

BCARES

*Bucks County Amateur
Radio Emergency Service*

Emergency Communications Operation Manual



Organized, prepared and written by
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Bucks County Amateur Radio Emergency Service
March 5, 2006

FORWARD

This publication is intended to be used as an outline and guide for those Amateur Radio Operators who are giving of themselves, their equipment and their precious time. BCARES members volunteer to help Governmental and Non-Profit Agencies who serve the public good and who have requested our communication expertise in times of need. Our members also participate with untold hours by preparing and training for the eventuality of an unfortunate event or disaster, which may greatly impact our county, our state or the nation. Our efforts make this community a safer place for our family, friends and neighbors...for all who reside and work in Bucks County.

This outline echo's the Eastern Pennsylvania Section Emergency Communication Plan set forth by our Section Leaders and written by Nick Meacher, N3WWE. I would like to acknowledge that as my mentor for ARECC Level III, he has inspired me to reproduce parts of his plan as well as writing in my own thoughts and ideas but not leaving his basic format in order to allow this plan to dove-tail into the greater plan in a seamless fashion but keeping focus on basic principles on a local level.

Please study, understand and reproduce this manual. Keep it with your go-kit. I also encourage you to familiarize yourself with the EPA Section Emergency Communications Plan as well. There is additional information, which you should know at a section level. The more information you gain, the better prepared you will be to deal with unforeseen and difficult situations.

PLEASE purchase an ARES® Field Resources Manual as an additional quick reference. It has most of the specialized forms which you might need on a deployment. This is a must addition to your "go-kit."

BCARES MISSION

When disaster strikes and all else fails... there is BCARES. Volunteer Amateur Radio Operators serving the public good for those requesting agencies who need our help. As highly trained individuals, we are giving of our expertise and ourselves, so that, emergency communications can keep flowing during times of need when a crisis is impacting our community.

VOLUNTEER ATTITUDES

We are here to serve the public good. We are here as volunteers at the request of others. It is that invitation that marks the recognition of what we do best.Emergency Communications. The one thing we must not forget is that we are here to serve and help within the framework of those who have requested us.

So remember that we have a critical role to play within another's organization. Always conduct yourself in a professional manner and operate within the scope and operations of the agency which we are serving. You are providing a critical service but at the direction of others. Do yourself, Amateur Radio and BCARES proud.

AMATEUR'S CODE

The Radio Amateur Is:

Considerate: Never knowingly operates in such a way as to lesson the pleasure of others.

Loyal: Offer loyalty, encouragement and support to other amateurs, local clubs and the American Radio Relay League through which Amateur Radio in the United States is nationally and internationally known.

Progressive: With knowledge abreast of science, a well-built and efficient station and operation above reproach.

Friendly: Slow and patient operating when requested, friendly advice and council to the beginner; kindly assistance, cooperation and consideration for the interest of others. These are the hallmarks of the amateur spirit.

Balance: Radio is an avocation, never interfering with the duties owed to family, job, school or community.

Patriotic: Station and skill always ready for service to country and community.

By Paul M. Segal, W9EEA – 1928

STATEMENT OF PURPOSE

The purpose of this manual is to implement Part-97.1 of the Federal Communications Commission.

Recognition and enhancement of the value of the amateur service as a volunteer non-commercial service, particularly with respect to providing emergency communications.

This manual is designed to provide guidelines for the Amateur Radio Operator while providing emergency communications in support of local or state and federal emergency management officials and associated agencies during an emergency or other disaster.

Please note that this manual implies that ARES® and RACES work together as one even if a separate Emergency Coordinator (E.C.) or Radio Officer (R.O.) is present. BCARES working with local or county Emergency Management Agency (EMA) officials is not meant to over-ride the RACES organization, which exists by jurisdiction.

UNDERSTANDING DISASTER SITUATIONS and ASSOCIATED ASSUMPTIONS

Hazards and disasters fall into three categories: *Natural, Technological and Terrorist*. Listed below are some of the natural and technological disasters, which may be experienced in Bucks County.

Flooding & Flash Floods	Hazardous Materials Accident
Hurricanes	Major Fires
Ice/Snow Storms	Air Crashes
Tornados	Nuclear Power Plant Incidents
Severe Weather Storms	Water Supply Contamination
Earthquakes	Power Outage
Mud/Landslides	Energy Shortage
	Dam Failure

Especially with weather related hazards, there is an advanced notice and warning. Understand these warnings and take the appropriate action....**BE PREPARED**. BCARES members should be aware of events that can occur in the event of a disaster and the importance of always being prepared. BCARES members should make sure that family is also prepared and have the necessary supplies and safeguards on hand.

Understand that many disasters may not directly affect the entire community but there can be a cascade effect, which occurs because of the effect on infrastructure.

UNDERSTANDING ARES® and RACES

ARES® - The Amateur Radio Emergency Service consists of licensed amateurs who have volunteered their qualifications and equipment for communications duty in the public interest when disaster strikes. Every licensed amateur is eligible for membership. The additional requirement of a sincere desire to serve is understood.

There are three levels of the ARES® organization-Section, District and Local. It is at the local level, headed by the Local Emergency Coordinator (E.C.), where most of the organization and operation is affected, because this is the level at which most emergencies occur and the level which ARES leadership makes direct contact with member volunteers and with officials of the agencies to be served.

Special interest groups are headed by Assistant Emergency Coordinators (A.E.C.s) designated by the E.C. to supervise those groups and their local activities. The E.C. together with designated A.E.Cs form the BCARES Executive Planning Group or EPG. BCARES is organized in anticipation of dealing with the need for emergency communications in Bucks County by governmental or public service non-profit agencies.

RACES - Administered by local, county, state Emergency Management Agencies (EMA), with guidance from the Federal Emergency Management Agency (FEMA), it is part of the Amateur Radio Service that provides radio communications for civil-preparedness purposes only, during periods of local, regional or national civil emergencies. These emergencies are not limited to war related activities, but can include natural disasters.

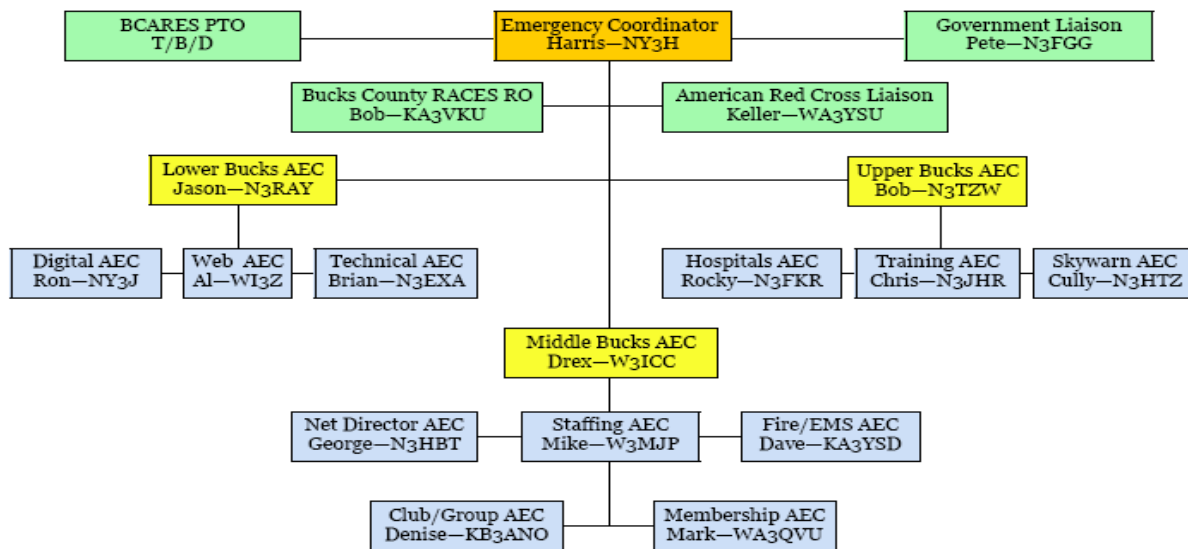
Amateurs operating in a local RACES organization must be officially enrolled in the local civil-preparedness group. All of the authorized frequencies and emissions allocated to the Amateur Radio Service are also available to RACES on a shared basis. In the event that the President invokes his War Emergency Powers, amateurs involved in RACES could be limited to specific frequencies while all other amateurs would be silenced.

ARES® and RACES – Although ARES® and RACES are separate entities, the ARRL advocates dual membership and cooperative efforts whenever possible. An ARES® group whose members are all enrolled and certified in RACES can operate in an emergency with greater flexibility. Using the same operators and same frequencies, BCARES members, also enrolled in RACES, can “switch hats” from ARES to RACES and back as a situation develops and can do more good for the agencies they serve with a seamless transition. No loss of time or manpower. It is this understanding that has fostered mutual cooperation between BCARES and RACES, sharing in activities for the common good of the people and the agencies who serve Bucks County.

BCARES ORGANIZATIONAL CHART -EXECUTIVE PLANNING GROUP (EPG)



Bucks County (EPA) - Amateur Radio Emergency Service Organizational Chart



1/23/2006

CHAIN OF COMMAND – CONTACT INFORMATION

SECTION

Section Manager	Eric Olena - WB3FPL	610-775-0526	wb3fpl@arrl.net
Section E. C.	Chris Snyder -NG3F	570-847-1265	ng3f@ptd.net
District E. C.	Al Rabenau – W3AHR	610-269-7153	ahr1@comcast.net
Section Traffic Manager	Scott Walker – N3SW	717-774-2567	n3sw@arrl.net

BCARES

Emergency Coordinator	Harris Stein – NY3H	215-307-9947	ny3h@comcast.net
Lower Bucks – AEC	Jason Bauer – N3RAY	267-566-0987	nray3@juno.com
Central Bucks – AEC	Harford Drexler – W3ICC	215-598-3934	w3icc@aol.com
Upper Bucks – AEC	Bob Nice – N3TZW	215-527-5005	n3tzw@yahoo.com

ADDITIONAL BCARES EPG CONTACT INFORMATION

Club Liaison-PIO	Denise Berstein – KB3ANO	215-694-1516	kb3ano@aol.com
Digital Coordinator	Ron Wenig – NY3J	267-688-8312	ny3j@comcast.net
Fire/EMS Liaison	Dave Sharp – KA3YSD	215-778-7875	dysharp@ix.netcom.com
Government Liaison	Peter Ference – N3FGG	215-416-4535	pdference@co.bucks.pa.us
Hospital Coordinator	Rocky Pistilli – N3FKR	215-572-5330	crpistilli@comcast.net
Membership	Mark Hinkel – WA3QVU	215-514-0718	mrhinkel@earthlink.net
Net Director	George Brechmann – N3HBT	215-443-5656	n3hbt@k3dn.org
RACES Radio Officer	Bob Phillips – KA3VKU	215-669-1301	ka3vku@isp.com
Red Cross Liaison	Keller Taylor – WA3YSU	215-630-3707	wa3ysu@wa3ysu.com
SKYWARN Coordinator	Cully Phillips – N3HTZ	215-669-1301	n3htz@comcast.net
Staffing Coordinator	Mike Patton – W3MJP	215-783-3251	ikemay@voicenet.com
Technical Advisor	Brian Taylor – N3EXA	215-257-6303	n3exa@enter.net
Training Coordinator	Chris McCormick – N3JHR	215-266-8024	mac3295@comcast.net
Web Administrator	Al Konschak – WI3Z	215-407-4505	al@konschak.org

The above listed members comprise the BCARES Executive Planning Group (EPG) who conduct and carry out the daily ongoing business of our organization. The group meets at least once a month, usually prior to our general meetings and training to discuss policy, procedures, operations and issues that affect or have impact upon our group. It is this group that ultimately determines the best practices on our local level but we do so within the scope and direction laid out by FCC, ARRL, Emergency Management Governmental Agencies, other non-profit agencies, which we serve, and finally the EPA Section.

The Executive Planning Group is also responsible for all planning and training sessions as well as developing the logistical deployment of BCARES operators into the field for those training opportunities or for actual emergency operations. After each training session, event or actual emergency deployment, the EPG will gather to review and critique the exercise or operation so we can adjust, correct or keep those operational components that work and best meet the needs of those we serve.

Finally, it is important to convey to all BCARES members that the EPG group feels very strongly about training and fully supports the training requirements being mandated by our Section Emergency Coordinator, which is to have completed a minimum of ARECC Level 1 and FEMA's Incident Command - NIMS IS-700. Those choosing to work with Lower Bucks Chapter of American Red Cross will have additional training and credentialing requirements.

COUNTY GROUP - DIVISION 1 – EASTERN PENNSYLVANIA

BUCKS

CHESTER

DELAWARE

MONTGOMERY PHILADELPHIA

STATEMENTS OF UNDERSTANDING (Signed, In-Process or in Negotiation)

Bucks County Emergency Management Agency – Ivyland

Lower Bucks Chapter – American Red Cross – Levittown

Falls Township – Emergency Management Agency

Lower Southampton Township – Emergency Management Agency

Middletown Township – Emergency Management Agency

Nockamixon Township – Emergency Management Agency

National Weather Service – SKYWARN Program

St. Mary Medical Center – Langhorne

Warminster Hospital – Warminster

Frankford Hospital – Langhorne

Doylestown Hospital – Doylestown

Lower Bucks Hospital – Bristol

GrandView Hospital – Sellersville

St. Luke’s Hospital – Quakertown

(BCARES also serves agencies who have Memoranda of Understanding with ARRL, Inc.)

BUCKS COUNTY COORDINATED REPEATERS

Location	Frequency	offset	Call	Group	PL
Bensalem	444.2000	+	WA3BXW	BEARS	131.8
Chalfont	223.9000	-	W3DBZ		o e
Churchville	224.5800	-	W3CCX	Mt.AiryVHF	o
Doylestown	145.3500	-	WA3EPA	RACES/WRC	131.8
Dublin	449.7250	-	KW3P		o (t=4Z) e
Fairless Hills	53.0300	-	WA3BXW	BEARS	131.8
Fairless Hills	147.3000	+	WA3BXW	BEARS	131.8
Fairless Hills	447.1250	-	WA3BXW	BEARS	o (t=DPL) L RB WX (ca) R A O
Feasterville	146.9700	-	K3ZFD	PARA Group	o L
Feasterville	223.8000	-	N3SP		o
Feasterville	224.9800	-	WB3BLG	PARA Group	o
Feasterville	443.3000	+	K3ZFD		131.8
Hatfield	146.8800	-	WB3BJE	PARA Group	o (ca)
Hilltown	145.3300	-	K3ESJ	HiPointRA	131.8
Hilltown	147.3900	+	K3ESJ	CBRA	o (t=1Z) (ca) e
Morrisville	447.4750	-	WR3B	NERA	o (t=1A) L e
Perkasie	145.3100	-	W3AI	RF HILL	131.8
Plumsteadville	447.9750	-	KB3AJF		131.8
Quakertown	224.4000	-	W3PS	METRO- COMM	o (t=5A) L WX (ca) e LiTZ
Quakertown	224.9000	-	WB3KRW		o t
Quakertown	443.2000	+	WA3KEY	BLURA	o (t=2A) (ca) e
Quakertown	444.7500	+	N3BKN		o t RB (ca) e R O
Richboro	146.7900	-	N3TS	LBRA	131.8
Southampton	145.2500	-	W3SK	PWA	131.8
Springtown	442.9500	+	WA3BXW	BEARS	131.8
Warminster	147.0900	+	K3DN	WARC	131.8
Warminster	223.7600	-	K3NAL	NAWC ARC	o (t=7Z) L a e
Warminster	443.9500	+	K3DN	WARC	131.8
Warrington	147.0000	+	WA3ZID		o e
West Rockhill	53.2300	-	K3MFI		c t

MODES OF OPERATION

VOICE – VHF/UHF/HF Repeater/Simplex/FM/SSB
DIGITAL – CW/APRS/WINLINK/PSK-31
HF/6 M/2M/70CM
Bucks County pl tone – 131.8

TELEPAC GATEWAYS

UPPER: NJ3A-10 145.610/**CENTRAL:**NY3H-10 145.670/**LOWER:**NY3J-10 145.530

CONCEPT OF OPERATION

ARES® operates under the “lead or served agency” protocol. This means that BCARES group responds to the request from agencies that have the authority under local, county or state legislation or other non-profit community agencies with which BCARES has an MOU, to provide communication help to deal with an event or disaster. By following the guidelines set forth in this manual, amateur radio resources are coordinated through the local Emergency Management Agency and any conflict for the resource are decided by EMA Officials who are in a better position to prioritize communication needs.

ACTIVATIONS

In an emergency it is essential that there is an orderly and controlled response. BCARES must be part of that response and function within and abide by the lead or served agency and its emergency plan. *It is essential that we remember that we are there at their request and invitation, working under a statement of understanding.* BCARES members should become familiar with that written statement.

AUTHORITY TO ACTIVATE BCARES

BCARES can be activated by the Emergency Coordinator, any one of the three: Upper, Central or Lower Bucks Section Assistant Emergency Coordinators or the SKYWARN Coordinator at the request of:

1. County Director of the Emergency Management Agency
2. Pennsylvania State Police
3. Pennsylvania Governor or designated representative such as PEMA.
4. Department of Homeland Security, FEMA or other Agency under the Federal Response Plan.
5. Any Agency who has an existing MOU with ARRL, Inc.

Should a BCARES member become aware of a communications emergency they should make every attempt to contact the Emergency Coordinator or one of the three Section Assistant Emergency Coordinators to ensure that they are aware of the situation.

BCARES members should not respond to an emergency or request from an Agency unless the E. C. and A.E.C.'s are not available. In their absence, the D.E.C., S.E.C. or S.M. has the authority and authorization to activate and deploy BCARES.

Once BCARES has received a request, the E.C. should attempt to notify the D.E.C. at which time the E.C. may request mutual aid from other ARES® resources.

WARNINGS, ALERTS and RESPONSE LEVELS

All BCARES members should listen and monitor our primary repeater frequency of 147.090 with pl 131.8 as soon as they become aware of a potential or actual disaster or event which can impact our community. If it becomes necessary, information and instructions will be disseminated by a Net Control Station (NCS) operating a net on that repeater frequency.

A cell telephone text messaging alert notification will also be used as an additional means of communication as long as the cell resource is available and that you have given your cell contact information to the Upper Bucks Section A.E.C.

The Web Director will also make every attempt to post the latest information available on our website at www.bucksares.org as long as that information will not compromise or conflict with our mission, service or work with requesting agencies. Limited information will be updated as long as the resource remains available during the crisis or event.

LEVEL 1: Standby – Created for the purpose of anticipation of a need for BCARES assistance. BCARES will be placed on standby status when there is information that might indicate the need for deployment. Such indicators are severe weather watches and warnings, news bulletins indicating events taking place which could eventually adversely affect our community, or other events taking place in neighboring communities who may need additional resources from BCARES.

- At this time, any BCARES member who has new contact information or has a change of status, which may impact their deployment, should contact their Section A.E.C. or E.C.
- All members should recheck their “**Go-Kits**”. Make sure that you have the proper clothing, medication, money, etc to handle your personal need requirements. You will also need to check radio equipment, batteries and peripheral required of your radio specialty.
- ***MAKE SURE YOU HAVE YOUR ID and CREDENTIALS.***
- All “**FAST TEAMS**” should be prepared for immediate deployment.
- Top off your vehicles, back-up stores and emergency generators with gasoline.
- NCS should check to see if repeater systems are functioning appropriately. Contact repeater owner, E.C. and Technical Advisor if any anomaly is detected.
- E.C. and A.E.Cs are in communication. If the E.C. is not reachable, the three Section A.E.C.s should be communicating with each other to determine next steps and planning.

- BCARES A.E.C. liaisons and specialists should be checking their areas of readiness for those particular areas which might respond during the crisis.

LEVEL 2: Alert – An alert is understood that all BCARES members available for deployment, should be prepared for immediate assignment but they are to await word to proceed to their directed destination. Alert status is indicated when there is an indication of an impending need for deployment of BCARES resources for an operation. In most cases, this will be some severe weather event or call from an EMA or other served agency wanting to know the status of BCARES radio operators.

- NCS activates our primary resources net operation. All members who check in should be prepared to give status of readiness and time availability. Checks-ins are encouraged to check in whether they can be deployed immediately, at a later time or can not leave their home but are still available to serve.
- “FAST TEAM” members will automatically deploy to their pre-assigned duties after contacting NCS that they are in route.
- E.C. and R.O. will deploy to and operate from Bucks County EOC. Tactical operations and frequencies will be determined from the EOC after consultation and/or assignment from the EMA. Local or other agency requests will still be processed through the EOC command.
- All other BCARES members will hold in place and monitor the resources net until individual operators are specifically asked to change frequencies to a tactical net or are assigned to deploy to a specific location.

LEVEL 3: Deployment – All available BCARES personnel will be assigned task, duties or reserve status assignments. Those operators who are held in stand-by reserve as possible replacements may also be reassigned to serve in other operational positions as an event unfolds and needs of our agencies change. Be prepared to be flexible in assignment. NCS will advise reserve personnel to monitor the resources frequency. Remember, please check in to Net Control if your status changes during a call out, i.e. you are still awaiting assignment and you decide to go to rest and will not be monitoring the frequency. As a directed net, inform Net Control that you will not be monitoring for a period of time.

- A tactical frequency plan and additional nets will be established depending on the event and the needs of the agency or agencies we serve. Location, type of event, agency needs, lost infrastructure and estimated duration of operations will play a major role in determining our mode, method and spectrum of operation. We need to be prepared to be flexible and sometimes creative in our approach to complete our task for those we serve. Make sure you communicate with your agency supervisor and the E.C./A.E.C. if you become overwhelmed or cannot function as expected.
- Conventional alternative means of communications should be used until they are no longer available or become exhausted from overuse. Examples are cell phone, fax, landlines, Internet. Additional Amateur Radio modes

and frequencies may also have to be called upon to get the job done. Be resourceful.

- Fast Teams have arrived and must check in with their supervisory staff. Notify E.C. if you have any difficulty in reporting for duty, i.e. police barricades preventing you from reaching your assignment.
- American Red Cross may require you to operate non-ham equipment. ARC has commercial equipment, which is essential to their communication needs and goals. Be prepared to help communicate on other than amateur radio frequencies.
- KB3BUX is fully operational in the initial stages of deployment operations from the EOC. The operation will remain on the air as long as there is a need at the County level. Operations can change from time to time either locally or direct to an agency. This will be determined on an ongoing basis as an event unfolds or winds down.

ADDITIONAL INFORMATION

ARESMAT: Mutual Assistance Teams – As resources become overwhelmed by a disaster or event, BCARES may be called on to act in a mutual aid capacity. ARESMAT has been established to provide an organized method of deploying those who are available to provide help. Make sure you have advised the E.C. or Section A.E.C. as to your availability for mutual assistance if a disaster strikes another part of the county, state or some other part of the country or region. Special criteria are required and you can access the qualifications for service on the EPA Section or ARRL websites.

INCIDENT COMMAND SYSTEM: ICS is a management tool that is rapidly being adopted by professional emergency responders throughout the country. ICS provides a coordinated system of command, communications, organization, and accountability in managing emergency events. Due to the wide use and requirement of our S.E.C., training in ICS (NIMS IS-700) is now being required for BCARES members.

A brief overview of ICS shows that the concept of Unified Command is integral to the system. There is only one boss, the Incident Commander, who is responsible for the overall operation. For each incident, a number of functions must be performed ranging from planning, logistics, operations and finance. Finally a “chain of command” is set up where each person involved in the operation is accountable to only one person in an organized progression. BCARES fits under the logistics section. In all incidents, large or small, the above functions are carried out within an organizational structure.

BCARES will be expected and required to fit into the ICS system. Therefore, a complete understanding of the ICS is needed. All BCARES members can experience a number of ICS courses at no cost and online from FEMA. ARECC courses also offer sections devoted to ICS.

IN SUMMARY

That summarizes and outlines the different levels of BCARES activity and what you might anticipate and look for when we reach these different alert levels. The things we need to keep in mind are: we must act in an organized and professional manner. It is critical that we understand our mission and the mission of those we serve. And finally, as communicators, we need to be communicating within the framework and operational plans of the agencies we serve. You can be creative and flexible but if you find that you cannot carry out the assigned tasks, let others know so we can all respond appropriately. You have volunteered to serve to the best of your ability and that is all one can ask of you.

Again, I encourage all who have joined BCARES to become familiar with the Eastern Pennsylvania Section, Emergency Communications Plan and Statements and Memoranda of Understanding we have locally as well as nationally (through ARRL, Inc.) with our served agencies. Most have many different requirements that need to be understood. Knowing what is expected of you will help you successfully complete the job requested and will help you avoid the pitfalls experienced when misunderstanding can create unnecessary problems keeping us from accomplishing the goal.

Between my years in the United States Air Force, volunteer Fire Service and my professional life, education and training have played a vital role in accomplishing achievement and successful completion of tasks, assignments and duties. Education is critical and there is a wealth of training opportunities available online, some free or at very low cost. Monthly sessions are given by BCARES as well. Take advantage of what is offered and you will become much better at what you have volunteered to do, offer emergency communication services to those who need your help. I have made this a number one priority for BCARES. Learning can be fun. It will enhance your experience in and knowledge of Amateur Radio as it has already done for me.

Finally I would like to thank you all for your participation in ARES® and emergency communications. BCARES has really grown up in the past few months and I hope that your commitment to volunteering to serve and to help those in need will be a rewarding and satisfying experience. I applaud your commitment and dedication and want to personally thank you for choosing to serve the public when they call.

Harris Stein, NY3H
BCARES – Emergency Coordinator