

Report of the National Emergency Response Committee
January, 2007

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Introduction

The achievements of volunteer Amateur Radio communicators in times of disaster cannot be commended too highly. In dangerous and demanding environments, they get the job done when simple operability, let alone interoperability, is beyond some organizations which soak up huge numbers of taxpayer dollars and have permanent bureaucracies in charge of preparedness.

Amateurs have served in the extraordinary disasters of the 21st century with great personal courage, skill, and generosity. No one having any familiarity with the facts would say otherwise, and nothing in this report should be interpreted as diminishing their accomplishment.

However, the ARRL as a national organization could have done better and must do better in the future. Some changes have already taken place, such as enhancements of W1AW's capabilities as a disaster communications center, introduction of the Ham-Aid program for providing equipment to the field, improvement of the Headquarters teleconferencing system, and increased emphasis on cross-training of the Headquarters Staff. Additional changes are needed not only in what the League does but in how we think about what we do as a national organization when extraordinary disasters happen.

Most disasters are have a relatively small geographic footprint. Consequently, the traditional decentralized county-District-Section ARES model works very well most of the time. Unlike the ARRL's National Traffic System, which has always existed beyond the Section level, the League's ARES has never had a formal existence beyond the Section level. There are some inter-Section mutual aid agreements, but generally speaking, ARES function stops at the Section boundary and, generally speaking, that has been satisfactory. ARRL Section leaders understand their home areas – likely hazards, terrain, demographics, Amateur Radio culture, emergency management, and activities of charitable relief organizations – and they do not need an authoritarian, top-down, one-size-fits-all national plan imposed by the ARRL in order to prepare appropriately for service to their communities. Decentralization is one of the great strengths of the Amateur Radio Service when disasters occur.

In the present century, however, several extraordinary disasters have had such scope and magnitude that the ARRL was called upon by our national-level served agencies to provide Amateur Radio communications support at an unprecedented level. The terrorist attacks of September 11, 2001, the series of hurricanes that struck Florida in 2004, and the Gulf coast hurricane catastrophe in 2005 were extraordinary disasters to which the national-level ARRL was not well prepared to respond. The traditional decentralized ARES model does not scale up well in cases like these. Rare as such extraordinary disasters may be – we hope – it would be irresponsible for the ARRL not to prepare itself to respond to the requests of our national-level served agencies in a timely manner with a sufficient number of the best-qualified communicators in the country.

Timeliness is a key issue. As this committee's chairman wrote in a report on the 2006 Global Amateur Radio Emergency Communications Conference (GAREC-06) held in conjunction with the International Conference on Emergency Communications (ICEC):

[It is important] for Amateur Radio to avoid being dazzled by our own press clippings into thinking that we are the big dog in emergency telecommunications. The point of the Tampere Convention is to remove regulatory impediments to the swift deployment of modern emergency telecommunications equipment and competent personnel, especially to disaster zones in the developing world where communications infrastructure may not have been much to talk about before the disaster struck and where regulatory environments may be downright paranoid. For example, I saw a complete satellite communications system – dish and all – that collapses and can be carried in a hard case pack on one's back. Goodness

knows what human being would be strong enough to carry the pack very far, but even if you had to move it in a vehicle the transportability of this sophisticated system was daunting.

Here in the USA, we see a post-Katrina emphasis on speeding up the deployment of sophisticated communications systems after disasters so that governmental and non-governmental organizations can get to work quickly. As the emergency telecomm world as a whole speeds up its reaction time, so we hams must be better organized, more capable, and as quick as possible on the scene after our help is requested, if we are not to arrive after our window of usefulness has closed. Given ham radio's dependency on emergency communications as our reason to exist in this country, it would be suicidal to assume that what we have always been able to do, at the speed we have always been able to do it, will be just fine to maintain our relevance into the indefinite future.

Recognizing that there have been challenges created by extraordinary disasters that the national-level ARRL was insufficiently prepared to meet, and in light of the rapidly-changing disaster communications environment world-wide, the ARRL Board of Directors created the National Emergency Response Planning Committee (NERPC) at the Board's annual meeting in January, 2006. The committee was charged with making recommendations that would improve the ARRL's national preparedness.¹

There is always a risk of fighting the last war or preparing for the last disaster, as pointed out in the literature analyzing our nation's response to the 2005 Gulf coast hurricanes. NERPC is about the future, not the past. Members of NERPC possess not only leadership experience during past disasters but also the vision and imagination required to make recommendations applicable to future extraordinary disasters in which history does not repeat itself.

The committee was instructed to report to the Board at the annual meeting in January, 2007. This is that report, summarizing our actions, thoughts, and recommendations. As instructed in the authorizing motion, the NERPC chairman provided interim reports to the chairman of the Programs and Services Committee during 2006.

As a final introductory comment, the chairman would like to commend the committee members for their devotion to our task, their constructive and fair-minded attitude, their willingness to ask and answer hard questions, and their contribution of professional expertise that saved the ARRL thousands of dollars and months of time compared to having certain work done by others. It has been a privilege to work with these people, and the ARRL is extremely fortunate to have them among our emergency communications leadership volunteers.

Messaging

Although a typical concept of Amateur Radio emergency communications in recent decades has been tactical communications using voice on VHF/UHF FM, formal messaging using a variety of bands and modes is an important part of emergency communications in many disasters. Moving a large volume of messages quickly and accurately via Amateur Radio was a challenge twenty years ago when Amateurs were simply expected to back up telephone communications. Today, when Americans are accustomed to the rapid throughput and high accuracy of Internet communications, the challenge for Amateur Radio messaging is logarithmically greater.

¹ The resolution creating the committee is at Minute 51 of the 2006 Annual Meeting.

The NERPC presents the following comments and recommendations based on those developed by our task group (sub-committee) on messaging.

Following a disaster, the potential customers for Amateur Radio services include both official organizations communicating among themselves, and citizens who are without the conventional means to contact their friends and family. It is difficult for the service provider to place an exclusive priority on one or the other, particularly if the means exist to service both customers.

Regardless of the method used, the customer being serviced, or who is providing the service, effective communications requires the successful completion of all three major communications phases of origination, transport, and delivery. Originating messages from within a disaster area requires a minimum of one Amateur Radio operator, is often the primary focus, and can usually be accomplished. Without the concurrent provision for the transport and delivery phases, however, originating messages is futile.

Traditional Amateur Radio networks consist of at least two Amateur Radio operators on a common mode and frequency, which satisfies all three communications phases. As the distance between the origination and destination locations increases, additional operators are required to relay the messages: the transport and delivery phases. Irrespective of the mode and frequency used, these are referred to as manual networks, and all function similarly. In the USA, we best know this as the National Traffic System, which allows processing of messages by their assigned priority.

Semi-automatic networks require an Amateur Radio operator to originate a message, but use automatic systems to execute the transport and delivery phases. These systems provide higher speed and accuracy, require specific and detailed addresses, and require additional equipment at the origination point. These best known of these systems are NTS-Digital and Winlink 2000, both of which treat all messages as having the same priority. Semi-automatic networks are ill-suited for high priority warning communications, and should never be used to the exclusion of near real-time networks, such as voice. *The greatest value to the customer is provided when all available communications networks are used.*

Messaging Recommendations

1. The establishment of semi-automatic networks should be considered a priority for surviving and mutual assistance resources, but never to the exclusion of voice networks. Forward-based, self-contained mobile or portable equipment should include provisions for all modes of message transport possible, including voice, NTS-Digital, Winlink 2000, WiFi, and others that may be developed in the future. When possible, out-of-area gateway stations should be identified and scheduled to handle messaging in the most efficient method available to both ends of the circuit. If prior arrangements are not possible, the gateway stations in the affected area should immediately identify out-of-area capabilities, and set up the most efficient method of message transfer possible.
2. Amateur Radio Emergency Communications Vehicles (ECVs) are valuable as self-contained, mobile communications centers. They serve as an ideal platform for a mobile gateway supporting local area and out-of-area high speed communications. *(ECVs are discussed later in the report.)*
3. A detailed plan to deploy a semi-automatic network to enhance ARES communications was developed and presented to the board of directors by the ARESCOM committee. The Board subsequently established a permanent committee, the ARES Digital Network Management Team, to oversee the implementation of that plan. Very little progress has been made to date, leading to a great deal of frustration on the part of Team members and also digital communicators in the field. Thousands of individual Amateur Radio operators, and many ARES groups, are proceeding to deploy these systems independent of much encouragement, support, and recognition. It is

essential for the Programs and Services Committee and the Field and Educational Services Department at ARRL Headquarters to determine the future of the Team and to provide proper direction and leadership without further delay if the Team is to continue to exist.

4. A continuing education course on the installation, configuration, and use of the Winlink 2000 system is desperately needed.

5. Messages out of the affected area must be considered as having a significantly higher priority than inquiry messages into the affected area. A moratorium – 72 hours or as directed by the served agency – must be imposed on non-official inquiry messages into a disaster area, if these messages are accepted at all. The delivery of messages to organizations and people within a disaster area is made difficult or impossible by destroyed local communications and transportation infrastructure and residents being displaced to temporary locations which are unknown.

6. The existing ARRL Radiogram message form should include provision for an E-mail address to facilitate the use of semi-automatic message transport and delivery networks.

7. Amateur Radio resources provided at mass shelters should not be prohibited or restricted from being used by shelter residents to contact their friends and family. Person-to-person messages provide great comfort to shelter residents, and do not compromise shelter resident confidentiality. ARC Form 5972 has a check-box for residents to permit their personal information to be shared. The absence of a resident's consent to public disclosure should never prohibit residents from sending personal messages by Amateur Radio. Where Amateur Radio operators are unable to remain at a sheltering facility full-time, messages can be picked up several times per day and sent from home stations. *[Note: We have not been able to substantiate anecdotal reports that some shelter managers forbade sending Health & Welfare messages on behalf of shelter residents. H&W messaging out of shelters is not the top priority communication. There may have been misunderstandings between shelter managers and Amateur Radio operators, leading to reports that H&W messaging was forbidden at some shelters.]*

8. It must become and remain a perpetual priority for the ARRL and ARES to enhance training in basic message handling, particularly with respect to message accuracy through the major communication phases of transport and delivery. Message accuracy was reported to be lacking during the acute phases of Hurricane Katrina, which undermined response and relief activities.

Regarding recommendation #8, no one can recall a nation-wide exercise of the National Traffic System that measures both speed and accuracy since "Exercise Night Tango" in the 1980s. ARRL Headquarters is encouraged to work with the Area Staff chairmen of the NTS to design and implement nation-wide messaging exercises, including unannounced drills, that will challenge the system and evaluate both the speed and the accuracy of performance.

The day may come when every ARES operator deployed into the field is licensed and equipped to do portable voice and digital communications using the latest technologies, networks, and modes on all Amateur bands. Until that ideal situation comes about, we must be able to make good use of whatever equipment and operating capabilities our diverse population of volunteers is able to offer. Indeed, insofar as diversity of capabilities equals redundancy, not having ARES messaging capability locked into dependency on one or just a few techniques is an advantage for Amateur Radio, not a weakness.

National ARES Database

In recent years when the ARRL's Memoranda of Understanding have been invoked by served agencies such as the American Red Cross in extraordinary disasters such as 9/11 and Hurricane Katrina, the League has not been prepared to immediately alert and dispatch large numbers of

well-qualified operators to marshalling centers such as Red Cross disaster relief headquarters. We have eventually gotten enough operators into the field, but the process has been *ad hoc*, confusing to volunteers, prone to glitches, and burdensome on the Headquarters Staff. Many of the operators the ARRL sent to the Gulf coast in 2005 were untrained in emergency communications and were not members of any emergency communications groups at home. If training – both coursework and participation – is as important as we say it is, it is unacceptable for the ARRL to continue deploying operators who lack training into the most demanding of disaster situations.

Without a national database of ARES operators who are trained, equipped, and prepared for immediate deployment outside their home Sections, we waste far too much of Amateur Radio's window of usefulness – the time period between an agency's request for assistance and the point when normal communications are restored – pulling together what should have been ready well in advance.

It is important to emphasize at the outset that the NERPC has not devised anything radically different in principle from what has been done by the ARRL in the past five years when major disasters occurred in the United States. We have worked towards the goal of enabling the ARRL to do the same kinds of things – because on the whole they have been the right things to do – but in a planned, orderly way instead of in an *ad hoc* scramble that does not befit the national association for Amateur Radio.

The second point that is essential to understand is that this database will not undercut Section-level ARES in any way whatsoever. It will be used during major disasters when our national served agency partners need more communicators than local resources can possibly provide, especially considering that ARES in the affected Sections will be stretched to the limit serving local agencies. It could also be used when Section Managers inform ARRL Headquarters that they need more communicators from outside the Section than can be arranged through existing mutual aid agreements with neighbor Sections. Sections which have developed elaborate internal ARES databases will not be prevented from continuing those projects. Sections which have not perceived a need for a Section-wide ARES database will not be required to start one.

Thanks to funding from a Corporation for National and Community Service grant, ARRL is now able to assemble a national volunteer database of experienced and trained emergency communications volunteers available for rapid deployment in case of extraordinary disasters. The principles underlying the system were developed by a task group of the NERPC for the project managers at ARRL Headquarters. The software was written by the Headquarters Staff. Beta-testing of the software was done with the cooperation of several ARRL Sections.

This system will allow timely and orderly alerting and deployment of experienced, well-trained operators. It will enable the League to respond quickly to requests from national-level served agencies such as the American Red Cross for large numbers of qualified operators without the delay and confusion that has sometimes occurred in the past. It will eliminate the heavy “make it up as you go along” burden on the Headquarters Staff. It will eliminate asking national-level served agencies to contact and stay in touch with multiple Section Managers in order to fill their communications needs. It will eliminate reliance on databases that are maintained and controlled by individuals / entities other than the ARRL.

One way to populate the database would have been simply to seek volunteers directly from the Amateur Radio community at large. However, the NERPC – made up of present and past ARRL Field Organization leadership officials – decided it is best to work with and through the Field Organization chain of command, both as a practical matter and as an indication of respect for the Field Organization.

Operators in the database must be recommended by their home Section Managers as suitable for deployment outside the home Section. Section Managers may delegate this responsibility to

SECs and STMs if desired. The Amateurs in the database must be self-reliant and self-sufficient both as persons and as Amateur Radio operators.

In addition to recommendation by the Section Manager, field operators will be required to complete certain formal training courses. In determining the minimum requirements for training courses, David Patton contacted the American Red Cross and Vice President Craigie consulted the Department of Homeland Security's National Incident Management System (NIMS) Integration Center on the Internet. In addition, extensive discussion took place on the committee reflector. The resulting list of required courses is in line with what is already being expected of ARES operators around the country. ARES volunteers interested in deploying away from home are likely to have already passed most of these courses.

Field operators will be expected to have completed the following courses:

- ◆ ARRL's ARECC Level 1
- ◆ Red Cross combined course in Adult CPR/First Aid Basics
- ◆ Red Cross online Introduction to Disaster Services (www.redcross.org/flash/course01_v01/)
- ◆ FEMA IS-100 (Introduction to Incident Command System)
- ◆ FEMA IS-200 (ICS for Single Resource and Initial Action Incidents)
- ◆ FEMA IS-700 (National Incident Management System)

Except for the first two, all courses are free of charge, and CPR/First Aid may be free to members of the Red Cross. CPR/First Aid is the only course which requires periodic refreshers and the only course which must be taken in person rather than on the Internet. The NERPC decided that medical professionals should be exempted from the CPR/First Aid course requirement. Where FEMA courses exist in more than one current version – aimed at somewhat different audiences – any of the currently-available versions will suffice.

The committee discussed requiring criminal background checks for operators in the database but concluded that the ARRL should not be in the business of performing such checks on ARES volunteers. This subject arose again later in the year in the context of our discussion of credentialing and will be discussed further under that heading in the report.

The database was designed to make the start-up as easy as possible for Section officials contributing the data on volunteers from their Sections. Data can be accepted in several common file types.

Maintenance of the database was given careful consideration. Maintenance will be done without burdening the Sections or adding undue workload on the Headquarters Staff. Because any effort required of Staff would likely occur in the Field and Educational Services Department, David Patton was assigned to the database task group so he would be involved with it from the very beginning.

Although some Field Organization leadership officials indicated interest in being able to use the national database for purposes of mutual aid between Sections, other Section Managers strongly opposed permitting officials in one Section to view data on operators living in other Sections. They worried about poaching of volunteers across Section boundaries. In response to those concerns, at the outset leadership officials will be able to view information only on volunteers from their own Sections. It will be possible in the future, however, to share information when and if particular Section Managers agree to do so. This can be done without expensive re-programming of the software.

Once the database is populated, it will be possible for the Field and Educational Services staff to issue an e-mail alert and start what amounts to a virtual Resources Net immediately upon

receiving a request for assistance from a national-level served agency. Section Managers will be informed when volunteers from their Sections are deployed outside the home Section.

Regional Coordination Function

During Hurricane Katrina, the work done at Red Cross disaster relief headquarters in Montgomery by Alabama SM Greg Sarratt W4OZK and his colleagues was immensely valuable in dispatching and maintaining contact with the operators sent to Red Cross shelters in the disaster zone. The ARRL and the Red Cross were both very lucky that a well-qualified person was available to carry out this important coordination function. However, the ARRL should not be dependent on luck in the future when preparedness is called for. The ARRL will assemble a list of volunteers qualified to perform the kind of coordination SM Sarratt did when major disasters occur and national-level served agencies request communications support from the ARRL.

The regional coordination function, like similar roles described for federal officials in the Department of Homeland Security's National Response Plan², will not be a new level of permanent Field Organization bureaucracy. This point cannot be emphasized too strongly. Regional coordination is to be a *function*, not a *position*. It does not amount to setting a boss over the heads of Section Managers. It does not diminish the authority of Section officials over their own ARES operations. Coordinators will maintain liaison with the Field Organization leaders in the affected Sections and show them all due respect.

Following extensive discussion, the NERPC recommended to the Field and Educational Services Department that Amateurs fulfilling this function should be titled Major Disaster Emergency Coordinator (MDEC). The Staff person at ARRL Headquarters who activates and oversees the MDEC functions as the Disaster Response Emergency Manager. Again, this is a function, not a job title.

MDECs will be activated by ARRL Headquarters only if they are needed to deal with field operators activated to serve agencies such as the Red Cross in a major disaster such as Katrina. The geographical area to be handled by an MDEC is not fixed or keyed to ARRL political geography. It will depend on the parameters of the disaster and the needs of the served agency. More than one MDEC may be activated, for example, if the served agency decides to geographically subdivide its own activity in a particularly large-scale disaster. When the disaster activation ends and the served agency no longer needs ham radio communications support, Headquarters will instruct the MDEC to stand down. The MDEC will go back to being a name on a list of potential coordinators and back to his or her normal Field Organization roles in the home Section.

People qualified to fulfill the MDEC function are to be drawn from the ranks of present and past Field Organization leadership officials because of their pre-existing qualifications, their experience, and their involvement with the ARRL. If that population does not produce enough volunteers, then the Sections will be asked to recommend other qualified ARRL members. MDECs must be able to interact in a professional manner with served agency officials at venues such as Red Cross disaster relief headquarters.

MDECs must have the same formal training courses as field operators and, in addition, must have completed ARRL's ARECC Level 2 and Level 3 courses because these courses deal with organizational and leadership principles. They will also be expected to be members of the ARRL

² See www.dhs.gov/dhspublic/interapp/editorial/editorial_0566.xml. As part of preparation work for chairing this committee, Vice President Craigie took FEMA's IS-800 course on the National Response Plan.

since MDEC is an ARRL appointment. Being on the list of people who may be activated as MDECs is not a life-long entitlement; appointments will be reviewed periodically.

The MDEC position description and considerations for selection of MDEC appointees appears in Appendices 1 and 2. Further comments about the MDEC function with regard to served agency relationships appears later in the report.

Emergency Communications Vehicles

There is no doubt that emergency communications vehicles (ECVs) – both motorized ones and trailers – are valuable assets during disasters. The question considered by the committee was whether owning and operating such vehicles is within the scope of the ARRL's mission.

Though not unanimously, the NERPC concluded that it is not within the scope of the ARRL's mission and that local ownership of ECVs is the best way to go. In addition to financial considerations, there are also issues of liability and logistics. It is noted that no new ARRL programs and projects can be initiated without firm information about how they are to be financed.

However, the committee also concluded that ARRL Headquarters should have information about existing ECV resources located throughout the USA. The last nation-wide survey of ECVs was done many years ago. The committee decided to carry out a survey in 2006, in cooperation with Headquarter Staff and the ARES E-Letter and using Web resources donated by Vice Director Bullock. The resulting inventory of vehicles and their capabilities will be useful to the League in future disaster situations and can be used to provide ideas to groups interested in creating their own ECV.

In addition, Vice President Craigie and ARES E-Letter editor Rick Palm expanded a set of thoughts contributed by Vice Director Bullock into a paper discussing points that an emergency communications group should consider before embarking on an ECV project. This paper was forwarded to Steve Ewald for publication in the *QST* "Public Service" column. A copy will be provided to any member of the Board upon request.

FCC Emergency Communications Declarations

The committee received an inquiry from Director Leggette on behalf of Delta Division Section Managers about why the FCC has issued so few Emergency Communications Declarations (ECDs) under §97.401(b) in recent years. At one time, the FCC issued such declarations rather frequently. The NERPC chairman consulted ARRL General Counsel Chris Imlay and the FCC's Riley Hollingsworth about the Commission's current thinking regarding Emergency Communications Declarations. A summary of that conversation follows.

Mr. Hollingsworth explained that in the past he received complaints from the FCC Wireless bureau staff about too many requests for ECDs. Also, some requests had been rather strange, such as a request for an ECD on a 2 meter frequency in an area located a thousand miles from the disaster zone. Finally, requests were being filed *before* normal communications were disrupted rather than *during* such disruption, and those requests could not be granted under §97.401(b).

To provide guidance to hams, a document was issued on June 8, 2004. It is posted on the ARRL web site at www.arrl.org/FandES/field/emcom-declarations.html. Mr. Hollingsworth said that only one person has inquired about an ECD since this document was issued and that the person did not follow through with a formal request.

Mr. Hollingsworth said that he monitored the HF emergency nets during the Gulf coast hurricanes and found very little interference. He had to make a few phone calls to operators who did not comprehend what was going on, but he was not aware of any problems on HF which proved insoluble. Mr. Imlay noted that since the return of enforcement on the ham bands, there may be less need for ECDs to keep emergency net frequencies free of malicious interference. Mr. Hollingsworth intends to monitor the bands during future disasters and to take prompt action when he perceives a problem caused by either ignorance or malice.

To the extent possible, the FCC would like Amateurs to carry out emergency net operations without requesting ECDs. The FCC does not want hams to routinely apply for ECDs every time there is a disaster. Mr. Hollingsworth will monitor actively and take action on problems before they get out of hand. However, he said that if this approach is not sufficient to keep the situation under control during a disaster, then an application for an ECD is appropriate. This is in keeping with the self-regulatory tradition of the Amateur Radio Service.

Just as this committee's work was drawing to a close, the FCC's WT Docket 04-140 deleted §97.401(b), although the ARRL has been informed by the FCC that the Commission still has the authority to declare a communications emergency if circumstances warrant.

Mutual Aid / Mutual Assistance (ARESMA)

Some disasters which do not require involvement of the League at the national level may nevertheless over-tax the resources of a single Section or may have an impact upon more than one ARRL Section.

Some ARRL Sections – those on the Gulf coast and those in the Delta Division, for example – have formal mutual aid agreements with neighboring Sections. Some Sections have oral understandings with their neighbors. Still other Sections do not have any sort of agreements, formal or informal, with their neighbors. Historically, the Field and Educational Services Department has not had much information about inter-Section agreements: what agreements exist, what the documents say, and so on. This not only leaves Headquarters in the dark when a disaster occurs but also makes it difficult for Staff to advise Sections interested in forming agreements among themselves.

On behalf of the NERPC, Staff posted a survey on the Section Managers e-mail reflector requesting information on existing mutual aid agreements.

Responses were received from Eastern Massachusetts, Kentucky, Louisiana, Sacramento Valley, Georgia, South Carolina, Delaware, Rhode Island, Alabama, San Joaquin Valley, Connecticut, and Mississippi. Copies of formal agreements among Sections in the Delta and West Gulf Divisions were received. The responses that were received were informative and helpful. The quantity of responses, however, was very disappointing: only 12 Sections responded to the survey.

Among the questions was one relating to any agreements existing between ARRL Sections along the borders of the USA with Amateur Radio emergency communications groups in Canada and Mexico. Although no information was received about formal agreements with groups in our neighbor countries, we know that the Western Washington Section Manager has a "handshake" type understanding with his counterpart in British Columbia, Canada, because a major population center is located at the national boundary line.

After review of the survey input and discussion within the committee, a task group of the NERPC composed a paper on mutual aid agreements. This paper was distributed to the Section Managers, should be covered in new Section Manager workshops in the future, and should be included in the revised Section Manager workbook. The paper forms Appendix 3 to this report.

As a final note on this subject, reasonable documented expenses incurred in developing and maintaining mutual aid agreements should be reimbursable from Section budgets. A small-population Section should not be prevented from developing and maintaining mutual aid agreements with its neighbors simply because its budget is too small to cover the expenses involved in that process while still reimbursing Section officials for other necessary and appropriate leadership activities.

Assistance to Distant Sections

Most ARRL Sections are located in the contiguous 48 states of the USA. The Alaska, Pacific, Puerto Rico, and US Virgin Islands Sections, however, are separated either by water or by the territory of another country. Mutual aid agreements with neighbor ARRL Sections may be impractical or impossible because they really do not have any neighbor Sections. They also have political, historical, and cultural circumstances which set them apart from Sections in the contiguous 48 states. The Pacific Section, for example, is made up of several political entities; one is a state but the others are territories having unique characteristics. All the components of the Pacific Section are located a very long way from the North American mainland.

A task group of the NERPC contacted the Section Managers of the Alaska, Pacific, Puerto Rico, and US Virgin Islands Sections to learn more about the Amateur Radio emergency communications environment in these atypical Sections. We considered it important for the Field and Educational Services Staff at Headquarter to become better informed about these Sections because all of them are vulnerable to major disasters: hurricanes, typhoons, volcanic eruptions, earthquakes, tsunamis. We suggest continuing dialog between these Section Managers and the Headquarters Staff so the League can be better prepared to support ARES as well as possible in these distant and vulnerable areas. The Section Managers' input was shared with their ARRL Directors and Vice Directors.

International Aspects

While Amateurs in the USA view emergency communications as the principal reason for the service's existence, very different views prevail in some other parts of the world. American Amateurs have much to learn from the fresh perspectives of hams in countries where emergency communications is new, because those hams are not burdened by almost a century of organizational and conceptual *status quo* that may sometimes deter innovation and impede change in our own part of the world.

Disasters, particularly natural disasters, do not respect national boundaries any more than they follow state or Section lines. As the IARU Region 2 Emergency Coordinator, NERPC member Rick Palm briefed the committee on how the national societies of Region 2 cooperate via the IARU.

The Region 2 Emergency Coordinator serves as a volunteer and works on coordination and planning regarding emergency communications issues. The Emergency Coordinator is supported by an advisory group representing geographical areas within the Region. Members of the advisory group are listed at <http://iaru-r2emcor.net/Advisors.html>. These people gather and process information and disseminate bulletins during disasters. They help the Emergency Coordinator organize information about emergency communications programs.

Countries' emergency communications activity is dictated by need. Amateurs in countries having likely disaster hazards tend to more be interested emergency communications than those having few likely hazards. Some parts of South America, for example, have relatively few natural disaster hazards and thus may have relatively little interest in and organization for emergency communications, although it is known that Argentina, Brazil, and Venezuela have active

programs. Countries in Central America, North America, and the Caribbean, on the other hand, have a history of frequent natural disasters (earthquakes, volcanoes, tornados, hurricanes, etc.), and Amateurs are quite interested in emergency communications.

It is possible that there is more emergency communications activity in South America than the present Region 2 Emergency Coordinator knows about because he does not speak Spanish. Mr. Palm believes that future Emergency Coordinators in Region 2 should be bilingual in English and Spanish. A Region 2 committee has made recommendations for changes in the Emergency Coordinator position which are to be considered by the General Assembly for Region 2.

What would be the ARRL's role in supporting emergency communications in other countries when disasters happen? In the past, the ARRL has sent shipments of equipment such as repeaters and generators. The IARU is working on an international handbook on Amateur Radio emergency communications. Also, the ARRL's on-line training courses can be taken by people living outside the USA.

It is not clear that the ARRL would ever be in a position to deploy operators to other countries if a request were to be received through proper channels. When he was employed at ARRL Headquarters, Rick Palm worked with a US government agency about 15 years ago regarding training for international communications assistance, but to our knowledge there has not been discussion of actual deployment of communicators.

What is the status of cross-border cooperation with Canada and Mexico? Although there are instances of emergency communications preparedness cooperation with Canadian Amateurs, we are not aware of such cooperation between Mexico and the USA. The committee recommends greater outreach to and dialog with Radio Amateurs of Canada (RAC) and Federación Mexicana de Radioexperimentadores (FMRE) regarding possible opportunities for emergency communications cooperation with our neighbor societies. A Global Amateur Radio Emergency Communications Conference (GAREC-07) will be held in conjunction with the 2007 ARRL National Convention in Huntsville, Alabama. This conference (see the web page at www.arrl-al.org/GAREC07.htm) will provide a welcome opportunity to discuss cooperation with our neighbor societies. In addition, the 2007 IARU Region 2 Conference in Brasilia, Brazil, will consider subjects related to emergency communications in our hemisphere.

The NERPC chairman has corresponded with RAC officials carrying out a study of emergency communications issues in Canada. Despite the differences between the USA and Canada, Amateur Radio emergency communications experience many similar opportunities and challenges, making future discussions quite worthwhile.

Relationships with Served Agencies

The NERPC's existence follows in large part from the invocation by the American Red Cross of their national-level MOU with the ARRL during the 2005 Gulf coast hurricane disaster. A great deal of the ARRL's response to that request for communications had to be improvised. Needs were met, and improvisation is a valuable component of Amateur Radio's resource set, but the ARRL recognized that it is unsatisfactory for a national organization to rely on luck when preparedness is called for.

Organizational relationships with served agencies lie at the heart of Amateur Radio emergency communications today, at both the local or Section level and the national level. The era when individual Amateurs could simply show up in a disaster zone and make themselves useful has been over a lot longer than some Amateurs accept. In the present climate of concerns about security and requirements for formal training, served agencies' expectations drive ARES emergency communications preparation more than ever before. In a disaster situation today, spontaneous volunteers may well find that they cannot just walk in.

At the national level, the ARRL has had Memoranda of Understanding (MOUs) with disaster-related organizations since before World War II. Although not all of the ARRL's MOUs are with disaster-related organizations (e.g., the Society of Broadcast Engineers), a significant number of the agreements are with such organizations and may include or imply providing emergency communicators in the field. These agreements are reviewed and revised periodically. The ARRL's MOUs are posted on the Web at www.arrl.org/FandES/field/mou/.

When the chairman of the NERPC served on the ARRL Board's Volunteer Resources Committee (VRC) several years ago – before that committee was merged into the Programs and Services Committee – she was assigned to review the League's MOUs and report on how the agreements related to ARES. The result of that review and its discussion within the VRC was realization that many of the emergency-related MOUs seemed to be words on paper that did not necessarily reflect operational relationships at the local, Section, or national level. It was also clear that at the time that the Headquarters Staff was not in frequent contact with appropriate national-level personnel of the served agencies. This review took place shortly after a change of management in the Field and Educational Services Department, and some of the slippage may be attributable to Staff turnover. The VRC recommended that Staff improve communications between ARRL Headquarters and disaster-related agencies with which the League has MOUs.

It remains extremely important that the ARRL have good working communications with national-level served agencies. Further, the ARRL should build additional relationships – with or without formal MOUs – with governmental agencies and charitable organizations active in disaster preparedness and relief work. This is important not only to facilitate effective operational cooperation when disasters happen but also to maintain Amateur Radio's credibility as a peer among entities active in disaster preparedness. ARRL management should assign a high priority to having persons on the Staff whose outstanding qualifications about emergency communications and emergency management, allow them not only to provide leadership and support for Amateurs in the field but also to interact as respected professionals with outside agencies and organizations.

The agreements entered into with served agencies by the national-level ARRL have consequences for Section Field Organization officials as well as for individual ARES volunteers dispatched from our national database. Relations with served agencies are always implicitly relations with our own ARRL volunteers, and we must take that into account when we negotiate and execute agreements.

Relations with Served Agencies through the Unified Command

The model that the committee has developed and recommended for the Major Disaster Emergency Coordinator (MDEC) has the individuals performing that function reporting to the person in the Disaster Response Emergency Manager role at ARRL Headquarters and maintaining liaison with Section leaders in the disaster-stricken Sections. This is similar in principle to what was done *ad hoc* during the Gulf coast hurricane disaster.

However, as the National Incident Management System (NIMS) comes into play more and more, this model for the MDEC function may have to be revisited. This is because the designated Disaster Response Emergency Manager in Newington has no direct relationship with the NIMS Unified Command³ on the ground. As time goes on, we may discover that it is necessary to make

³ "Unified Command" is an application of the Incident Command System in which a team is formed representing agencies responding to the incident. Unified Command (UC) is set up when there is more than one agency with incident jurisdiction and/or when incidents cross political jurisdictions. Agencies work together through the designated members of the UC to establish a

the MDEC operationally responsible to the affected SM/SEC or their designated representative to the Unified Command. The Disaster Response Emergency Manager at ARRL Headquarters would continue having administrative responsibility for the MDEC because they are ARRL national-level appointees.

The Unified Command provides a seat at the table for relief organizations such as the American Red Cross, Salvation Army, faith-based organizations, and so on. If these organizations need Amateur Radio support, the NIMS model says that their requests should go through the Unified Commander rather than via separate relationships the organizations might have with the ARRL.

No one is suggesting that the ARRL should sever our MOU relationships with relief organizations, but Amateur Radio under the Unified Command is considered a single resource for emergency management purposes.⁴ Emergency management expects to be able to go to a single point of contact to fill their communication needs and they have a reasonable expectation that they should be able to prioritize the response to those needs.

It is very important for the Field and Educational Services Staff to be trained in ICS and NIMS, aware of ongoing developments in NIMS, and able to analyze how NIMS may affect our relationships with charitable relief agencies. The League and our volunteers must be willing and able to adapt our models to how the real world works.

Credentialing and Chain of Command

Credentialing and chain of command pose particularly knotty problems in the context of extraordinary disasters. The committee does not see any simple, easy, realistic answers to these dilemmas but strongly recommends continuing exploration of the issues within the ARRL Field Organization and with our national-level served agencies, especially as memoranda of understanding come up for revision and renewal. ARRL representatives involved in negotiating MOUs having to do with emergency communications should be thoroughly familiar with the principles of the Incident Command System (ICS) and the National Incident Management System (NIMS).

“Credentials” can refer to an individual’s résumé, to speak – the list of courses the person has passed, skill levels attained, organizational memberships, records of participation in previous events, etc. In this discussion, however, we use the term “credentials” to refer to a document which confirms an individual’s identity as a qualified and trustworthy emergency communicator. Many ARES and RACES organizations issue such ID cards to members. Some of these credentials may be recognized state-wide, while others may not be of any value outside the local jurisdiction (such as a county) where they were issued. It is important for Amateurs to understand that the states of the USA do not all follow the same practice in providing credentials for Amateur Radio emergency communicators registered with ARES and RACES.

common set of objectives and strategies and a single incident action plan. The purpose of Unified Command is to enable these agencies with different legal, geographic, and functional authorities and responsibilities to work together effectively without affecting individual agency authority, responsibility, or accountability. *[See the course summary for IS-100, Incident Command System, and Department of Homeland Security’s “Quick Reference Guide for the National Response Plan” at www.dhs.gov/xlibrary/assets/NRP_Quick_Reference_Guide_5-22-06.pdf.]*

⁴ “Single resources” in Incident Command System terminology may be individuals, a piece of equipment and its personnel complement, or a crew or team of individuals with an identified supervisor that can be used at an incident. *[See course summary for IS-100, Incident Command System.]*

When the ARRL's ARES communicators are deployed outside their home areas, as in the case of operators in our new national database, what credentials must they carry in order to be allowed into the disaster zone? The instructions they receive from the person functioning as the Disaster Response Emergency Manager at ARRL Headquarter will suffice to get them to the relevant marshalling center, but what then?

Will their home area credentials (ARES ID card, RACES ID card, etc.) be recognized as valid by authorities controlling the disaster perimeter? For example, would the volunteer ID card issued to the chairman of this committee by the Department of Emergency Services in Chester County, Pennsylvania, be worth the plastic it is made of if she presented it to a state police officer guarding the perimeter of a disaster zone in Mississippi or California or Michigan? Would a credential issued by the national-level ARRL be recognized as any more valid than, say, a state RACES card issued half a continent away from the disaster zone?

Although in an ideal world the ARRL would be so well known to civil authorities that a national ARES photo ID card issued by the League would be a volunteer's passport through the perimeter of an extraordinary disaster, the NERPC does not believe that situation is likely in the real world. The committee believes that the ARRL's efforts would be better directed toward obtaining a credential for its operators from a larger organization or government agency where there would be no question of recognition by all authorities.

This credential may someday be issued by the Department of Homeland Security, but that credential does not exist today. The League should pursue discussions with DHS about this subject. Since we have an MOU with FEMA and with DHS's Citizen Corps, and since there are ARRL members with contacts in DHS from their professional lives, it should be possible to open the door.

In the meantime, how is meaningful credentialing to take place? During the Gulf coast hurricane disaster, Amateurs responding to the League's call for volunteers were sent to an American Red Cross marshalling center. There they were issued Red Cross credentials before they were dispatched to provide communications at shelters in the disaster zone and other served agency locations. The authorities controlling the perimeter of the disaster zone may never have heard of Amateur Radio, and they probably never heard of the ARRL, but they certainly recognized a credential issued by the American Red Cross.

Questions remain. When Amateurs are dispatched outside their home areas to provide communications for an organization such as the American Red Cross, must they formally register as a volunteer for that organization and consent to whatever requirements the agency may place upon its volunteers? If they must register with the served agency, then under the Incident Command System's unity of command principle,⁵ to whom are they accountable and who is accountable for them – the ARRL or the served agency? The terms of existing Memoranda of Understanding are not as clear on these points as they ought to be. As MOUs are revised, language should be negotiated that clarifies the chain of command and accountability issues.

In 2006, the American Red Cross began requiring background checks of its volunteers, and certain aspects of this particular background check procedure gave some ARES members cause for concern. The American Red Cross is by no means the only agency which is instituting background check requirements. In fact, criminal background check requirements are increasingly common in all sorts of volunteer work today, especially if contact with children is involved. In the country at large, many companies are going beyond criminal background checks on job applicants and carrying out credit bureau checks on them as well. That is the trend, whether one likes it or not.

⁵ In the Incident Command System, "unity of command" means that every individual is accountable to only one designated supervisor to whom the individual reports at the scene of an incident.

Served agencies quite reasonably want to protect their clients from harm and themselves from liability. At the same time, individual Americans are increasingly sensitive to issues of personal privacy and identity theft. Americans want to feel safe and secure, but some of the steps taken to ensure our safety and security make us feel threatened and uncertain. That is a cultural and historical tension which is beyond the ARRL's control.

Should the ARRL run criminal background checks on ARES volunteers, especially those in our national database, and thus vouch for our volunteers dispatched to serve partner agencies? Is that within the ARRL's mission as a provider of competent Amateur Radio emergency communicators? As already noted in this report, the NERPC thinks it is not within the ARRL's mission to run background checks. However, we recognize that that our partner organizations have legitimate reasons for wanting criminal background checks. We also recognize that this issue is not going away.

The ARRL must clarify our principles and interests and articulate a policy on background checks so that we can negotiate MOUs with national-level served agencies on the basis of a reasoned position. This position should take into account the valid concerns of our volunteers about personal privacy and identity theft and the obligation to safeguard the ARRL from undue exposure to liability.

Relationships with Served Agencies at the Section Level

In a conversation with Vice President Craigie and ARRL Staff, a representative of a major served agency said that RACES, not ARES, serves government emergency management agencies. The ARRL representatives believed this was not an accurate generalization for the USA as a whole but realized that the Field and Educational Services Department did not have data about the agencies served by ARES in the League's 71 Sections.

In cooperation with Staff, the NERPC distributed a survey to the Section Managers asking for information about agencies that ARES serves in their Sections. Nineteen responses were received. They came from Sections in 12 of the 15 ARRL Divisions, giving a reasonably-good geographical spread. Responding Sections were Alabama, Colorado, Connecticut, Delaware, Georgia, Iowa, North Carolina, North Dakota, New York/Long Island, Northern New Jersey, Rhode Island, South Dakota, San Diego, San Joaquin Valley, Sacramento Valley, Tennessee, West Central Florida, West Virginia, and Western Washington.

Respondents were asked whether or not serving particular agencies is "common or typical" practice in their Sections. This gave a slightly finer-grained result than if the answers could be only "yes" or "no." We would not want to generalize too much on the basis of this unscientific sample, but the results are interesting nevertheless.

The statement that ARES does not work with emergency management agencies is not supported by the survey results. In all but one of the responding Sections, some ARES units serve EMA. San Diego ARES does not serve EMA at all, and North Dakota says it occurs in the state but is not typical.

All responding Sections except San Diego provide some service to the Red Cross, although it is not typical practice in 5 of the Sections.

Service to the Salvation Army is less common than service to the Red Cross in the Sections that responded to the survey. Although 14 of 19 Sections say they provide some service to the Salvation Army, 9 of the 14 say it is not typical practice through the Section. One Section reports sour relations between ARES and SATERN.

All responding Sections say they cooperate with the National Weather Service's Skywarn program. San Diego Section noted, however, that they do not have much severe weather.

Thirteen Sections say they have ARES units providing backup communications for medical institutions such as hospitals and nursing homes.

Eight Sections report providing ARES service to charitable relief organizations other than the Salvation Army and the Red Cross. Two Sections mention serving VOAD programs. Four mention Southern Baptist relief organizations. The other two do not name specific organizations.

The final question asked respondents to list any other agencies served by ARES units in their Sections which had not already been elicited through previous questions. Agencies mentioned in response to this question were State Department of Forestry, electric power utility companies, local police and fire departments, the National Guard, Search and Rescue units, 9-1-1 centers, Department of Public Health, CERT (Citizen Emergency Response Team), regional council of governments, regional and local emergency planning councils, United States Forestry Service, and the state blood bank.

On the basis of this small sample we can see that ARES units serve a wide variety of agencies such as emergency management, the National Weather Service, large and small charitable relief agencies, CERT, police and fire departments, medical institutions and health-related agencies, planning councils, and forestry departments. At the local and Section level, ARES is flexible enough so that Amateurs can find meaningful emergency communications work to do in the service of significant organizations in their communities.

It is important for the ARRL to have reasonably-current information about what served agency relationships our Section ARES organizations have. When there is an extraordinary disaster, Headquarters should already know the affected Section ARES organizations' existing agency relationships and obligations. The Field and Educational Services Department should repeat this survey in the future and should seek ways to significantly increase the number of Sections that respond.

Spectrum Protection

Amateurs are accustomed to protecting our spectrum from entities which want our frequencies allocated to themselves and which disparage Amateur Radio as less deserving than themselves. Spectrum protection has also taken the form of protecting our frequencies from Part 15 device interference such as that caused by some implementations of Broadband over Power Lines. In that case, the issue is not loss of spectrum outright but loss of the ability to use spectrum because of severe interference.

We may be entering an era when a different kind of threat to Amateur Radio spectrum has to be dealt with, one which is directly related to emergency communications. In addition to protecting our spectrum from our enemies, sometimes we also have to protect it from our friends. These are entities which have become aware of Amateur Radio's value during disasters, either from first-hand observation or from our effective public relations efforts.

Some organizations are expressing interest in using Amateur Radio in ways that are not in the best interests of our radio service and that run contrary to the spirit if not the letter of the FCC's Rules.

We are hearing about agencies which, having heard that Amateur Radio works "when all else fails," decide that the answer to their communications problems is to get some Amateur Radio gear. They have heard that in life-and-death situations the FCC's Rule about having licenses goes out the window, so (their line of reasoning goes) it will be all right to just skip the licensing bit

and plan to use Amateur Radio equipment for disaster communications. Imagine the chaos on the Amateur bands if all sorts of unlicensed, incompetent users were to go on the air during a disaster.

This is an obvious end-run around the FCC's Rules by planning to go through a loophole that exists only as a last resort and is not an excuse to avoid doing the right thing in the first place.

Of course just having some Amateur Radio equipment does not equal having effective communications capability, any more than owning a guitar makes one a musician. Without properly-qualified operators, the equipment will not be useful and will cause more problems, not fewer. However, agency officials looking for a quick fix to their communications problems may not understand this point.

These organizations are not enemies of Amateur Radio. On the contrary, their interest in Amateur Radio exists because they admire Amateur Radio's proven emergency communications ability.

However, they could become adversaries if the ARRL does not take the necessary steps to show them how they can use Amateur Radio within the spirit of the FCC's Rules. For example, they could form agreements with existing Amateur Radio emergency communications groups. Alternatively, the FCC has stated more than once that the Rules do not prohibit Amateurs "who are emergency personnel engaged in disaster relief from using the amateur service bands while in a paid duty status." *[See Section J, paragraph 52, of WT Docket 04-140, and the language in the dismissal of RM-9114, adopted November 29, 1999.]*

If pro-active, constructive educational outreach should prove unsuccessful with a particular organization, then the League should shift into spectrum protection mode with the FCC's enforcement staff.

Training / Recruitment Issues and Recommendations

For many years, Amateur Radio has longed to be taken seriously by governmental authorities as a professional-quality resource in disaster response. Although there are areas of the country where achieving and maintaining emergency management agencies' respect is still a struggle, Amateur Radio's service during 9/11 and the major hurricane disasters of the 21st century has brought us a new level of respect and new opportunities at the national level.

Being taken seriously as a resource comes with a price, however. It is a price that must be paid by individual volunteers, not in dollars but in precious personal time. When the federal government instituted the National Incident Management System (NIMS), it imposed a set of requirements on state and local emergency management agencies and their personnel. Affected personnel include not only paid employees of emergency management and related agencies but also volunteers such as those in volunteer fire companies, ARES, and RACES. If the emergency management agencies are to continue receiving federal funds, personnel must complete a number of FEMA training courses having to do with the Incident Command System (ICS) and NIMS. Individuals who do not complete the training will not be allowed to participate, even as volunteers.

These FEMA courses are free of charge, available on line or sometimes in person at emergency management offices, and not particularly difficult. The courses are useful in familiarizing volunteers with the specialized vocabulary (i.e., jargon) and principles of the Incident Command System and showing where communications fits into the ICS structure. This is valuable knowledge, because if Amateurs – particularly those in leadership positions – cannot "talk the talk" then authorities may well assume that we cannot "walk the walk."

However, the required courses have little or nothing to do with the specific duties performed by Amateur Radio emergency communicators and may be time-consuming for the volunteer to complete. Just as many volunteer firefighters who have been on the job for decades resent being forced to take courses that they perceive as unrelated to their competency in fighting fires, many experienced ARES communicators have objected to being required to pass a set of government courses that they consider irrelevant and a waste of time.

The obligation to pass a list of FEMA courses in order to be allowed to participate with an ARES group that serves emergency management is making it harder for ARES groups to recruit and retain volunteers. For Amateurs whose participation in emergency communications is the main thing or the only thing in their Amateur Radio lives, taking these courses is not perceived as an imposition. But what about Amateurs with a less-fierce personal devotion to emergency communications? Most ARES volunteers and prospective ARES volunteers in this country also have various other interests in Amateur Radio. Their desire to take part in emergency communications, no matter how sincere, exists in some kind of balance with their other interests. Being told they must spend part of the limited personal time they have to devote to their Amateur Radio avocation in taking jargon-laden courses could be the last words they hear on their way out the door.

Like it or not, these formal requirements are here to stay and more may follow. At the national level, Amateur Radio has earned the respect we always wanted, bringing us closer to the emergency management establishment. The challenge now is persuading both casual ARES volunteers and experienced volunteers to meet the requirements that follow from being part of the system. This will not be easy. The national-level ARRL must be aware of that and develop ways to help local and Section ARES officials bring their volunteers, both old-timers and newcomers, into the new era.

Another challenge following from being more a part of the establishment is ensuring that Amateur Radio does not lose that famous ability to improvise and innovate which permits us to accomplish supposedly-impossible tasks. Bureaucracies are by nature inflexible, and disaster plans run to thousands of pages of dense language in small print. A major asset that Amateur Radio brings to any disaster is our ability to decide on the fly when to go by the book and when to close the book and just go. If Amateurs give up the “McGyver” component of our character in order to fit into the establishment whose respect we desire, then we will have been absorbed into the “all else” that typically fails. As a national organization, the ARRL needs the wisdom to help ARES organizations achieve the best balance between being “cowboys” and being “suits.”

Given the challenges of recruiting and retaining ARES volunteers in the present emergency management environment, the NERPC recommends improving resources available for outreach to Amateurs who are not now involved in and knowledgeable about emergency communications. We note that there is material about emergency communications in the Technician class license question pool effective in July, 2006. That is a step in the right direction, although the effect of what is in the question pool upon Amateurs’ behavior is difficult to measure and may follow a temporal version of the inverse square law. Amateurs with expertise in emergency communications may wish to submit syllabus topics and questions for future revisions of the General and Amateur Extra question pools.

Amateur Radio’s value as an emergency resource is the first item listed in Part 97’s statement of the basis and purpose of the Amateur Radio Service. Everyone with a United States Amateur Radio license should feel some duty to be prepared to provide communications in an emergency. Our common experience, however, is that the overwhelming majority of licensees may give lip service to emergency communications – especially when they want to persuade neighbors to accept their antenna installations – but are not active in ARES, RACES, Skywarn, SATERN, or similar organizations even in the immediate aftermath of the disasters we have observed over the past five years. The reality is that too few will prepare, even in the highest-threat areas.

How do we reach more Amateurs nationwide with the message about emergency communications? If we cannot get uninvolved Amateurs to come to an ARES meeting, then we must go to where those Amateurs congregate. Amateurs with expertise in both teaching and emergency communications are able and willing to develop lively in-person introductory presentations that catch people's interest through hands-on experience with radio equipment, messaging, and so on. These presentations could be distributed by the ARRL and would be suitable for club meetings and conventions. This is not intended to replace or undercut the ARRL's on-line emergency courses but rather to stimulate interest in emergency communications among Amateurs who have never heard of the on-line courses or never considered taking them.

An ARRL video showing what ARES communicators actually do both in preparing for and serving in disasters, with examples from many parts of the USA, would also be useful in catching the interest of the uninvolved. The NERPC recommends that the League should pursue the cost-effective development of such a video.

It is possible that these presentations, whether videos or in-person seminars, may not yield a huge number of new ARES volunteers. However, as one committee member said, if we always do what we always did, then we will always get what we always got. Today, "what we always got" is not sufficient to live up to our self-promotion and our growing obligations to government and charitable agencies.

The NERPC recommends that the ARRL should begin developing effective universal emergency communications training materials aimed specifically at the Amateur Radio operator who is not already active in emergency communications, to be delivered through ARRL-affiliated clubs and ARRL convention programs.

Section-level Suggestions

Although changes in ARES at the Section level are not part of this committee's charge, several subjects have arisen in the course of our discussions which we would like to comment upon in this report for the consideration of the Headquarters Staff and the Programs and Services Committee.

Suggestion: Handbooks for Emergency Coordinators and District Emergency Coordinators

At the present time the League does not offer a paper version of the handbooks for ARES leadership officials, providing them in PDF format instead. When leadership officials carry the printed-out pages into meetings with served agency officials, it does not present a professional appearance.

The committee urges ARRL Headquarters to create a professional-looking cover insert page that can be slipped into the outside of a three-ring binder. Also, a title page for the document itself should be created so that when the binder is opened, one sees a professional-looking title page. We believe this will enhance volunteers' self-image and allow them to carry a document that does not look – in the negative sense of the term – amateurish.

The committee also noted the usefulness of having fundamental documents burned on CDs bearing professional-looking ARRL / ARES artwork and also recorded on flash drives. Some agencies do not permit volunteers to use flash drives on agency-owned computers, but most will permit Amateurs to use CDs.

Suggestion: "Swiss Army Knife" for ARES and NTS

The committee recommends developing something for ARES/NTS volunteers along the lines of the "Swiss Army Knife" electronic publication available to our public relations volunteers. This could be done at the least expense by bringing together on the ARRL Web site a set of links to documents and resources a person is advised to burn on a CD or carry on a flash drive. If we do this, it would also be ideal to include some graphic material that could be used to make a CD label if the volunteer wants one. Preferably, however, the League should produce a CD that looks as professional as the public relations "Swiss Army Knife" disk. If we can do it for our public relations, we should be in a position to do it for emergency communications.

Suggestion: Add Assistant SEC, Assistant DEC, and Assistant EC appointments

When the present Official Emergency Station appointment guidelines were written in the mid-1990s, the appointment was designed to be tailored to fit the particular needs of ARES at the Section, District, or county level and to make good use of the talents of particular individuals. Two members of NERPC – Rick Palm and Kay Craigie – were involved in the revision of the OES. The intention was to have the OES appointment gradually replace the unofficial Assistant Emergency Coordinator position and to make it unnecessary to complicate ARES's hierarchy by adding Assistant SEC and Assistant DEC appointments.

The revised OES appointment has been put to good use in many ARES units, allowing individual volunteers' capabilities to be matched with organizational needs. However, after ten years of existence in its present form the OES has not fulfilled the field's perceived need for formal Assistant SEC, DEC, and EC positions. In support of the desires of ARES field leadership, the NERPC recommends that the Programs and Services Committee should take the necessary steps to add these appointment options to ARES at the earliest opportunity.

Information Flow from the Field to ARRL Headquarters

Many ARES leadership officials and individual ARES members have access to valuable information about developments in emergency management and emergency communications. Some gain this information from their ARES contacts with officials of served agencies, while others gain it from contacts in their professional lives. In some instances the information is public knowledge, while on other occasions the information comes via back channels and must be handled with discretion.

It is essential for the national-level ARRL to benefit from all this information available from our volunteers in the field. What process will ensure a flow of reliable information from the field to ARRL Headquarters? How should this information be assembled, evaluated, and turned into the basis for well-informed preparation and strategic planning at the national level?

There is a finite number of hours of work the ARRL Headquarters Staff can do. No matter how the Field and Educational Services Department is structured and staffed in the future, they may not have the time to deal with a large inflow of unfiltered, unevaluated intelligence.

What about using knowledgeable volunteers? The NERPC considered recommending reviving the Emergency Communications Advisory Committee or its successor, the Public Service Advisory Committee to assist the Headquarters Staff. The structure and terms of reference of ARRL Advisory Committees, however, are not well suited to the task we envision.

The other model the committee considered is the ARRL's Public Relations Committee, itself the more flexible successor of an Advisory Committee. The NERPC recommends that Field and Educational Services staff and the Programs and Services Committee study the creation of a committee of expert volunteers similar to the PR Committee, whose charge would be to seek, gather, evaluate, and analyze information on developments in emergency communications and

emergency management, and to provide cogent input to Headquarters and the Board. This committee could also analyze after-action reports received after future major disasters and recommend improvements in programs and procedures.

Conclusion

Disaster preparedness is a moving target, moving faster all the time. No recommendations, no plans, no systems should be considered as graven in stone and the permanent answers for all circumstances and hazards. The level of professional expertise in emergency communications and emergency management among Amateurs in the USA is growing, and the expectations these Amateurs place upon their League to provide first-rate leadership and guidance is growing, too. This committee appreciates the opportunity to contribute to the ARRL's ability to provide that leadership and guidance. We trust that the process will continue. If "lessons learned" are not followed by "behaviors changed," then the lessons have not been learned at all.

Respectfully submitted,

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Appendix 1: Major Disaster Emergency Coordinator – Considerations for Appointment and Deployment

The Major Disaster Emergency Coordinator (MDEC) will coordinate and manage Amateur Radio operations, operators and resources supporting served agencies during a disaster relief operation and will be active for the duration of his/her deployment. The MDEC's line of authority is from the ARRL's Disaster Response Emergency Manager (DREM) and is parallel to the affected area's Section Managers. The MDEC position should be a continuous appointment but should only be active when called upon by the DREM.

The MDEC is responsible for the establishment of an impromptu emergency communications structure – the Disaster Field Team – that is designed to fulfill served agency requests and/or augment the existing Field Services structure established by the Section Manager. The Disaster Field Team (DFT) will be assembled from the ARRL national ARES database. The purpose of the DFT is to provide emergency communications support for the infrastructure of relief organizations that bring resources into the disaster zone and can not be served by the local Field Organization. Ideally, the MDEC should have remote access to the national ARES database.

Personalities play a big part in disaster management and the MDEC will be no exception. S/he will have multiple Type-A personalities to deal with and needs to have the management/leadership skills to cope with them both within the DFT and in served agencies.

The MDEC must be able to move about within the disaster zone freely. Recognized credentials will be required.

Membership in the ARRL and a history of emergency communications leadership experience and training verified by their SM/SEC is required. Applicants should be able to demonstrate leadership, management and people skills in chaotic and substandard working conditions.

Long days and adverse living conditions will be the norm. It may be wise to deploy MDECs in pairs so they can work twelve-hour shifts.

The committee is not in favor of aligning or associating MDECs with existing ARRL boundaries such as Divisions. An option that may work is to appoint MDECs for areas that are defined by the FEMA Regions. In practice, MDECs do not need to have defined geographic areas until they are assigned to a disaster. Care needs to be taken so that MDECs are spread across the country.

In multi-state events, MDECs should be assigned to the support systems for each affected state. For example, Katrina had two support systems, one for Mississippi and another for Louisiana. The Mississippi side of the event had its support system spread into Alabama and Florida.

Self-sufficiency – food, water, money, etc. – is something that all operators should strive for when responding to a disaster zone but this may not be possible for the MDEC if s/he is flying into the area. Depending on the conditions at the destination, supplies should be picked up before traveling into the devastated area.

MDEC appointments should be renewed on a regular basis. Two or three years is the suggested periodicity. The MDEC will be managed by and must meet the requirements set by the ARRL DREM. The MDEC must represent the highest standards of the ARRL, Amateur Radio and the served agencies.

Appendix 2: Major Disaster Emergency Coordinator – Position Description

The Major Disaster Emergency Coordinator (MDEC) is an appointed position that will be filled from applicants vetted by their Section Manager/Section Emergency Coordinator. The MDEC will be activated by ARRL Headquarters on an as-needed basis to be the head of the Disaster Field Team (DFT). The DFT will be composed of volunteers from the ARRL national ARES database and will be activated to fill the emergency communications needs that are beyond the capability of the affected Section or Sections. As soon as the DFT is no longer needed, it will be disbanded. The MDEC and the DFT will supplement and aid the Section. They are not intended to replace or assume the authority of the Section staff.

The MDEC is accountable for carrying out the duties of the position in accordance with ARRL policies established by the Board of Directors and shall act in the best interests of Amateur Radio. The MDEC will be activated by and is responsible to the person performing the function of ARRL Disaster Response Emergency Manager (DREM) in response to disasters or large scale exercises that will/have overwhelmed Section resources and require outside resources from the national database.

In discharging these responsibilities, the MDEC:

- a. Will act as an ARRL representative, coordinator, manager to the served agency or multi-served agencies when requested. Will implement and maintain Emergency communications services and systems to support served agency requests.
- b. Coordinates with the affected Section Manager(s) and Section Emergency Coordinator(s) to augment served agency needs, local nets and other emergency communications functions. Recruits, appoints, and supervises the DFT leadership to administer the Field Organization's principal areas of responsibility in the disaster zone. These areas are emergency communications, message traffic relay, technical activity / problem solving, volunteer monitoring, government relations, public relations in the general community, information services for amateurs, and cooperation with served agencies.
- c. Maintains a close liaison with the Logistics Section of the unified Command.
- d. Will be familiar with served agency practices, procedures and methods.
- e. Appoints qualified operators from the national database to other volunteer positions in support of Field Organization objectives, and may authorize Disaster Field Team staff to make such appointments.
- f. Is responsible for requesting and coordinating people and equipment resources for the disaster area.
- g. Supervises the activities of the disaster field team staff, monitors the performance of the Field Organization volunteers, and provides guidance as necessary to ensure that appointees act in the best interests of Amateur Radio and in accordance with ARRL policies.
- h. Maintains liaison with the ARRL DREM; makes periodic reports to the DREM regarding the status of disaster activities; receives from the DREM information and guidance pertaining to matters of mutual concern and interest. Writes, or supervises preparation of a daily status report that is submitted to the DREM via whatever means available. This report will be based on a daily log and input from served agencies and a daily net conducted with the base and all field stations.
- i. Maintains up-to-date qualifications in ICS, NIMS, First Aid, and CPR. Completes all three levels of the ARRL Emergency Communications courses. Completes FEMA courses IS-100, IS-200, and IS-700. Completes other appropriate disaster training offered by the American Red Cross and other organizations.
- j. Maintains a continuous state of readiness for deployment to a disaster zone on short notice under difficult conditions.

- k. Keeps well informed concerning matters of ARRL policy so as to administer the disaster field team in accordance with current policy.

MDEC appointees must be members of the ARRL.

MDEC appointments should be renewed on a regular basis. Two or three years is the suggested periodicity.

The MDEC will be managed by and must meet the requirements set by the ARRL DREM.

The MDEC must represent the highest standards of the ARRL, Amateur Radio and the served agencies.

Appendix 3: Mutual Aid (ARESMAT) Agreements Among Adjacent ARRL Sections

Most disasters are local and of relatively short duration, which is why the traditional county and Section-based ARES approach is appropriate most of the time. However, disasters do not conform to state and ARRL Section boundaries. Disasters that are truly national-level catastrophes require national-level coordination. Regional disasters of less magnitude than, say, the 2005 Gulf coast hurricanes, do not require national coordination but may need well-organized responses from several adjacent ARRL Sections.

At the present time (2006), relatively few ARRL Sections have formal, written agreements with neighboring Sections spelling out how emergency communications cooperation would be structured and managed. The National Emergency Response Planning Committee (NERPC) recommends that Section Managers should consider developing such agreements with one or more neighboring Sections, depending on the disaster hazards likely in their parts of the country. These agreements would become appendices to existing Section emergency plan documents.

Why not informal, oral, "handshake" agreements?

Informal agreements or understandings that are not written documents may be sufficient in states having more than one ARRL Section, where contact and cooperation across Section boundaries is commonplace. Informal agreements may also be satisfactory where Section Managers stay in office a long time, reducing the chances that agreements will be forgotten about. Informal agreements of a temporary nature may also be satisfactory when an unforeseen incident happens. The absence of a formal agreement should certainly not be seen by Section Managers as an impediment to cooperation when a need arises.

However, the sense of the NERPC is that if Sections are going to have mutual aid agreements, they should be formal, written ones. The following reasons support that position:

- If an agreement is not on paper, then in a real sense it does not exist. Misunderstandings are possible, and the agreements can be forgotten about as time goes on and officials change.
- Written agreements have a better chance of surviving changes in Section leadership because they are documents and not dependent on memory.
- Written agreements are easily distributed and referenced when it is necessary to invoke them. They can be part of the Section emergency plan, perhaps as an appendix to the main document.
- The process of creating a written agreement requires Section officials to do risk analysis and think about which adjacent Sections would be best able to help and how cooperation would happen.

Are formal mutual aid agreements to be required of all Sections?

The NERPC opposes requiring all Sections to have formal, written agreements with their neighbors. For some Sections, mutual aid agreements are simply not possible. For example, the Pacific and Alaska Sections are isolated by geography from other Sections and have no adjacent or even nearby Sections. In some other Sections having large geographical areas with widely-dispersed centers of population, mutual aid agreements would make little sense. If a disaster happened in a large western state such as Montana, assistance from other states might be impractical because distances were too great and population centers were too far apart. Finally, in some parts of the country there are informal understandings among Sections that have worked well for many years – "if it's not broken, don't fix it."

Rather than impose a requirement which ignores the variations in geography, history, and demographics, the NERPC recommends that all Section Managers examine the concept of formal mutual aid agreements, discuss it with their neighbor Section Managers, and then do what is in the best interests of effective emergency communications in their regions.

What the agreements are called – ARESMAT, mutual assistance, mutual aid, etc. – is for the Section officials to decide. Preferred terminology may change over time.

The planning process may be more important than the plan

Although written agreements between Sections are important, they are only one part of an ongoing process of cooperation. Discussions and, if possible, in-person planning meetings between officials of adjacent Sections may be even more important in the long run than the written agreements which document those discussions and conferences. Periodic discussions should be held with adjacent Sections about such things as resources, frequency coordination, and officials' contact information. Joint exercises are desirable with scenarios based on likely hazards, whether during the Simulated Emergency Test (SET) or in some other context.

The key concept is the need to build and maintain relationships with adjacent Sections before disasters occur. Executing a written mutual aid agreement is not the end point of the process of cooperation. Further discussions and exercises should follow.

In-person conferences of Section officials away from the distractions of conventions are desirable but not always possible. If in-person conferences cannot be arranged, the ARRL HQ teleconference bridge can be used. Contact the Field & Educational Services Department for information on that resource.

Do these Section agreements require approval by ARRL HQ?

They do not, because the agreements are within the ARRL Field Organization rather than between the Section and another entity. However, copies of such agreements should be sent to the Field & Educational Services Department so the Headquarters Staff is aware of what agreements exist and so copies can be provided as example to leaders of other Sections who are interested in developing agreements of their own.

What other kinds of multi-Section cooperation are there?

Written agreements are not the only means of effective inter-Section cooperation for emergency preparedness. The National Capital ARES Council (www.ncacdc.com) was formed in 1988 to ensure ongoing cooperation among ARES groups and their officials in the Washington, DC, area. This metropolitan area has three political entities (Virginia, Maryland, the District of Columbia) and two ARRL Sections that lie in two ARRL Divisions. Training and education are done cooperatively and an ARES Institute is held twice a year. Because the area's Section Managers, SECs, and ECs already knew each other from the council, they were prepared to cooperate when the Pentagon was attacked by terrorists on September 11, 2001.

Points to consider and discuss in the cooperative planning process

The NERPC suggests that the following points should be among those considered in the mutual aid planning process and the development of formal agreements:

- 1: Share current phone numbers, postal addresses and e-mail addresses for the Section Manager, Section Emergency Coordinator and Section Traffic Manager in each adjacent section.
- 2: List major likely hazards in each Section.

- 3: List available resources Sections have that can be used to assist adjacent Sections. If ARESMAT are available, then list locations, points of contact, and capabilities.
- 4: If ARESMAT resources are needed, then Section leadership should be familiar with and utilize ARESMAT information and requirements in EC-003 and the PSCM.
- 5: List the major served agencies in each Section, whether or not a written support agreement exists, and the point of contact for each. Identify any volunteer insurance coverage, credentialing, and expense reimbursement which may be available from these agencies.
- 6: Describe the activation authority and the process for requesting and providing out-of-Section mutual assistance in each Section.
- 7: List or summarize Section currently-installed emergency communications capabilities and points of contact.
- 8: List Sections' major VHF and HF routine, operations and traffic net frequencies.
- 9: List Sections' Web site addresses.
- 10: It is suggested that the agreement should specify that mutual assistance can be invoked only by Section Managers, Section Emergency Coordinators, or specific designees.
- 11: It is recommended that the agreement should require certain documentation be kept when the agreement has been invoked. For example: daily documentation and logbook for SITREPS (situation reports), after-action reports, and notes on future needs.
- 12: It is recommended that the agreement should require each Section Manager who requests or provides mutual assistance to prepare a written after-action report which summarizes each mutual assistance activation. This report should be sent to the involved SMs and to the ARRL Field and Educational Services Manager no later than 30 days following the stand-down from each mutual assistance activation.
- 13: Plans should be reviewed by each SM, SEC and STM annually, and updated as necessary.