Management (EM). The ARES unit attaches itself to the local Emergency Management unit (a unit of government charged with allocating resources during all emergencies). During emergencies, the head of Emergency Management (the "Emergency Manager") tells the EC where communications support is most needed. The EC makes all assignments to meet those needs.

We need to explain the EM model, since it is an emerging, non-traditional approach. Federal law designates that each county in the US has an Emergency Manager, whose job it is to allocate resources during times of emergency. For example, if a tornado devastates a city, the county EM may 1. Call on the county Sheriff to provide officers to augment the city's police services, 2. Ask a neighboring county to provide additional EMTs and vehicles, 3. Contract with a local heavy equipment contractor to supply bulldozers, cranes and other equipment for rescue operations, and so on. The Emergency Manager has the statutory power, and statutory responsibility, to coordinate these operations. The essential activity in this job is **management of resources during emergencies**. Well, then, guess what? An ARES unit is a volunteer emergency communications resource!

Some ARES units have attached themselves, by mutual consent, to Emergency Management departments. The county Emergency Manager allocates the ARES unit's communications abilities during emergencies just like any other important resource. That is, the EM tells the EC where communications links are most needed. The EC then does all the usual tasks of an EC; assigning operators and equipment, making relief schedules, and so on.

This arrangement has several benefits. First, the person who knows most what is needed in the emergency and who has the statutory job to meet those needs- the Emergency Manager - decides what overall task(s) the ARES unit is assigned to. The EC does not have to decide, for example, that it is more important to serve the Red Cross than the Salvation Army during a particular incident.

Second, the EC does not have to "beat the bushes" looking for agencies to serve. The ARES unit is simply a volunteer arm of Emergency Management and serves agencies as they are assigned by the Emergency Manager.

Third, the ARES unit may be afforded a meeting place in the Emergency Operations Center, maintained under the Department of Emergency Management. Some ARES units have even been given a separate Emergency Communications Center - a room where ham radio and public service radio equipment is stored and operated. Some Emergency Managers have allocated funds in their budget to purchase ham radios and antennas to support the mission of their attached ARES groups. As trust and mutual respect develops, hams are sometimes given even greater responsibility. At least one EC has been made Deputy Director of Emergency Management, a volunteer position with even greater opportunity to serve the public in time of need.

Finally, there is training. Attachment to Emergency Management opens doors to a huge opportunity for emergency training at the local, state and federal levels. The Emergency Manager can authorize enrollment in a number of web-based or in-person training courses offered at the state or national level.

GENERAL PRINCIPLES.

What things **are** necessary when serving agencies no matter what approach you take? There are some underlying principles.

1. Everyone must know exactly with whom they are dealing.

a. It is important that agency managers know who leads the ARES unit (EC) and that all recruitment and utilization of operators is directed by that leader. Make sure they are aware of your local and general ARES policies, capabilities and (probably most important) your limitations in operators and equipment. They should also be aware of who your "boss" is in ARES - your District Emergency Coordinator (DEC) and Section Emergency Coordinator (SEC) and the role each plays in emergency response. Do not forget to make them aware of policies such as message format, security of message transmission, Disaster Welfare Inquiry and others that will affect the way you serve them. If you have other agencies to serve, let them know that, too.

b. It is important that the EC know the policies and hierarchy of each agency it is serving. Whom will the EC interface with in an emergency? Who are their bosses? What policies does that agency have in place that may impact on how ARES serves them? What other volunteer communications units will serve them?

2. Everyone must know what to expect. A detailed operations plan should be developed with a served agency that sets forth precisely what each organization's expectations are during emergencies. ARES and agency officials must work jointly to establish protocols for mutual trust and respect. Mutual trust and respect develops when expectations are known and fulfilled.

3. Do not exceed your abilities. A challenge ARES faces is the number of agencies that demand communications support during a disaster. A local ARES unit only has so much to go around, and it cannot possibly meet every agency's needs.

Competition

With a strong ARES program, and a capability of substantially meeting most of the local served agencies' needs, you might avoid another problem that is cropping up in some parts of the country, that of "competition" with emerging amateur groups providing similar communications services outside of ARES. Some of these groups may feel that their local ARES doesn't do the job, or personality conflicts and egos get in the way, so they set up shop for themselves, working directly with agency officials, and usurping ARES' traditional role. Some agencies have been receptive to their assistance.

There continues to be "RACES versus ARES" polarization in some areas. Some agencies, including at least one with statewide jurisdiction, are forming their own auxiliary communications groups, and recruiting their own hams, some away from ARES. In other states, the problem has been solved by making every ARES ham a RACES operator, and vice versa. It works!

Work to find and provide the best services you can as outlined in this unit. Strive for growth and enhancement of ARES members' abilities, and make sure you present a "professional" face to potential "served" agencies and your opportunities will grow. Make your program better than the next guy's, and agencies will be more attracted to you.

If possible, setting egos and personalities aside, seek out these other groups and take the initiative to try to establish a rapport, and the fact that "we're all in this together," for the good of the public and Amateur Radio. With good communication, mutual respect and understanding between you and the other groups, at the least, you should be able to coordinate your program's missions with theirs (i.e., divide up the pie, or who will do what for which agency) to foster an efficient and effective Amateur Radio response overall. At best, you may find other groups willing to fold their tents and join your camp! Try it.

Personal Preparedness for Emergency Responders

Response Kits

It is becoming very common for amateurs to respond to major calamities far from their residences and normal base of operations. In such responses, there is no fall-back to the comforts of home until one's participation is complete. While the Salvation Army, Red Cross and local residents will readily supply emergency workers (including amateurs) with some hygienic necessities, the wait for these to arrive can often be uncomfortable. A small backpack-sized response kit always at the ready and carried along when responding will make a big difference in terms of the responder's comfort.

What should a good, relatively small, lightweight response kit contain? It can carry the transceivers, batteries, cables, earphones, microphones, etc, that are the tools of our response. What it must also contain are items designed for our physical survival and personal comfort.

Personal Survival Kit

Disaster preparedness experts advocate a 72-hour supply of food, water and medicine, on the theory (proven correct) that it may take up to three days to transport such essentials into a stricken area. For disaster service workers, such as ARES personnel, a one-day supply of food and water will suffice. Emergency responders will be the first to be provided access to water and foodstuffs based on the fact that emergency responders must be "fueled" if they are to capably assist victims. A one-day supply of water (in easy-to-carry and use Coast Guard-approved packets) along with a one-day ration of high-energy, high-fiber food bars, in a small pack is a good idea. Both are available at marine supply outlets, mountaineering and backpacking stores, and at some drug and hardware stores.

Required prescription medicine needed should be carried in an amount sufficient for one week. Remember, even if you have a prescription with you, there may not be a pharmacy open to fill it. Other medicines such as a pain-reliever, antacid tablets, and protective lotions such as sunscreen and insect repellent should also be carried.

Some cash and coins need to be included. Don't count on open banks or functioning ATM machines to convert your "plastic" into spendable cash.

Proper identification, including your Amateur Radio license and ARES card should be carried along with a list of important telephone numbers to refer to when calling your employer or relatives to update them on your status and to determine theirs.

Hygiene is important; a toothbrush, toothpaste, comb, shampoo, antiperspirant, and chemical hand-wipes should be carried. A flashlight or chemical light stick and a portable AM/FM radio are important, as are extra batteries for them. Extra clothing (including a light jacket, even in the summertime) and some type of head covering are likewise important.

Convenient carrying of the items that comprise your personal survival kit is as important as the contents. In addition to your survival kit you will likely have radio equipment, spare batteries, power cables, an external antenna, and maybe even a computer and TNC to carry in a briefcase or a duffel bag. A relatively small backpack is large enough to carry every item needed in a personal survival kit, including extra clothing. An extension cord and power strip often prove to be useful.

Your personal survival kit should to be close at hand at all times. If it is in one location and you are in another, it does you no good at all. If you travel by motor vehicle most of the time, keep it in the vehicle. A locker at work or school may be a good place to store it. When you are at home, keep the kit where you will see it when you rush out the door en route to whatever emergency summons you. Like the commercial for a well-known credit card says, "Don't leave home without it."

Severe Weather Communications and SKYWARN

With the development of informal weather nets which may include hundreds of observers in a wide area, many NWS Meteorologists-in-Charge began to instruct these hams in the types of information needed during severe-weather emergencies. Training sessions were conducted, and publications disseminated. Amateur Radio SKYWARN operations developed as an important part of community disaster preparedness programs. Accurate observations and rapid communications during extreme weather situations now prove to be indispensable to the NWS. Amateur Radio operators are a first-response group invaluable to the success of an early storm-warning effort. Weather spotting is popular because the procedures are easy to learn and reports can be given from the relative safety and convenience of a home or an auto.

SKYWARN training is offered by NWS, Emergency Management offices, and is also found in NWS publications. It may also be offered by other community service minded organizations in your area.

Weather reports on a severe-weather net are limited to critical severe weather observations, unless specifically requested by the net control operator. As a result, most amateurs monitor net operations and transmit only when they can help. Weather forecasters, depending on their geographical location, need certain information. During the summer or thunderstorm season, hams report:

- Tornadoes, funnels or wall clouds.
- Hail.
- Damaging winds, usually 50 miles per hour or greater.
- Flash flooding.
- Heavy rains, with a sustained rate of 1 inch per hour or more.

During the winter or snow season, hams report:

- High winds.
- Heavy, drifting snow.
- Freezing precipitation.
- Sleet.
- New snow accumulation of 2 or more inches per hour.

Here's a four-step method to describe the weather you spot:

- 1) *What*: Tornadoes, funnels, heavy rain and so on.
- 2) *Where*: Direction and distance from a known location; for example, "3 miles south of Newington center, on Route 15."
- 3) *When*: Time of observation.
- 4) *How*: Storm's direction, speed of travel, size, intensity and destructiveness. Include uncertainty as needed. ("Funnel cloud, but too far away to be certain it is on the ground.") Also, indicate if amounts are measured or estimated; i.e. rain or wind gauge vs. visual estimate.

Weather Warnings

NWS policy is to issue warnings only when there is absolute certainty, for fear of the "cry wolf" syndrome (premature warnings cause the public to ignore later warnings). Public confidence increases with reliable weather warnings. When NWS calls a weather alert, it will contact the local EC by phone or voice-message pager, or the EC may call NWS to check on a weather situation.

Hurricanes

A hurricane is declared when a storm's winds reach 75 miles per hour or more. These strong winds may cause storm-surge waves along shores and flooding inland. A hurricane *Watch* means a hurricane may threaten coastal and inland areas within 36 hours. Storm landfall is a possibility, but is not necessarily imminent. Listen for further advisories and be prepared to act promptly if a warning is issued. A Hurricane Warning is issued when a hurricane is expected to strike within 24 hours. It may include an assessment of flood danger, small-craft or gale warnings, estimated storm effects and recommended emergency procedures.

Amateurs, in the 4th and 5th call areas in particular, can spot and report the approach of hurricanes well ahead of any news service. In fact, their information is sometimes edited and then broadcast on the local radio or TV to keep citizens informed. The Hurricane Watch Net on 14.325 MHz, for example, serves either the Atlantic, Pacific and Gulf of Mexico during a watch or warning period and keeps in touch with the National Hurricane Center.

Tornadoes

A tornado is an intensely destructive whirlwind formed from strongly rising air currents. With winds of up to 300 miles per hour, tornadoes appear as rotating, funnel-shaped clouds from gray to black in color. They extend toward the ground from the base of a thundercloud. Tornadoes may sound like the roaring of an airplane or locomotive. Even though they are short-lived over a small area, tornadoes are the most violent of all atmospheric phenomena. Tornadoes that don't touch the ground are called funnels. A Tornado *Watch* is issued when a tornado may occur near your area. Carefully watch the sky. A Tornado *Warning* means take shelter immediately, a tornado has actually been sighted or indicated by radar.

Amateurs in "tornado alley" areas often receive Tornado Spotter's Training and refresher courses presented by NWS personnel. Amateur Radio's quick-response capability has reduced injuries and fatalities by giving early warnings to residents.

Tornadoes disrupt telephone and electrical services just as quickly as they flip over trucks or destroy homes. Traffic lights and fuel pumps won't work without electricity, creating problems for motorists and fuel shortages for electric generators. After a tornado strikes, amateurs provide relief communications in cooperation with local government and relief agencies. Welfare messages are sent from shelters where survivors receive assistance. Teams of amateurs and officials also survey and report property damage.

Handling Hazardous Material Incidents

The term "hazardous materials" (HazMat) refers to any substances or materials, which if released in an uncontrolled manner (e.g., spilled), can be harmful to people, animals, crops, water systems, or other elements of the environment. The list is long and includes explosives, gases, flammable and combustible liquids, flammable solids or substances, poisonous and infectious substances, radioactive materials, and corrosives.

One of the major problems faced by emergency responders, including ARES members, is determining which chemicals are involved and in what quantities.

Hazardous Chemicals On The Move

As the primary regulatory agency concerned with the safe transportation of such materials in interstate commerce, the US Department of Transportation (DOT) has established several systems to manage HazMat materials. These include definitions of various classes of hazardous materials, placards and other marking requirements for containers and packages to aid in rapid identification of cargoes, and an international cargo commodity numbering system.

The DOT requires that all freight containers, trucks and rail cars transporting these materials display placards identifying the hazard class or classes of the materials they are carrying. The placards are diamond-shaped, 10-inches on a side, color-coded and show an icon or graphic symbol depicting the hazard class (flammable, caustic, acid, radioactive, etc). They are displayed on the ends and sides of transport vehicles. A four-digit identification number may be displayed on the placard or on an adjacent rectangular orange panel. If you have spent time on the roads you have undoubtedly seen these placards or panels displayed on trucks and railroad tank cars. You may recognize some of the more common ones, such as 1993, which covers a multitude of chemicals including road tar, cosmetics, diesel fuel, and home heating oil. Or you may have seen 1203 placards on tankers filling the underground tanks at the local gas station.

In addition to the placards, warning labels must be displayed on most packages containing hazardous materials. The labels are smaller versions (4 inches on a side) of the same placards used on trucks and other vehicles. In some cases, more than one label must be displayed, in which case the labels must be placed next to each other. In addition to labels for each DOT hazard class, other labels with specific warning messages may be required. Individual containers also have to be accompanied by shipping papers that contain the proper product name, the four-digit ID number and other important information about the hazards of the material.

Hazardous Chemicals in Buildings

The National Fire Protection Association (NFPA) has devised a marking system to alert firefighters to the characteristics of hazardous materials stored in stationary tanks and facilities. This system, known as NFPA 704M, can also assist citizens visiting a site in identifying the hazard presented by the stored substance. Use of the system is voluntary, unless specified by local codes.

The NFPA 704M label is diamond-shaped, and is divided into four parts, or quadrants. The left quadrant, colored blue, contains a numerical rating of the substance's health hazard. Ratings are made on a scale of 0 to 4, with a rating of 4 indicating a danger level so severe that a very short exposure could cause serious injury or death. A zero, or no code at all in this quarter, means that no unusual hazard would result from the exposure. The top quadrant of the NFPA symbol contains the substance's fire hazard rating. As you might expect, this quadrant is red. Again, number codes in this quadrant range from 0 to 4, with 4 representing the most serious hazard. The NFPA label's right quadrant, colored yellow, indicates the substance's likelihood to explode or react. As with the health and fire hazard quadrants, ratings from 0 to 4 are used to indicate the degree of danger. If a 4 appears in this section, the chemical is extremely unstable, and even under normal conditions may explode or react violently. A zero in this quadrant indicates the material is considered to be stable even in the event of a fire. The bottom quadrant is white, and contains information about any special hazards that may apply. There are three possible codes for the bottom quarter of the NFPA symbol:

OXY means this material is an oxidizer. It can easily release oxygen to create or worsen a fire or explosion hazard.

The symbol **W** indicates a material that reacts with water to release a gas that is either flammable or hazardous to health.

If the material is **radioactive**, the usual tri-blade "propeller" symbol for radioactivity will appear.

Another short way to say it.

The NFPA 704M labeling system for hazardous materials was devised to provide at-a-glance information to response personnel on how a substance could be expected to react in the event of an emergency.

Guidelines for Handling HAZMAT Incidents

1. Be sure you are up-wind and up-hill from the incident site. Once you are in a safe position, try to identify the material. However, it cannot be over emphasized that you **MUST** stay well away from the site. Do **NOT** be tempted to get just a little closer so that you can read placards or other items. If you cannot read these items using a spotting scope or binoculars, simply report what you can see from a safe position. If you are able to see from a safe position, look for:

- The four-digit number on a placard or orange panel.
- The four-digit number preceded by the initials "UN/NA" on a shipping paper, package or drum.
- The name of the material on the shipping papers, placard, or package.

2. Call for help immediately and let the experts handle the situation. Remember, even ordinary firefighters and police are prohibited under federal law from taking certain actions at some HazMat incidents. Do not attempt to personally take any action beyond your report. This is an instance when it is vitally important to know your limitations, not just for your own safety, but also for the safety of others.

3. When calling in the experts, you should consider including the following information:

- a. Identify yourself.
- b. Give your current location and the location of the incident, i.e. street address or cross streets, road and mile marker, distance from nearest town, etc.
- c. Briefly describe what you see (from a distance), i.e. liquid spill, gaseous cloud, etc.
- d. If gaseous cloud or liquid, give the direction the contaminant is flowing or moving. Give any other pertinent weather information you observe from a safe distance that might help the experts in responding to the incident. Be brief but concise.