

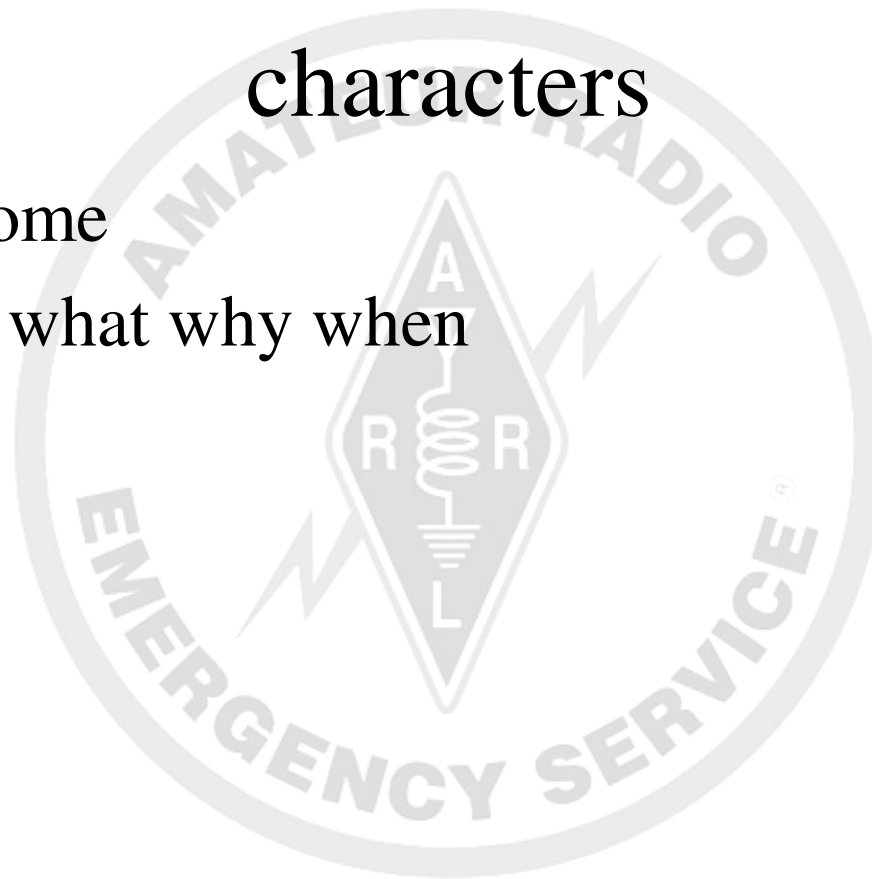


McHenry County ARES

Emergency Communications
Training

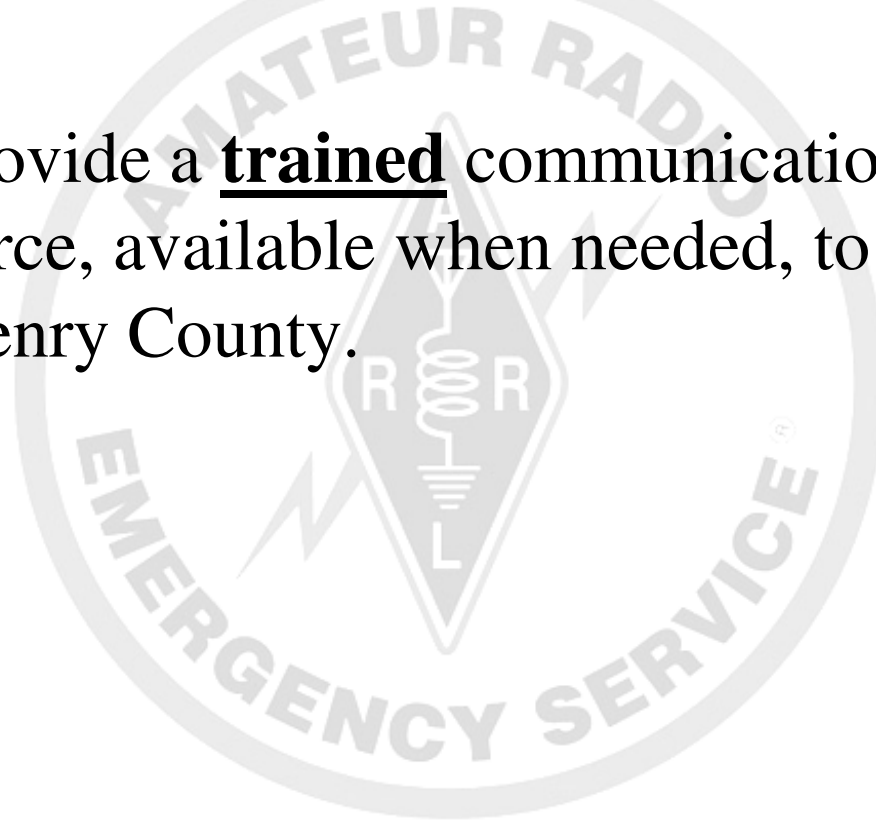
Introduction of the cast of characters

- Welcome
- Who, what why when



Mission Statement

- To provide a **trained** communications resource, available when needed, to serve in McHenry County.



Objectives

- Provide a basic level of communications training.
- Provide an introduction to EMA RACES operations for non-RACES personnel

Outline/Agenda

- The Basics
- Communications
- Nets
- Training and Practical Experience
- Equipment
- Incident Command System
- Emergency Call Outs
- EMA Organization
- Other Training Resources

The Basics

- Attitude
 - The most important tool in emergency communications.
 - If you are not ready to follow instructions, you should consider something other than RACES and ARES.

The Basics, cont.

- What is a communications emergency?
 - When normal communications processes are inadequate to handle the information flow required to service an incident.
- Amateur Radio's Role: To support the emergency management community when normal communications are unavailable or overwhelmed.

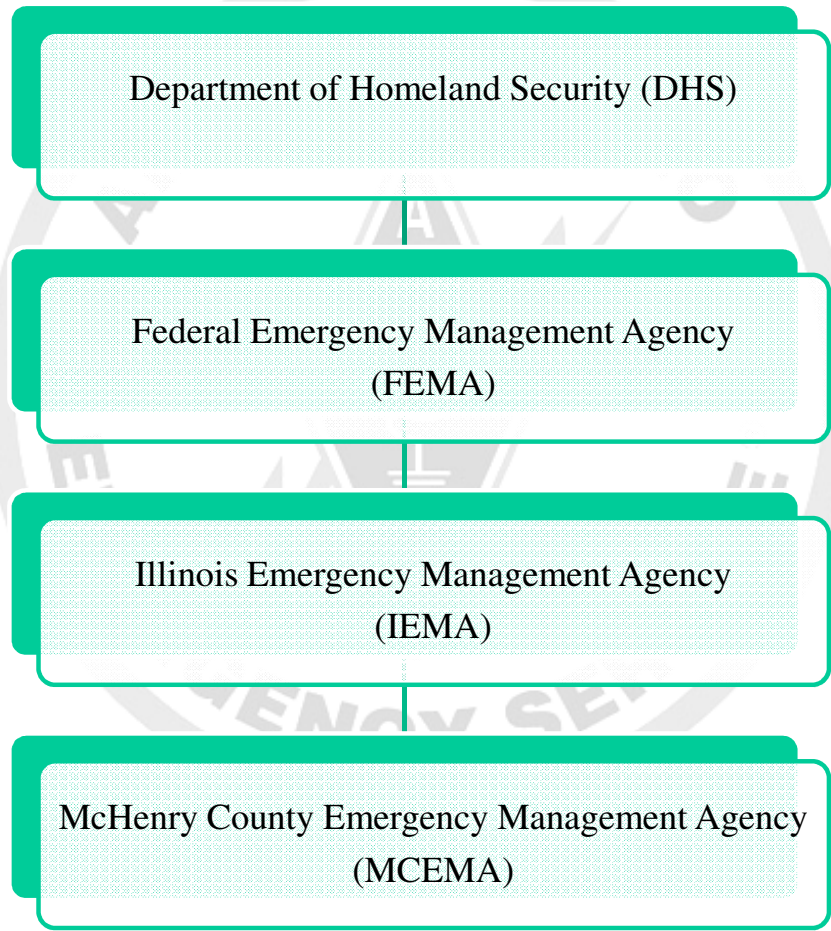
The Basics, cont.

- Public Service Communications
 - Key Elements:
 - The Agency being served must be non-profit.
 - The Event must be a public community event.
 - For-profit agencies should provide business band communications equipment.
 - Communications organizations
 - ARES - Amateur Radio Emergency Service
 - RACES - Radio Amateur Civil Emergency Service

ARES and RACES

- RACES
 - Set up by the federal government.
 - Administered by FEMA (Federal Emergency Management Agency).
 - During wartime, may only communicate with other RACES stations.
 - Cannot begin operations until authorized.
 - Cannot continue after official operations have ended.
 - Must be registered with local emergency management.

Homeland Security Org Chart



ARES and RACES, cont.

- ARES
 - Setup and administered by the American Radio Relay League (ARRL).
 - Might not be allowed to operate during certain events.
 - Can begin at once, and operate beyond the official end of activities.
 - Can respond to a greater variety of events.

ARES and RACES, cont.

- RACES or ARES?
 - Many local hams belong to both. It is easy to switch hats when needed.
 - Must be a member of a local emergency management agency to be a RACES member.
 - ARES members must be registered with their local ARES Emergency Coordinator (EC).

The Basics, cont.

- Public Service Communications
 - Communications organizations
 - NTS - National Traffic System
 - MARS - Military Auxiliary Radio Service
 - REACT – Radio Emergency Associated Communications Teams
 - CAP – Civil Air Patrol

The Basics, cont.

- Primary Served Agencies
 - Emergency Management (Emergency Management Agency (EMA), etc.)
 - Law Enforcement
 - Fire/Rescue-EMS (Emergency Medical Services)
 - Red Cross
 - Salvation Army

The Basics, cont.

- Media
 - Do not make statements to the media. Refer all questions to the served agency Public Information Officer.
 - You may discuss general information about amateur radio.
 - Do NOT disclose modes, frequencies or traffic volume information.
 - Anything you say is “On the Record”.

The Basics, cont.

- Image
 - During an event, maintain a courteous, professional image.
 - Remember: you may be working for several agencies. Please extend to them every possible courtesy. Make sure that they know who you are and what your communications capabilities are. You are only there to provide communications.

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Communications

- Basic Guidelines
 - Two levels of communications
 - **Formal Traffic** - relaying traffic on behalf of the served agency.
 - **Informal Traffic** - Traffic you originate, not written, no response needed.
 - Basics
 - Brevity - Keep it short.
 - Use the fewest words necessary.

Communications, cont.

- Basic Guidelines, cont.
 - Clarity - Pass exactly as written, no additions or subtractions.
 - Listen first.
 - Phonetics - Use standard phonetics.
 - Numbers - pronounce one at a time; i.e.: 653 would be pronounced six-five-three.

Communications, cont.

- Public Service and Emergency Communications
 - Getting Through – Be Prepared for:
 - Static and background noise.
 - Equipment or voice sounds around you.
 - Inappropriate amount of light or shade.
 - “Loose cannon” tempers.
 - Improper transmission speeds.
 - Improperly terminated messages.

Communications, cont.

- Public Service and Emergency Communications
 - Message Handling Event Log
 - Log time, sender, brief description of message.
 - Use 24 hour local time.
 - Number each page.
 - Keep finished pages in a safe place.
 - ARRL Radiograms

Communications, cont.

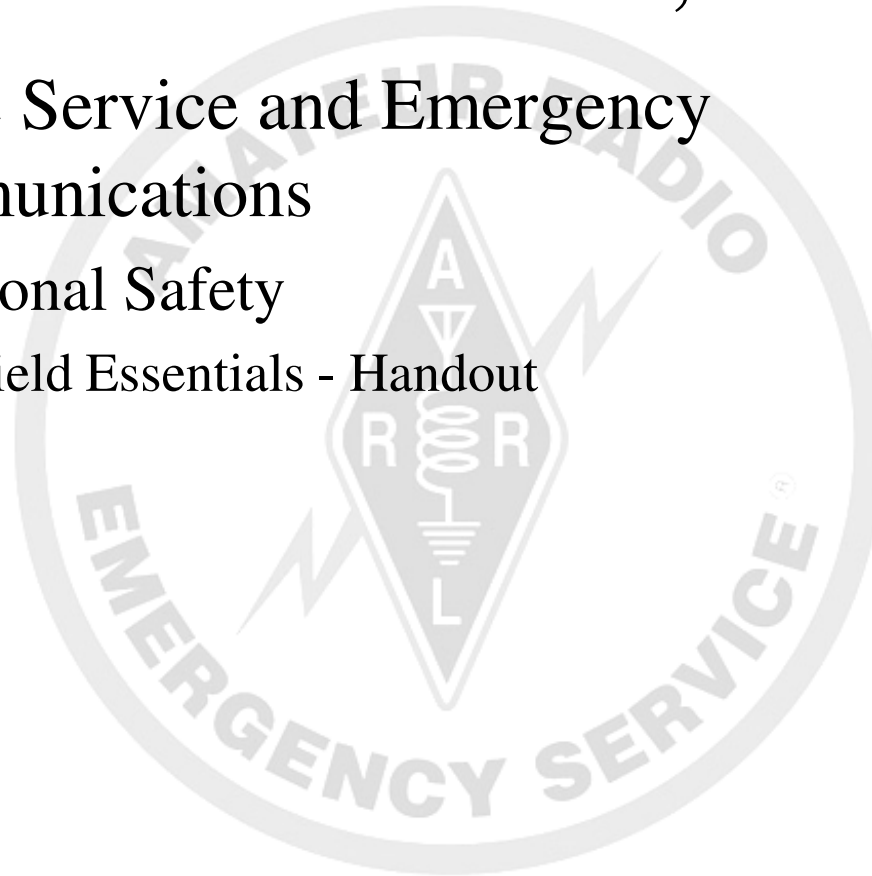
- Public Service and Emergency Communications
 - Modes of Communications
 - FM
 - Digital : Packet, APRS, PSK-31
 - SSB
 - CW
 - AM
 - ATV

Communications, cont.

- Public Service and Emergency Communications
 - Security
 - Anyone may be listening.
 - Do NOT pass account numbers, passwords or control codes.
 - Be discrete if discussing injuries or fatalities.
 - Never reveal the contents of a message to anyone other than the intended recipient.
 - Do NOT spread rumors.

Communications, cont.

- Public Service and Emergency Communications
 - Personal Safety
 - Field Essentials - Handout



Communications, cont.

- Public Service and Emergency Communications
 - Stress
 - Anticipate oncoming stress
 - Tensions will build, don't take anything personally.
 - We are all in this together.
 - We have to make do with what we have.
 - Know who is in charge.
 - Anticipate food, water and sanitation needs.

Communications, cont.

- Public Service and Emergency Communications
 - Stress, cont.
 - Coping with injuries near you
 - Stay away from the scene if possible.
 - If you have to be in the area, keep in contact with your team leader.
 - If the situation is too intense, ask for relief.

Communications, cont.

- Public Service and Emergency Communications
 - Debriefing
 - Tactical - needed after all events
 - What was our goal?
 - Did we have a clear definition of who we were going to communicate with and what our likely traffic would be?
 - Did we accomplish our mission or goal?
 - What did we do correctly?
 - What did we do that was beyond expectations?
 - What specific training items do we now have a need for?
 - Other than the training items, what else needs improvement?
 - Were there any surprises and why did they surprise us?
 - Where did we come up short?

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Communications, cont.

- Public Service and Emergency Communications
 - Served Agency Communications
 - Each agency will have its' own unique system
 - Telephone System
 - Satellite System

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Nets

- Directed or Controlled Net
 - A means of insuring orderly use of limited frequency resources to conduct communications for a scheduled event or during an emergency.
- Net Control Station
 - The person charged with control of information flow on the frequency used by a controlled net.

Nets, cont.

- Net Types
 - **Open** or informal: Any traffic is permitted, providing that they break to allow incident related traffic.
 - **Directed Net:** Deals with large amounts of traffic. NCS determines who will use the frequency and what traffic will be passed first.

Nets, cont.

- Net Types, cont.
 - **Tactical Net:** The primary coordination net for the event. Traffic is restricted to the event. The NCS has absolute control over the net. Tactical callsigns may be used (IE. Net Control, this is Checkpoint 3.)
 - **Resource Net:** Acquire volunteers, make work assignments.
 - **Traffic Net:** Passes formal, normally written, traffic.

Nets, cont.

- Net Types, cont.
 - **Incident Command System Net:** May be used by the primary served agencies. The **RACES/ARES Tactical** net would be known as the **Operations** Net, the **Resource** Net would be known as the **Logistics** Net.

Nets, cont.

- Identification
 - Use your FCC callsign every 10 minutes during a conversation, and at the end of your last transmission.
 - Tactical Callsigns may be used, but you must still follow the above rule.

Nets, cont.

- Procedures
 - If just joining the net, listen first to understand what is going on.
 - Follow the NCS rules for checking in.
 - Do NOT editorialize. Don't make comments not relevant to the net.
 - If you need to step away, let net control know.
 - If asked by authorities to move, DO SO, and then advise the NCS.

Nets, cont.

- Procedures, cont.
 - Let NCS know if you have to leave, details are not necessary.
 - If an on-scene authority asks you to stop transmitting or to turn off your radio, do so immediately. There could be explosive or flammable materials present
 - Be patient with the NCS.
 - Leave a short break between transmissions. It will allow other stations to get through.

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Training and Practical Experience

- Undergo an educational/training program such as ARRL Emcomm courses
- Emergency Management
 - Learn about emergency management agencies in your area (EMA, Red Cross, etc.)
 - Learn how requests for mutual aid are handled.
 - Find out how people are notified for communication emergencies.
 - Take a first aid and a CPR course.

Training and Practical Experience, cont.

- National Incident Management System (NIMS)
 - Provides a systematic, proactive approach to guide departments and agencies at all levels of government, nongovernmental organizations, and the private sector to work seamlessly to prevent, protect against, respond to, recover from, and mitigate the effects of incidents, regardless of cause, size, location, or complexity, in order to reduce the loss of life and property and harm to the environment.
 - Training is required for responders to emergencies

Training and Practical Experience, cont.

- Recommend all ARES take these FEMA courses:
 - ICS-100.A (Intro. To Incident Command System)
 - ICS-200.A (ICS for Single Resources)
 - ICS-700.A (Intro. To National Incident Management System)
- Available on-line from:
<http://www.fema.gov/emergency/nims/NIMSTrainingCourses.shtm>

Training and Practical Experience, cont.

- Expect further NIMS training requirements
 - New ARRL Emcomm 2/3 replacement class requires 14 NIMS classes for course completion.

Training and Practical Experience, cont.

- Equip Yourself
 - Get a NOAA Weather Radio with Specific Area Message Encoding (SAME) capability.
 - Put together a quick deployment bag, AKA a Go Bag, a Go Kit, or a Jump Kit.
 - Put together a 72 hour kit.
 - Learn how to use your radios.

Training and Practical Experience, cont.

- Learn about emergency communications procedures
 - By checking into nets.
 - By becoming a Net Control Station.
 - By participating in a tactical net such as a bike run.

Training and Practical Experience, cont.

- Learn about emergency communications equipment
 - Learn and practice HF techniques.
 - Learn and practice Near Vertical Incident Skywave (NVIS) antenna setup and function.
 - Learn and practice VHF/UHF simplex and repeater techniques.
 - Learn and practice packet radio.
 - Participate in public service activities.

Training and Practical Experience, cont.

- Practical Experience
 - Expect confusion.
 - Be flexible.
 - Dress for the weather and the situation.
 - Be aware of your first impressions.
 - Know your equipment.
 - Know your goals.
 - Know your assignment.

Training and Practical Experience, cont.

- Bottom Line
 - You are an emergency communicator; not a paramedic, firefighter or police officer.
 - Keep your EMA/ARES ID Card with you at all times.
 - Do not impede the professional responders.
 - Stay out of the “Hot Zone” unless instructed.
 - You may be requested to perform duties other than communications. Be flexible, **to a point.**

Training and Practical Experience, cont.

- Bottom Line
 - Test techniques and equipment before you need them.
 - Once you've learned the basics, get as much on the air experience as possible.
 - Don't be overly concerned with problem solving during an exercise.
 - Practice being efficient with others' time.

Training and Practical Experience, cont.

- Bottom Line
 - Make your transmission sound crisp and professional.
 - Prepare for lack of water, food, sanitation and first aid.
 - Be aware of stress in yourself and those around you.
 - Get to know those who you will be working with through activities.

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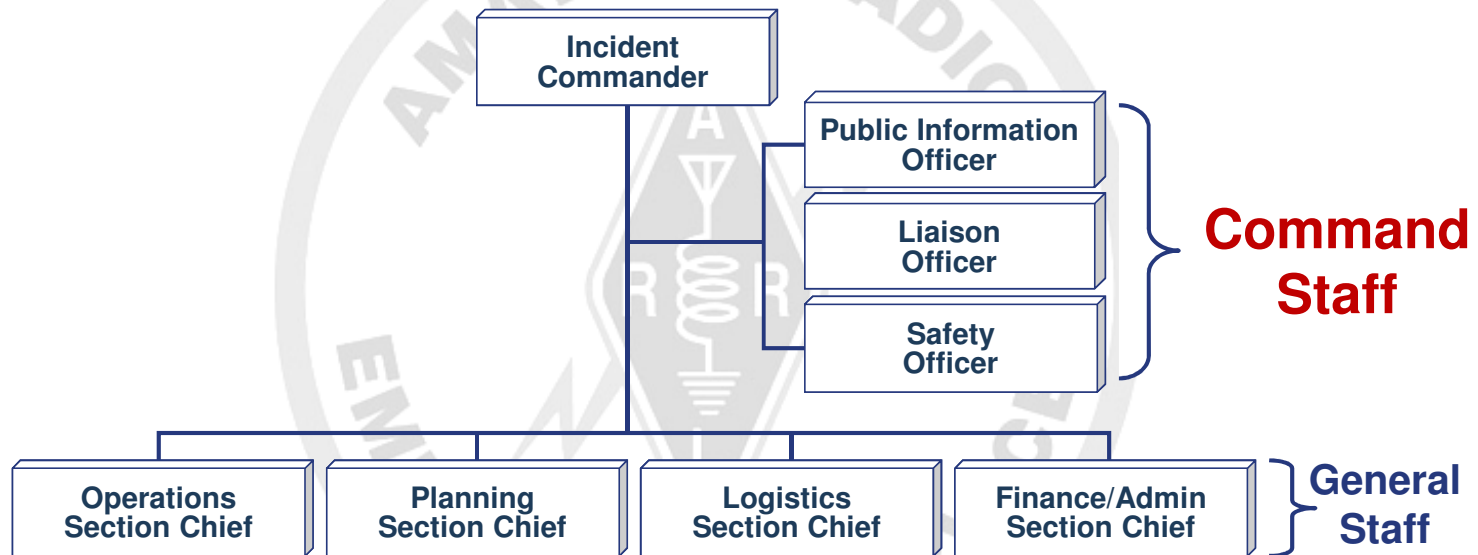
EQUIPMENT

- Equipment List
- Connectors
- Equipment Knowledge
- Maintenance
- Portable Antennas, generators
- Batteries

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Incident Command System



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Emergency Call outs

- Process
 - Call outs are initiated by the EMA or the County EC.
 - Notification done by a message on RACES/ARES repeater, phone calling list, email list.

Emergency Call outs, cont.

- Response
 - Respond as directed by the message.
 - If it is unclear, monitor the RACES/ARES repeater for instruction.

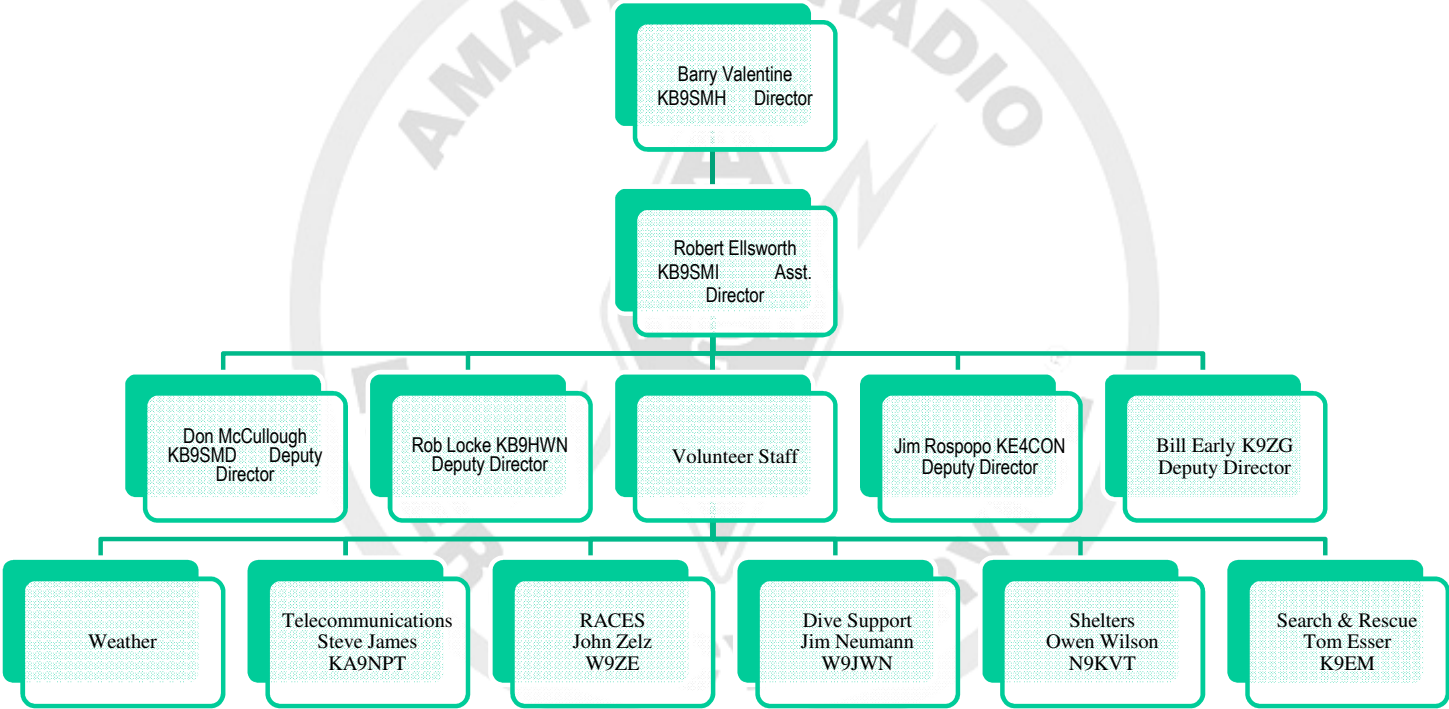
Emergency Call outs, cont.

- Response scenarios
 - Communications emergency.
 - Severe weather.
 - Multiple alarm fire.
 - Hazardous Materials Incident.
 - Water Rescue or Recovery.
 - Other major emergency requiring emergency management or communications support.

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EMA Organization



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Questions, comments?

For further information on EMA, ARES, RACES please visit these web sites:

MCEMA: <http://www.co.mchenry.il.us/CountyDpt/esda/default.asp>

MCRACES: <http://www.mcraces.org>

ARRL: <http://www.arrl.org>

FEMA: <http://www.fema.gov>

FCC: <http://www.fcc.gov>

Please contact any of these people for further assistance:

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Thank You!

To MCEMA, for hosting this today's meeting and the opportunity to bring this program to you.

