



WAKE COUNTY ARES/RACES EMERGENCY HANDBOOK

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Most of the information in this handbook is stuff that we hope we rarely have to use, but...

What is ARES

ARES is the Amateur Radio Emergency Service, and is part of the ARRL Field Organization. ARES is tasked with providing backup and emergency communications for our primary and secondary served agencies.

What is RACES

RACES is the Radio Amateur Civil Emergency Service. It is a joint effort of both Amateur Radio and Emergency Management agencies. It's focus is primarily CIVIL DEFENSE related.

Activation Types

Note that this applies to Wake County Emergency Management activities as well, by substituting "Wake County" for "State" or "NC State" in the following information.

Activation Level 4 – Standby:

This level of activation is to raise the awareness of ARES/RACES volunteers and to provide advance notice in order for them to prepare for a possible deployment. There is no requirement for a net to be established at level 4. Volunteers should monitor their radios if possible (see frequencies below) and check their level of preparedness. Below are some examples:

- Check family members
- Check schedule and availability
- Check batteries (and generator if owned)
- Check 'Go Kit'
- Fill gas tank, including generator(s)
- Etc.

The ARES/RACES ECs may utilize the following methods to establish ARES/RACES activation in support of NC State EOC emergency communications:

1. Announcement on local repeaters. **The main VHF repeater for NC State and Wake County ARES is 146.88.** In the event 146.88 (- no tone) is not available 145.390 (- 82.5) is the backup. The 164.640 (- no tone) is a second level backup. In the event no repeaters are available tune to 147.420 simplex with no PL tone used (remember to open squelch).
2. Announcement on HF 3923 kHz (LSB) and/or 7232 kHz (LSB) depending on availability of operators and conditions.
3. Announcement by phone.
4. Announcement by email (includes text pagers and SMS capable devices).

A level 4 activation notification message will take the following format:

An ARES/RACES Level 4 Stand By Activation has been established by (EC name) to support the NC State EOC at (time and date). All ARES/RACES volunteers are asked to check preparations and listen to ARES/RACES State EOC frequencies. (additional information if available). Thank you for your support of the State EOC.

Activation Level 3 – **Minimal Deployment**

At this level of activation ARES/RACES ECs shall assess the need for volunteers. ECs may contact minimal numbers of ARES/RACES members to gather scheduling information. There is no requirement for a net to be established at level 3, however if the ECs feels a net is required, they may call for Net Control Station (NCS) volunteers. Liaison station support may also be established. If deemed necessary the ECs may conduct equipment testing including possible testing at the EOC. Volunteers should monitor their radios if possible (see frequencies below) and check their level of preparedness.

A level 3 activation notification will take the following format:

An ARES/RACES Level 3 Minimal Deployment Activation has been established by (EC name) to support the NC State EOC at (time and date). All ARES/RACES volunteers who are available are asked to standby and be ready for an assignment. All available operators are asked to listen to ARES/RACES State EOC frequencies as outlined above. (additional information if available). Thank you for your support of the State EOC.

Activation Level 2 – **Moderate Deployment**

At this level of activation at least one ARES/RACES EC/AEC shall be deployed at the EOC. ECs shall start the call up tree for ARES/RACES members to establish a 72 hour schedule. There is a requirement for a net to be established at level 2 and the EC/AEC shall establish a schedule for Net Control Station (NCS) volunteers. Volunteers should monitor their radios (see frequencies below) and be ready to react to calls for service at the EOC or elsewhere. Special instructions shall follow if this is a RACES activation.

A level 2 activation notification will take the following format:

An ARES/RACES Level 2 Moderate Deployment Activation has been established by (EC name) to support the NC State EOC at (time and date). All ARES/RACES volunteers are asked to be ready for an assignment and listen to ARES/RACES State EOC frequencies. The call up tree has been activated. (additional information if available, including RACES specific instructions). Thank you for your support of the State EOC.

Activation Level 1 – **Massive Deployment**

At this level of activation EC/AEC schedules are updated to fulfill operator and net control requirements for up to two weeks. All ARES/RACES resources shall be available to support NCEM and other served agencies. All nets and sub-nets shall observe strict net protocols until the Activation Level 1 is rescinded.

A level 1 activation notification will take the following format:

An ARES/RACES Level 1 Massive Deployment Activation has been established by (EC name) to support the NC State EOC at (time and date). All ARES/RACES volunteers are asked to be ready for an assignment and listen to ARES/RACES State EOC frequencies. Please ensure your family is secure before applying for a schedule slot. (additional information if available, including RACES specific information). Thank you for your support of the State EOC.

FREQUENCIES

- 146.880 -** (No tone) is the **primary emergency repeater for Wake County.** This repeater should be monitored first in the event of a callup, EAS activation, severe weather, or disaster. **The State EOC net has priority on this repeater.**

- 145.390 - (82.5) is the first backup repeater for NC State and Wake Co. ARES. **If both State and Wake County nets are required, Wake's will start here.**

- 146.640 - (No tone) is the State/Wake County second backup repeater.

- 147.195 + (88.5) is the third State/Wake County backup repeater, and may be also used by Johnston County ARES as a backup repeater.

- 145.190 - (156.7) is the fourth State/Wake County backup repeater.

- 147.450 Simplex, no tone, is the first Wake ARES simplex channel

- 147.570 Simplex, no tone, is the second Wake ARES simplex channel

- 147.420 Simplex, no tone, is the unofficial RARS simplex channel.

- 146.520 Simplex, no tone, is the National Calling Frequency.

- 145.450 - (No tone) is the Durham County primary emergency repeater.

- 147.360 + (136.5) is the Durham County first backup repeater.

- 444.925 + (100.0) is the Durham County second backup / Admin. repeater.

- 444.100 + (No tone) is the Durham ARES third backup / Admin. repeater

- 147.225 + (No tone) is the Durham County fourth backup repeater.

- 146.580 Simplex, no tone, is the Orange & Durham Counties ARES Simplex frequency.

- 146.535 Simplex, no tone, is a Durham County ARES Simplex Frequency

- 446.100 Simplex, no tone, is a Durham County ARES Simplex Frequency

- 147.315 + (No tone) is the Franklin County primary emergency repeater.
- 145.110 - (88.5) is the Franklin County first backup repeater.
- 145.170 - (No tone) is the Granville (Tri-County) ARES primary emergency repeater.
- 145.370 - (No tone) is the Granville (Tri-County) ARES first backup repeater.
- 146.940 - (No tone) is a Granville (Tri-County) ARES backup repeater. It is listed as the South Granville PRIMARY emergency repeater. It may also be used for traffic going to/from the NC Emergency Management facility/EOC at Butner.
- 147.270 + (No tone) is the Johnston County primary emergency repeater.
- 146.805 - (118.8) is apparently the Nash County primary emergency repeater
- 145.290 - (107.2) is a Nash County emergency backup repeater
- 442.150 + (131.8) is the Orange County primary emergency repeater.
- 147.135 + (82.5) is the Orange County first backup emergency repeater
- 145.230 + (107.2) is the Orange County second backup emergency repeater.
- 147.180 + (156.7) is the Orange County third backup emergency repeater.
- 443.475 + (131.8) is the Orange County fourth backup emergency repeater.
- 3.923 (LSB) is the Morning / Night primary for the Tarheel Emergency Net.
- 7.232 (LSB) is the Day primary for the Tarheel Emergency Net.
- 3.935 (LSB) is designated for NC State RACES primary use if frequency restrictions are invoked.
- 7.250 (LSB) is designated for NC State RACES secondary use if frequency restrictions are invoked.
- 14.340 (USB) is designated for NC State RACES tertiary use if frequency restrictions are invoked.

3.938 (LSB) is the North Carolina Single Sideband Net. This frequency may be pressed into service in the event of a National Emergency.

KD4RAA - K4JDR Linked Repeaters

Skywarn or ARES/RACES use

441.725 + (100.0) Raleigh West (Hub repeater) All repeaters in this system
444.775 + (100.0) Cary use a 100.0 Hz PL tone.
444.150 + (100.0) Clayton
444.925 + (100.0) Durham
444.550 + (100.0) Benson
444.375 + (100.0) Henderson
444.325 + (100.0) Holly Springs
444.875 + (100.0) Louisburg (Franklin County)
444.675 + (100.0) Raleigh North (NOT linked)

Graham Repeater Association Linked Repeaters

Major Disaster Use

444.825 + (146.2) North Raleigh These repeaters are designated for
443.425 + (156.7) RTP Hospital to Hospital or disaster site
442.050 + (107.2) Efland traffic, or long haul ARES/RACES
443.725 + (156.7) Graham traffic.
444.225 + (146.2) Greensboro

This is not a complete listing of all the repeaters in the area. Consult the Wake ARES or RARS websites for further information. Remember: other repeaters **can** be pressed into emergency service if needed.

No frequency information for Lee, Harnett, and Chatham ARES is available

Do not count on a particular repeater being available. Even some of the repeaters with backup power failed during the December 2002 ice storm.

OPERATIONS

If you become aware of a potential situation that may require an ARES, RACES, or Skywarn activation, immediately monitor the ARES repeaters in the following order: 146.880, 145.390, 146.640. Do not wait for a callup or e-mail notification. If you hear no traffic after a few minutes, transmit your callsign and see what happens.

If the ARES, RACES, or Skywarn net is brought up on a standby mode, regular traffic is permissible. However, ARES, RACES, and Skywarn traffic has priority over normal traffic. Longer breaks between transmissions are required, and transmissions should be shorter than normal. If possible, long ragchew traffic should be moved to another repeater or simplex.

If the ARES, RACES, or Skywarn net is in an active mode, regular traffic will be severely limited. ARES, RACES, and Skywarn traffic has priority. A Net Control Station will be on air, and almost all traffic should go through that station. Longer breaks between transmissions are required, and transmissions must be shorter than normal, to allow for emergency and priority traffic to be passed rapidly. Ragchew and other non-germain traffic should be moved to another repeater or simplex.

If you are contacted by a served agency, or other group, requesting Amateur Radio cover for an event or emergency communications backup, take down as much information as possible, then immediately notify the Emergency Coordinator(s) of the request. The reason for this is to make sure that all requests are routed as quickly as possible to the appropriate support group (if needed).

If the situation warrants, move point-to-point and ragchew traffic to other repeaters, or if in range, a simplex frequency such as 147.420 or 146.550 MHz (remember to open your squelch). Avoid 146.535 MHz during activations, as it is designated for Durham and Orange County ARES/RACES simplex traffic. Remember that there are also plenty of repeaters on 440 Mhz, 220 MHz, and six meters (50 MHz)

REMEMBER: In an emergency, our frequencies may be monitored by the public, served agencies, and the news media. **IT IS VITAL** that all ARES and RACES operations be conducted as friendly, courteously, and as professionally as possible. Regardless of what some people may think, we **ARE** an emergency service. Our actions reflect on all Hams, and to a point, on other emergency services.

PREPAREDNESS

1. Preload all of your radios with the repeater frequencies and PL tones for your area, as well as some of the wide area repeaters outside of your

normal area. Using your main VHF/UHF antenna, try to activate each of your area repeaters so that you know which repeaters you can actually use, and verify the settings for each repeater.

2. Have an inside VHF/UHF antenna that can be used for storms. If possible, it should be mounted as high as possible inside the attic. Test this antenna so that you know which repeaters you can use with it. Periodically use this antenna instead of the main station antenna to detect problems before the storm antenna is needed.
3. Determine your station's simplex range. A rough idea can be determined during repeater nets by switching between the input and output frequencies, and noting which stations can be heard on the input. Range will be determined by terrain, antenna heights and gains, and transceiver output power.
4. Keep your station at a level of readiness at all times, even if it means connecting a handheld radio to the main station antenna. You will be surprised what 5 watts can do with a decent antenna.
5. If your station uses 12 VDC as the main working voltage, and your backup wet cell battery is outside, periodically clean the battery connections and tighten them. A poor connection will reduce the amount of power available to the station during a power failure or dangerous operating conditions.
6. Experiment to determine how little power is required from your main radio and antenna to achieve full quieting on the county emergency repeaters, and your favorite repeaters. Reduced transmit power will lengthen your available equipment operating time during power outages.
7. Construct one or more twin lead "expedient" and/or expendable J-pole antennas. These are for use in case the main station antenna fails.

Training

1. Weekly ARES training nets on the 146.880 (no tone) repeater on Thursday at about 9:15 pm (21:15) Eastern time
2. ARES formal training events, ie, November SET, Hurricane drills, Shearon Harris Drill, and other formal simulations

3. Participation in Public Service events can provide many needed skills and practice for emergency communications
4. Red Cross First Aid/CPR certification (and renewal) can make you a more valuable volunteer, and possibly save a life!
5. Obtain the ARRL's ARES Field Resources Manual
6. Experiment with Simplex operations.
7. Participation in Skywarn nets and operations.

Addendum 1 Served Agencies and other related helpful information

North Carolina Emergency Management
Report to the EOC in the basement of the Administration Building.

Wake County Emergency Management
Report to the EOC in the basement of the Wake County Courthouse.

Wake County Backup Facility - Wake County Commons Building
4011 Carya Drive, Raleigh (off of Poole Road at the Beltline)
Located in the Wake County Office Park.

Note: No operations have been done there, but initial testing looks promising enough that handheld outside operations with a counterpoise may be possible but iffy. Operations may require an outside antenna and a mobile or base radio.

Town Of Cary (EOC) 400 James Jackson Ave.
Report to the EOC or Cary Police in the building.

Note: The Cary EOC has a discone antenna set aside for Amateur Radio use. N connector is probable, and adapters are likely there. Take jumper coax, adapters, and barrel connectors with you regardless.

Wake Memorial Medical Center a.k.a. "Big Wake, Wake Med"
Report to the ER or Classroom 3

Note: In a disaster, Wake Med may move or divert patients to their other facilities for treatment or rest.

Western Wake Hospital a.k.a. "Western Wake"
Located at the intersection of Tryon Road and Kildaire Farms Road, in Cary.
Report to the ER

Eastern Wake Day Hospital (part of Wake Med) Zebulon
Report to Front desk or Charge Nurse

Wake Med North (part of Wake Med)
Located at the Falls of Neuse and Durant Roads intersection
Report to the Front Desk, Day Surgery Office, E.R., or Police/Security on site.

Rex Hospital
Report to the ER

Duke Health Systems Raleigh Hospital. (the old Raleigh Community Hospital)
Report to the ER

Note: Due to the number and locations of the buildings at this hospital, handheld operations may not be possible. Cross-band repeating from a vehicle may be required. Position your vehicle in the North parking garage on one of the upper *covered* floors, with the vehicle against the South wall, preferably with the antenna close to the wall opening. If an AC outlet is near the parking space, so much the better. REDUCE handheld transmit power as needed.

A portable (twin lead construction) J-pole antenna running off of a handheld may suffice, but has not been tested at RCH.

Raleigh-Durham International Airport "RDU"
Report to the Crash-Fire-Rescue "CFR" building near the control tower.

**WARNING! - RDU IS A HIGH SECURITY AREA!
DO NOT ENTER A RESTRICTED AREA UNLESS YOU ARE AUTHORIZED!
YOU MUST HAVE YOUR SERT BADGE OR A PHOTO ID AND YOUR FCC
LICENSE WITH YOU!**

Cary Fire Department
Report to the station you are needed at.
Note: CFD stations have 144/440 dual band AMATEUR antennas installed or

available! Antenna connectors are N type, but adapters are reported at the stations. However, take coax jumpers, adapters, and barrel connectors with you.

Addendum 2 Shelters and other related helpful information

Cary Senior High School 638 Walnut Street, Cary (Near the mall)

East Wake Senior High School 5101 Rolesville Road, Wendell

Enloe Senior High School 128 Clarendon Crescent, Raleigh
Note: This facility may require a better antenna than a “stock rubber duck”

Garner Senior High School 2101 Spring Drive, Garner

Sanderson Senior High School 5500 Dixon Drive, Raleigh

Carroll Middle School 4520 Six Forks Road, Raleigh
Note: This is the only facility not noted for having a generator, and may just be used as a reception center.

North Garner Middle School 720 Powell Road, Garner

Addendum 3 GO Kit ideas

A Handheld radio, preferably true dual band (able to receive two stations simultaneously on the same or different bands - VHF/UHF). Minimum power output of 5 watts.

Photocopy of the radio’s manual.

Extra batteries and/or a dry cell converter with dry cell batteries.

Photocopy of your current FCC Amateur license.

Higher gain “rubber duck” antenna(s) for your handheld radio(s)

Counterpoise for handheld radio long enough for the lowest frequency that you can transmit on.

Expedient J-pole (300 ohm twin lead) or other antenna, and support hardware.

Reasonable length coax cable with connectors installed.

BNC to SO-239 or SMA to SO-239 adapters, depending upon the handheld radio(s).

Combination speaker/mic for the handheld radio.

Headset, headphones, or earphone for the radio(s) to be used.
DC “car” adapter or AC adapter/charger for the handheld radio(s)
Aspirin and/or other pain reliever.
Several doses of any prescribed medication you may need.
Flashlight and/or small battery powered lantern. (extra batteries, too)
Notepads and writing equipment.
ARRL Radiogram forms (can be photocopies)
One or more folded area maps.
Money in small bills and a bit of change.
Current copy of the RARS repeater list and/or SERA Repeater Journal, or ARRL Repeater Directory.
Small hand tools.
Large paper clips and rubber bands to suspend coax or a J-pole antenna from suspended ceilings.
Canned water and snacks. Keep these in a closed or sealed plastic bag.
A flattened roll of toilet paper
Waterless hand cleaner or a few sealed handi-wipes.
A high quality backpack to put all the above in.

Addendum 4 Station emergency equipment and supplies

Enough bottled water for at least 4 days for your household and guests. 1 gallon minimum per person, per day. Include extra water for cooking purposes.
Enough food for each person for at least 4 days. This food should be the same or similar to the regular diet, but require less or no preparation, and no refrigeration. This includes: ready-made canned foods, crackers, cookies, instant noodles, sugar, salt, chocolate and/or other candy, raisins or other dried fruits, and powdered or UHT (long-life) milk. Don't forget the soft drinks, coffee, and tea!
Heavy paper plates (Chinet), paper cups, and plastic cutlery and utensils.
One or preferably two manual can openers.
Water purification tablets or bleach without any additives.
Britta or equivalent water filtration device.
Paper towels, Toilet paper, feminine supplies, plastic garbage bags.
One or two bottles of alcohol based hand sanitizer.
At least 2 flashlights and/or battery powered lanterns (with extra batteries)
A gas fueled camp stove, gas burner, or gas ring. Gas canisters used should be the type with an internal valve to allow for safer storage by detaching the canister from the appliance. Avoid those gas appliances that use puncture type

canisters.

Matches and/or lighter (keep well away from children)

An extra propane gas tank for the gas grill, if it doesn't use piped gas.

At least 1 dry chemical fire extinguisher, rated at 3-A 40-BC or better. **It must have a metal valve assembly, not plastic.**

Adapters for all handheld radios to allow them to be connected with the main station antenna.

At least one 12 volt deep cycle (preferred) or auto battery, and cabling with connectors to run the station with.

Extra batteries and/or a dry cell converter.

An expedient j-pole or other antenna, and a barrel connector. (to replace the station antenna if it becomes damaged or unusable, or for use with handhelds)

Combination speaker/mic for the handheld radio(s).

A reasonable length of small gauge wire to make counterpoises for the handheld radios, each long enough for the lowest frequency that can be transmitted upon. (It CAN make a difference)

A reasonable length of 12 to 16 gauge insulated wire, insulators, and lightweight rope for a temporary HF antenna if you are licensed for HF, or wish to monitor HF frequencies.

A small set of hand tools.

2 sets of heavy work gloves.

A gas or other soldering iron that can run on something other than 120 VAC.

Rosin core solder.

Plastic sheeting (for damage control and/or Shelter In Place use)

Duct tape

Masking tape, wide width (aprox 2 in / 5 cm)

Electrical tape

A reasonable sized first aid kit (see addendum 5, below)

At least one (preferably 2 or more) battery or generator powered AM/FM radios.

A battery powered TV.

A "rabbit ears" or other tv antenna, with connector balun if needed.

At least 2 sets of batteries for radios, TVs, and other electronics normally used.

Some means of generating AC power. This can be a generator and/or inverter.

Additional fuel for the generator and/or vehicle.

Please read the handbook notes and observations section.

Addendum 5 First Aid Kit ideas

Manuals- -Red Cross First Aid Manual
-American Medical Association Handbook of First Aid and Emergency Care (recommended)

Medications -

Aspirin, 300 mg tablets
Ibuprofen, 200 mg tablets (Advil, Motrin, etc.)
Ammonia inhalant, 10 cnt.
K-Y Jelly, 2 oz tube
Sodium Chloride tablets, 1 g
Laxative-Antacid (Milk of Magnesia, etc.)
Phosphorated Carbohydrate solution (for nausea/vomiting)
Betadine solution, 8 oz bottle
Alcohol swabs, 20 cnt.

PLUS ANY PERSONAL MEDICATIONS YOU OR YOUR FAMILY MEMBERS MAY NEED

Bandages -

Plastic strips, 3/4" wide, 20 count
Plastic strips, 1" wide, 20 cnt.
Butterfly closures, 20 cnt.
Gauze pads, 2" x 2", 10 cnt.
Gauze pads, 4" x 4", 10 cnt.
Gauze pads, Eye pads, 5 cnt.
Adhesive pads, 2" x 3", 10 cnt.
Surgical sponge dressings, 4" x 4", 10 cnt.
Surgical sponge dressings, 5" x 9", 10 cnt.
Flexible gauze ("Kling" type), 2" x 5yds, 2 cnt.
Flexible gauze ("Kling" type), 4" x 5yds, 2 cnt.
Triangular bandage

Misc. Equipment -

Medical tape, 2 rolls
Tweezers
Hemostats, straight, 9"
Hemostats, curved, 9"
"E.M.T." Shears
Finger splints - 1ea, small, med., large
Rescue Breather w/ one-way valve
Rubber (or equivalent) Gloves, 5 sets
Small bottle of hand sanitizer (alcohol based)
Penlight - extra batteries
Matches
Foil "space" blanket, 2 cnt.

Additional Kits -

Diabetic Kit --

- Glucose tablets, 5 g, 5 count
- Syringe, disposable, 1 cc, 10 cnt.
- Lance and Lancet system (for blood sampling)
- Test strips for blood sugar
- Reagent strips for Urinalysis

Bee Kit --

- Antihistamine tablets
- 1/1000 Epinephrine
- Syringe, disposable, 1 cc, 10 cnt.
- Tourniquet

Snake Bite Kit --

- Tourniquet
- Scalpel
- Suction cups

Addendum 6 Other equipment ideas and suggestions

Have a DC/Car Charger for the handheld transceivers you might own.
Have a DC/Car Adapter for each model cellphone(s) you may own.
Have a dry cell adapter for the handhelds you may own, with batteries.
Keep an expedient j-pole antenna in your vehicle's trunk with needed adapters for your handheld radio(s)

Addendum 7 Crisis Relocation (Evacuation, Bug-Out, Run-For-It!, etc)

If you live or work in an area that is a higher risk for evacuation, such as the coastal areas, chemical plants, and Nuclear Power Plant EPZs:

1. Preload all your radios with amateur radio repeaters for the counties you might evacuate to, National Calling Frequencies of 146.520 and 446.000, and the common simplex frequencies used in those counties. (This is in addition to the normal frequencies that may already be programmed.)
2. Keep a CURRENT copy of your FCC Amateur License in the vehicle.
3. Keep a current copy of the Repeater Directory, and/or the SERA Journal, in each vehicle. The RARS repeater list is a good idea also.
4. Keep with you a handheld radio, preferably true dual band with a minimum power output of 5 watts.
5. Keep a photocopy of the radio's user manual(s) in the vehicle.

6. Keep a CURRENT copy of the state highway map in the vehicle.
7. Know the primary and backup operating frequencies of the ARES/RACES groups in the areas you might evacuate to.
8. Keep enough small gauge wire in the vehicle to construct counterpoises for each of your handheld radio(s), for the lowest frequency you can transmit on.
9. Construct and keep in the vehicle a portable (twin lead or ladder line construction) 2 meter J-pole antenna with at least 10 feet of coax, and temporary mounting hardware such as suction cups, string, and paper clips.
10. Keep adapters and enough extra coax so a handheld radio can be used with the mobile antenna and/or the expedient J-pole antenna.
11. Have a dry cell adapter for the handhelds you may own.
12. Keep a DC/Car adapter/charger in the vehicle for the handheld transceiver(s) you might own.
13. Have a DC/Car Adapter for each model cellphone(s) you may own.
Note: Some powered handsfree units will also charge the cellphone.
14. Keep at least one ruggedized flashlight in the passenger compartment.
15. Keep at least one pair of heavy work gloves in the vehicle.
16. Keep a small stash of cash somewhere in the car, both bills and coins.
(if possible, put some of it somewhere besides the glove box)

If you are forced to evacuate your residence, after you arrive at your temporary accommodations, take the time to inform Wake ARES of your location and situation. If you cannot make direct contact with either Wake or State ARES, send a radiotelegram with Welfare priority. Either way, we'll know that you're ok.

Addendum 8 Bug-out Kit ideas

A Handheld radio, preferably true dual band / dual receive (able to receive two stations simultaneously on the same or different bands - VHF/UHF). Minimum power output of 5 watts. Other radio equipment, *but only if you have time to retrieve it!!!*

Photocopy of the radio's manual(s).

Higher gain "rubber duck" antenna for your handheld radio.

Battery case (uses AA cells) for the radio, or a 12 volt battery pack and a DC adapter for the handheld radio.

Counterpoise for handheld radio long enough for the lowest frequency that you may transmit on.

The current SERA Repeater Journal, or a hard copy of the RARS repeater list.
Two sets of clothing for each person.
two blankets or a sleeping bag for each person
toilet articles (including feminine articles if needed)
bath towels
necessary medication (includes aspirin or ibuprofen)
baby needs and identification
Car registration (*Should already be in the car!*)
Some cash in smaller bills and coins.
Checkbook and credit cards.
A battery or generator (hand crank) powered AM/FM radio.
At least one pair of heavy work gloves.
Flashlight with extra batteries.
Legal documents, *but only if you have time to retrieve them.*
One meal's worth of food. **DO NOT** bring food if the evacuation is due to a Radiological, Nuclear, Chemical, or Biological incident. This is to prevent ingesting anything contaminated.

ADDENDUM 9 W1AW (ARRL) FREQUENCIES and INFO

In a communications emergency, monitor W1AW for special bulletins as follows: **voice on the hour**, teleprinter at 15 minutes past the hour, and CW on the half hour.

Voice Frequencies are 1.855, 3.99, 7.29, 14.29, 18.16, 21.39, 28.59 and 147.555 MHz.

Teleprinter Frequencies are 3.625, 7.095, 14.095, 18.1025, 21.095, 28.095 and 147.555 MHz. Bulletins are sent at 45.45-baud Baudot and 100-baud AMTOR, FEC Mode B, 110-baud ASCII will be sent only as time allows.

Code Frequencies are 1.818, 3.5815, 7.0475, 14.0475, 18.0975, 21.0675, 28.0675 and 147.555 MHz. Code bulletins are sent at 18 wpm.

Further information can be found on the web at <http://www.arrl.org/w1aw.html>

ADDENDUM10 RACES FREQUENCIES / BANDS / INFORMATION

These bands are set aside for RACES use in the event RACES is activated at a NATIONAL level. Frequencies are in MHz.

1.800-1.825	1.975-2.000		(160 Meters)
3.50-3.55	3.93-3.98	3.984-4.000	(80 Meters)
7.079-7.125	7.245-7.255		(40 Meters)
10.10-10.15			(30 Meters)
14.047-14.053	14.22-14.23	14.331-14.350	(20 Meters)
21.047-21.053	21.228-21.267		(15 Meters)
28.55-28.75	29.237-29.273	29.45-29.65	(10 Meters)
50.35-50.75	52.00-54.00		(6 Meters)
144.50-145.71	146.00-148.00		(2 Meters)
222.00-225.00			(1.25 Meters)
420.00-450.00			(70 Centimeters)
1240-1300.00			(23 Centimeters)
2390-2450.00			(12 Centimeters)

The frequencies of 3.997 and 53.300 MHz (fm) may be used in emergency areas when required to make initial contact with a military unit and for communications with military stations on matters requiring coordination.

A NATIONAL EAS Activation should be considered as a “heads up!” that a National level RACES activation is imminent.

RACES uses IMMEDIATE, PRIORITY, and ROUTINE as message priorities, instead of the ARES/NTS priorities of EMERGENCY, PRIORITY, WELFARE, and ROUTINE. Treat IMMEDIATE messages the same as EMERGENCY messages.

Note: If there is a NATIONAL LEVEL RACES activation, non RACES stations may be ordered off the air, and some limitations on registered RACES stations may be imposed.

NC RACES Digital and CW Frequencies

If no restrictions:

Mode	Primary	Secondary
CW	3573 kHz	3695 kHz
Digital (Pactor)	3624 kHz	7104 kHz

IF frequency restrictions:

Mode	Primary	Secondary	Tertiary
CW	3535 kHz	7120 kHz	10120 kHz
Digital (Pactor)	3545 kHz	7104 kHz	10130 kHz

Addendum 11 Handbook NOTES and OBSERVATIONS

About purchasing bottled water --- There is a slight savings per ounce in purchasing it in 2.5 gallon dispensers, versus the 1 gallon jugs. However, the gallon jugs will be easier to handle. The smaller bottles (1 liter or smaller) are more expensive per ounce, however they make good disposable canteens.

Two liter soft drink bottles can be used to store water. Just be real careful in thoroughly cleaning them out before refilling them with drinking water. Do not use plastic milk jugs that have held milk. If you have any concerns whatsoever, purchase the bottled water.

Be sure to rotate and use up your emergency food stocks every six to nine months. This is especially true of flour and flour based products like cookies, crackers, and noodles.

About fire extinguishers --- At least one extinguisher must be a dry chemical "ABC" type, rated at least 3-A, 40-BC. Occupants of any area must be able to fight any type of fire. In a disaster or attack situation, fire department response times will be longer. Avoid purchasing those extinguishers that have a plastic valve assembly, as they have a history of leaking down their pressure. Carry one in your vehicle, too!

About emergency lighting --- Flashlights and battery powered lanterns should be the first choice, as there is no flame involved. There might be a little interference on HF from the oscillators in fluorescent lanterns. But candles, gas or liquid fueled lamps and lanterns, and carbide lamps can be used. Just be real careful and take prudent fire prevention precautions.

About emergency J-pole antennas --- The 300 ohm "TV" twin lead material is only good for up to 10 watts due to potential overheating. If more than 10 watts of power may be used, then substitute 300 ohm ladder line for the twin lead. Plans for j-pole antennas can be found at the ARRL website (<http://www.arrl.org>) and other sites.

Sources for this handbook

Dr. Robert Condor, PsyD, K4RLC

Johnnie Mayfield, WA9SZL

Ron Casey, Cary Fire Department, K4JDR

Orange County, CA, RACES

American Red Cross

Federal Emergency Management Agency

Wake County Emergency Management

North Carolina State Emergency Management

Danish Emergency Management Agency "Beredskabsstyrelsen"

Singapore Civil Defence Force

This is version 2.1 of the handbook. 8/29/2005

This handbook is an ongoing project.