

# **Northern Florida Amateur Radio Emergency Communication Plan**

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# Northern Florida Section

## Amateur Radio Emergency Communications Plan

### The purpose of this plan

*...is to implement Part 97.1 of the FCC regulations, and Federal and international treaty law applying to Amateur Radio in the Northern Florida Section.*

97.1 Basis and purpose.

The rules and regulations in this Part are designed to provide an amateur radio service having a fundamental purpose as expressed in the following principles:

- 1. Recognition and enhancement of the value of the amateur service to the public as a voluntary non-commercial communication service, particularly with respect to providing emergency communications...[Emphasis supplied]*

This plan provides formal guidelines for the Amateur Radio Emergency Communications in the Northern Florida Section. It describes an organization within which County and District amateur radio units may function with maximum effectiveness and minimum confusion. It is intended to promote uniform procedures among local, District and Section amateur radio units, their officials and their operators.

**These guidelines are not intended as rigid regulations. The senior amateur radio official in charge may interpret and adapt the plan as reasonably necessary for efficient management of the situation.**

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## Definitions

- “Activated Alert” – Orange Alert - Condition Activated Alert members are active at assigned duty posts – not on standby.
- "AEC" – Asst. Emergency Coordinator
- "APRS" – Automatic Packet Reporting System – A digital system that transmits and displays data on maps on computer screens. Highly effective as a parallel to voice circuits.
- “AREC” – Amateur Radio Emergency Communications.
- “ARECP” – Amateur Radio Emergency Communications Plan.
- "CEM" – County Emergency Manager or County Emergency Management
- "Communications emergency" as defined the FCC occurs when normal communications systems are disrupted in a specified area.
- "County" - Any geographical jurisdiction assigned to an EC. A county can be an actual Florida County, a portion of a County, or a combination of counties.
- "County Warning Point" – A county public safety site, such as a Sheriff's dispatch office that functions 24 hours a day. It is a principal contact point for the State Warning Point.
- "DEC" – District Emergency Coordinator, an appointee in charge of activities in a cluster of counties comprising a District
- "DEM" also EDEM – The Florida Division of Emergency Management
- "Deployment Team" – A group of experienced Amateur volunteers selected and trained to mobilize on very short notice to operate in an incident area for an unspecified period of time – usually three to seven days.
- "Disaster" – An event causing death or serious injury to humans or a major loss of property.
- "Distress traffic" – Any traffic relating to an acute, immediate threat to human safety or property; i.e. SOS, MAYDAY, or EMERGENCY traffic.
- "District" – Two or more contiguous counties assigned to a DEC.
- "EC" – Emergency Coordinator. An appointee who supervises emergency planning and operations in a specified geographical area. Reports to the DEC.
- "Email" – Electronic messages exchanged over the Internet or local computer network.
- "Emergency" – any situation in which human life or property is threatened. The emergency ceases when relief agencies have no further need for our services. (See "Disaster")
- "Emergency Net" – A group of Amateurs using the same frequency and associated side frequencies to support emergency relief measures.
- "EOC" – Emergency Operating Center; an emergency headquarters.
- "ESF" – Emergency Support Function. Each of the 16 ESFs is a group of people in an EOC dealing with specific kinds of problem.
- "FDEM" – Florida Division of Emergency Management (see DEM).
- "FEMA" – Federal Emergency Management Agency
- "Formal traffic" is written in using a designated message form. It is used when Amateur Radio operators relay information between third parties.
- “Forward Command Assistance Team” FCAT – A forward deployment management team that travels into an incident area where AREC members are effected by a high impact event that produces trauma.
- “Fully Operational” – Red Alert - Maximum level of activation in the Northern Florida AREC Plan.
- "GATEway Stations" – Fixed stations providing liaison between two nets.
- "GPS" – Global Positioning System
- "HAZMAT" – Hazardous Materials.
- “Hot-Standby” – White Alert - notice to members to prepare for deployment on very short notice.
- "Informal communications" – Radio exchanges between two people not requiring verbatim relay to any third party. Classified as non-traffic; not handled on emergency nets.
- "LGL" – Local Government Liaison is an appointment made by the State Government Liaison (SGL) for any specific task.
- "NF" – Northern Florida - The Northern Florida Section of the State of Florida.
- "NM" – Net Manager.

"NOAA" – National Oceanic and Atmospheric Administration - Home agency for the National Weather Service

"NTS" – National Traffic system..

"NWS" – National Weather Service

"RACES" – Radio Amateur Civil Emergency Service – RACES organizations, where they exist in Florida, operate at the County level under direct control of the County Emergency Management Director.

"Section" – Administrative unit headed by elected Section Manager (SM). Florida has three Sections; Northern, Southern, and West Central.

"SEC" – Section Emergency Coordinator – Official responsible for all emergency communications activities within a Section.

"Secondary net" – A communications channel associated with the primary emergency net used for traffic handling and other time-consuming net business.

"SEOC" – State Emergency Operations Center in Tallahassee.

"Service information" – Handling notes attached to a message form.

"Service message" – Radiogram relating to handling of another message.

"SET" – Simulated Emergency Test. See p 21.

"SGL" – State Government Liaison is an appointment made by the Section Manager. The role is that of interface between amateur radio and all facets of state government.

"Side Frequency" – Secondary Net.

"SITREP" – Situation Report – message reporting status of emergency-related activities.

"SM" – Section Manager

"Standown" – Blue Alert – Alert status allowing officials at their discretion to shut down operations when they complete their emergency-related duties.

"STM" – Section Traffic Manager

"SWP" – State Warning Point – Communications center at FDEM; operates 24 hours a day, everyday

"SWPAS" – State Warning Point Amateur Station – An amateur station located at the State Warning Point in the State Emergency Operations Center in Tallahassee. It is activated by the SEOC Operations Officer when needed, is staffed by amateurs recruited by the LGL who has that role, and serves the roles given to it by the SEOC Operations Officer. Usually that will include receiving input from the Tallahassee GATEway, including SITREPS from the SECs, and transmitting traffic for County Emergency Managers from the SEOC. It will NOT usually include receiving or transmitting messages to individual amateurs unless they are serving County Emergency Managers or SECs.

"Tactical traffic" – Spoken instructions or consultation on the air. No third party communication occurs.

"Tracking Number" – A number issued by the State Emergency Operations Center for each restoration activity.

"Traffic" – Any exchange of information between two or more Amateur Radio stations.

"Traffic Log" – A list of incoming and outgoing traffic at an Amateur station.

## POLICIES

Certain policies prevail when Northern Florida Emergency Communications groups conduct emergency operations.

### Duty:

The SEC, DECs and ECs do not assume specific operating duties when their organizations are on an alert status above "Hot-Standby". They must remain free to cope with their official duties. When a County or District is not activated, however, this restriction does not apply.

AREC operators on duty are directed only by emergency communications officials. Served-agency officials may not change the radio volunteer's instructions.

Amateurs who hold professional emergency-response obligations (e.g. police officer or County emergency management) will not be appointed EC or DEC.

AREC operators, while on duty, perform only their assigned radio duties. If the operator wants to assume other duties he asks the EC for relief from radio duties.

The same person will not hold DEC and EC appointments at the same time

### Message Traffic:

Complete service information will be written on the message form.

Formal written message format is used whenever third parties are involved.

Every emergency-related message (except MAYDAY or Welfare) should be given a Priority precedence, no matter how routine they may seem.

A reply takes the same precedence as the original; a Priority message gets a Priority reply. Priority messages addressed to, or originating at the State EOC take precedence over other Priority traffic.

Emergency-related messages should usually be transferred from AREC nets to commercial circuits at the first opportunity when that will speed delivery.

In-coming Welfare inquiry traffic will not be handled on any AREC Net operating in Condition Activated Alert or Fully Operational.

Out-going Welfare "assurance" messages get a W (Welfare) precedence and will not be handled on any net operating on Activated Alert unless approved by the Net Manager. They will not be handled at all during Fully Operational Alerts.

### Nets:

All efforts will be made to continue the regular net operations so that information flow can be maintained throughout the emergency for all stations. Activation of the Northern Florida Emergency Net shall be the decision of the Section Manager in consultation with the Section Emergency Coordinator or designee. Activation of the NFEN will be made to secure the network for efficient handling of tactical and formal emergency and priority traffic.

Regular operations by other NF nets cease on 3950 kHz when the Emergency Net is activated.

NTS liaisons are not maintained during emergency operations.

At their option, amateur radio emergency communications officials may use the Emergency Net frequency for consultation and coordination.

Except for MAYDAY situations, business on the Emergency Net frequency must not be allowed to cause delays in listing emergency-related traffic or listening for weak stations.

Message traffic should be dispatched on the Emergency Net but actually transmitted on side frequencies. However, during long periods of inactivity traffic may be handled on the net frequency at the discretion of the Net Manager or Net Control.

Situation permitting, emergency communications use VHF or UHF nets in preference to HF. When any operation taxes local radio resources, the EC asks the DEC for support. The DEC may assign radio units from counties within the District and/or request additional help through the SEC. The SEC may recruit additional personnel from other districts within the section.

ECs appointed to counties with gateways must hold at least a General Class Amateur license. UTC in 24-hour format is the preferred time system for all dated ARES messages, documents and schedules. Dates must agree with the time system used.

## **Emergency Radio Communications Leadership**

### **Section Manager (SM)**

A Section is the largest administrative unit of the emergency communications organization. Florida has three Sections, Northern, Southern, and West Central each with an SM. The SM has overall responsibility for emergency radio communication activities in the Section and may appoint as many assistant officials as he deems necessary. They serve at the pleasure of the SM. Technically, their appointments end automatically when the SM leaves office, though the new SM may choose to continue any or all of them. Among the appointments made by the SM are the SEC, STM, and the SGL.

### **Section Emergency Coordinator (SEC)**

The SEC is appointed by the SM and is responsible for emergency planning and operations of the Amateur Radio Emergency Communications in the Section.

In the event of the SEC's absence or temporary inability to perform his duties, the Section Manager assumes those duties or appoints someone to perform them during the SEC's absence or incapacity.

### **Section Traffic Manager (STM)**

The STM, appointed by the SM, is responsible for coordinating National Traffic System (NTS) activities in the Section. The STM is often helpful when setting up liaison circuits with other Sections or countries for served agencies in Florida - for example, the Florida Division of Emergency Management or Red Cross.

The Northern Florida Emergency Net does not operate within NTS, but circumstances could arise in which it is desirable to exchange traffic with NTS. They could include moving welfare inquiry traffic into Northern Florida during disaster operation, or routing outgoing welfare traffic through NTS, including the digital systems, for rapid delivery. In such circumstances the STM coordinates the exchange and keeps the SEC and Emergency Net Manager advised of preferred routes and methods. And he works closely with other NTS officials to establish and maintain routes for whatever inter-Sectional traffic is being generated. The STM assists the DEC's and EC's in setting up routes for outgoing Welfare traffic.

### **District Emergency Coordinator (DEC)**

District EC is appointed by the SEC with consent of SM and is responsible for the supervision of EC's in the District. He has major responsibility demanding a major commitment of time, energy and personal initiative. Northern Florida is divided into seven Districts, each comprising three or more contiguous Counties. DEC's are responsible to the SEC for executing the Section Plan as it applies to the District.

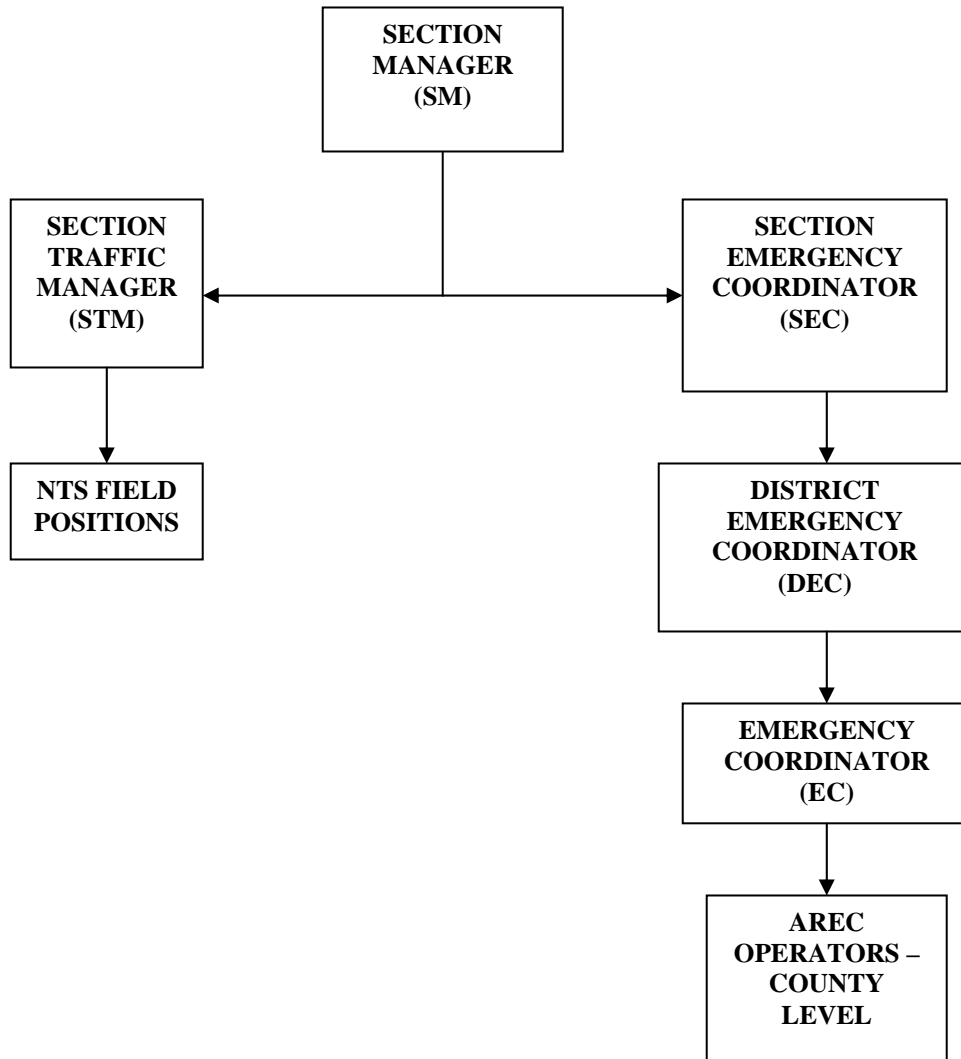
### **Emergency Coordinator (EC)**

The EC is the chief Amateur Radio Emergency Communications official in the County, and is directly responsible to the DEC. The duties of Emergency Coordinator require a serious commitment of time and effort by the volunteer who accepts it. The EC serves at the pleasure of the SEC or SM, but works closely with the DEC day to day.

The EC's duties in a medium-to-large county are many and complex. No EC can do everything himself. To be effective, he must delegate duties to Assistant ECs (AECs). He/she may appoint as many AECs as needed. AEC appointments do not need approval by any other radio official. They serve at the pleasure of the EC and their appointments lapse when the EC resigns or is replaced, though any or all of the same individuals may be reappointed by the new EC at his/her discretion.

The EC organizes and coordinates Amateur Radio Emergency Communications in the County to accommodate the needs of agencies served.

# Northern Florida Amateur Radio Emergency Communications Organization



## ALERTING and NOTIFICATION

### Levels of Alert

When a disaster strikes or threatens any Northern Florida community, affected ECs and DEC's may invoke any of four levels of alert of their organization:

**Hot – Standby ( White Alert )** notifies AREC operators in a specified area (such as a County or District) or functional unit (such as a net) that their services may be needed on short notice in the next 24-48 hours. It is typically issued by the SEC or, occasionally by DEC, or EC. The alert may apply to the entire Section or to specific Districts or Counties. But omission of any area does not prohibit others from taking whatever precautionary steps may be appropriate. The SEC usually does not issue a follow-up order raising the alert level but leaves that step to the ECs or DEC's in the affected areas.

A Hot – Standby Alert declaration signals DEC's that they should alert ECs, "deployment team" coordinators, Net Managers, and other key emergency communications officials to prepare for short-notice calls. All radio operators in the alerted Districts or Counties should monitor designated net frequencies and keep closely in touch.

Alerted Amateur Radio Emergency Communications operators should prepare to be en route to duty posts within two hours or less of being assigned. Preparations may include updating "ready-kits," arranging to take time off from work, fueling vehicles and power generators, charging batteries, obtaining stocks of expendable batteries and testing emergency-related portable equipment

Nets operating in Hot – Standby Mode customarily run in "free mode," i.e., they are not directed. Radio operators and officials should monitor the appropriate frequencies for information and for possible increases in or cancellation of the alert status.

**Activated Alert ( Orange Alert )** is descriptive of operational status. It is usually issued by DEC's or ECs and designates nets, GATEway activations; jump teams, and such, to perform specific tasks. The alert level becomes Activated in a County or District when specific duty posts are staffed and become operational. A net typically "goes Activated" when a net control operator opens the net.

A DEC may place any District or local net or other operating unit (such as a deployment team or County EOC AREC staff) in his District on Activated Alert. Most emergencies, even severe ones, can be handled without ever going beyond Activated.

**Fully Operational ( Red Alert )** is the highest possible level of alert in an emergency communications operation. It is useful for maintaining tight control over HF circuits where heavy traffic and large numbers of stations are causing communication problems.

When distress traffic is being handled on any emergency net or frequency, the alert level is automatically Condition Fully Operational and remains so until all distress traffic has been cleared.

Fully Operational Alert can be invoked at the Section level only by the SM. It is the only alert level under which the SM will consider asking the FCC to clear a frequency.

Fully Operational Alert is declared by issuance of a Priority bulletin to be transmitted on all active net frequencies. It applies solely to nets and geographic areas designated in the formal order. A District EC can put his District on Fully Operational Alert by declaration, but he must advise the SEC or SM of his action in advance or, if this is impossible, immediately upon taking the action.

The bulletin specifies the date and time Fully Operational Alert operation is to begin. It should designate the net or nets and/or the geographic area (County or Counties, District or Districts, Section, etc.) to which it will apply. Nets or areas NOT designated in the bulletin will continue in whatever level of alert prevailed before the Fully Operational Alert began.

**Standown Alert ( Blue Alert )** authorizes DEC's and ECs to begin the stand-down phase of the activation. Standown is permissive only; it does not require that operations be shut down in the specified area. It simply advises the designated

DECs and/or ECs that no apparent reasons exists for continuing operation unless they have local requirements. The DEC and EC then may reduce operating hours, restrict operations or close down designated nets as the emergency passes and traffic loads subside.

Only the SEC (or SM) may invoke a Standown Alert for a Section net, or if more than one District is involved in the emergency operation, because specific DECs or ECs may not be aware of conditions elsewhere that might require their support

A DEC can invoke a Standown Alert in the District net if the emergency- operation involves only his/her own District and no Section net is in operation.

**No Alert** is the normal situation for Amateur communication. No state of alert or emergency exists.

## NET OPERATIONS

The Florida traffic net system embraces many kinds of net, using many modes of communication. They operate around the clock, seven days a week, on a wide variety of schedules.

The basic cluster of Section nets in Florida embraces those of the National Traffic System (NTS) as well as a variety of special-purpose nets such as the Northern Florida Emergency Communications Net, the ARRL Information Net, various circuits operating in CW and various other digital modes.

In addition, a great many VHF and UHF local or semi-local nets operate all day, every day, and in just about every mode authorized by the FCC. These include repeaters which, by their inherent nature, may be defined as nets, though they may be seldom, if ever, subject to net controls. Each of these nets has its own procedures, schedule and operating practices and many of them shift almost automatically from routine, casual operation to emergency mode.

It is not the intent of this plan to prescribe operating functions or procedures for any of these nets unless they are explicitly part of the County, District, or Section AREC program. Individual participation in almost any well conducted net in any mode, on any frequency is strongly recommended as a way to become familiar with nets and how they operate. The discussions below refer to and recommend procedures for AREC-affiliated circuits; however, most of these procedures work quite well in any well-disciplined traffic or emergency net.

### **The Daily Section Net - NFARCEN – The Northern Florida Amateur Radio Communications Net**

The Northern Florida Amateur Radio Communications Net meets Monday through Saturday on or near 3950 KHz LSB, at 0900 Eastern Time (0800 Central), the year-around.

### **The Daily Section Sideband Traffic Net – NFPN – The Northern Florida Phone Net**

The Northern Florida Phone Net (NFPN) meets seven evenings a week on about 3950 kHz at 1930 Eastern Time (1830 Central), the year round, LSB as a regular part of ARRL's National Traffic System. Its primary purpose is to handle routine message traffic, and to train net members and net control operators in message handling and net procedures. A secondary daily objective is to disseminate bulletins and announcements of general interest to Amateurs. During major activations, NFPN merges with NFARCEN to become the Northern Florida Emergency Net - NFEN.

### **The Northern Florida Emergency Communications Net - NFECN**

During Emergency Net operation, managers of the Phone Net and the Communications Net alternate as Emergency Net Managers, each having full authority while on duty. They are responsible for the entire operation of the net, in all aspects. Between them they cover the full 24-hour period of operation when necessary, arranging their duty periods to suit their mutual convenience. This net is activated only when communications with more than one District is required or when amateur radio communications between a county EOC and the State EOC is required.

When NFECN is activated, NFARCEN and NFPN cease operations and their personnel -especially Net Controls and GATEway station operators become available for duty around the clock on the emergency net The NFARCEN and NFPN

Managers, appointed by the STM, become co-managers of the Northern Florida Emergency Net relieving each other as necessary to maintain a continual presence on the activated emergency net. The SEC, however, sets general operating parameters for the emergency net so as to provide maximum utility, while making the best use of available resources.

Emergency nets function both as traffic nets and as an official liaison net. A Section NTS net frequency becomes an emergency net frequency when the SEC or Net Manager alerts the Emergency Net. During operation the net uses the name "Northern Florida Emergency Communications Net."

Duties of co-managers during emergency operation:

Overall supervision of the net's operation to maintain net discipline and efficiency.

Reporting to both the SEC and the appropriate DECs if an activated District is not consistently represented in the net by GATEway stations.

Suggesting measures to the SEC to improve the existing emergency communications operation.

Selecting and assigning Net Control operators to keep the net going for long hours.

Arranging relief for NCS operators at reasonable intervals.

Replacing NCS operators who cannot maintain effective control of the net.

Reporting immediately to the SEC or SM any deliberate interference or persistent destructive interference of any kind.

Advising the SEC or his designee immediately of any disruption of net operations that the manager can't immediately handle.

Making sure that NCS operators adhere to guidelines for identifying GATEway stations and use them appropriately.

Calls of NCS operators and their times on and off duty.

Net frequency.

Changes of band conditions and interference levels.

Number of Priority messages handled by the net during each NCS duty shift.

Suggestions for further NCS and net member training.

Suggestions for changes in standing net procedures.

Writing prompt reports after emergency net operation ceases, using log entries and other available information. Copies of this report should go by email to the SEC, SM, STM and the other net co-manager as the manager's shift ends. These reports should be used to guide discussions on subsequent sessions of NFCN for training.

## **Frequencies**

Section-wide coverage during an emergency is normally maintained using frequencies on 75- or 40-meter sideband. The Net Control operator on duty will decide whether to keep the net on its current frequency, or to move up or down a few kHz to avoid interference. However, if it becomes desirable to move the net to another band, the Net Manager on duty at the time decides whether to move the net and if so, to what band, frequency, and mode. The manager, after consulting the SEC, may also opt for running simultaneous sessions on two bands at once, or he/she may set up direct "hot-line" circuits for special purposes. For example, if conditions are unfavorable on 75 and 40 meters, a CW or digital circuit might be set up on an arbitrary frequency, perhaps on 30- or 160-meters, or via APRS or other digital modes, thus maintaining contact

with critical locations while the net itself continues to operate on one of its normal frequencies.

<i>Net</i>	<i>Frequency</i>	<i>Time</i>
NFECN	3950 KHz LSB	As needed
NFECN	7254 KHz LSB	As needed
NFPN	3950 KHz LSB	Daily 1930ET/1830CT
QFN	3651 KHz CW 7051 KHz CW	Daily 1200 & 1500 UTC

The Northern Florida Emergency Net normally operates in continuous session for as long as the situation demands, preempting regular traffic net schedules on 3950 kHz - the frequency normally used by NFPN and NFARCN. The alternate NFEN frequency is 7254 KHz, or as close to that as circumstances permit. When nets of other Sections are involved, propagation factors may make it necessary to find other suitable frequencies nearby, or perhaps on other bands, or in other modes.

The Emergency Net may operate simultaneously on both 40-meter and 75 meter, each with its own Net Control and its own set of side frequencies. The "primary net" is where net control is. Frequencies on either side of the primary net used for exchanging traffic, are called "secondary nets" or "side frequencies." The primary frequency and all its secondary frequencies are referred to collectively as "the net."

Each net is called the "Northern Florida Emergency Net." They are distinguished from each other by reference to the band. During simultaneous operation on two or more frequencies, the NM has overall responsibility for both nets, and designates an Assistant NM to supervise operations on the others.

## Secondary Nets

Traffic should not be handled on the primary frequency of the Emergency Net except during periods of light activity. If the net frequency becomes continuously busy, it blocks the listing and dispatching of traffic and the conduct of other business.

Mobiles and other weak stations may have trouble being heard. If the net is handling much traffic off-frequency, the NCS or Net Manager should consider designating a separate frequency — a secondary net — for use by stations handling this traffic. If a waiting line develops on the secondary net additional frequencies may be added to accept the overflow.

If operation is in Condition Fully Operational, and if FCC has declared a "voluntary communications emergency" for NFEN operation, these secondary nets should be operated within the channel specified by FCC. Very rarely, it may be necessary to ask FCC to widen the protected channel to make room for the additional net frequencies.

## Spontaneous Nets

Under FCC regulations and international law, any person may use any available means at any time to summon help in an emergency. Any person may initiate emergency operations on any frequency. If this occurs in an Amateur band, control of the resulting net will rest with the station at the scene until a fixed-station operator can assume net control. Emergency communications officials should be careful not to intrude if the net is already functional and getting the job done.

Nets may also be activated by emergency radio officials on their own initiative or upon request from any supported agency. Each EC and DEC must have a well-designed plan for alerting local nets and communications members. The highest ranking Northern Florida official active in the operation will usually assume overall control and should designate a temporary net control (if the scene is in Northern Florida). Some Amateur Radio nets operate in support of ships at sea, or of missionaries in Third World countries. Individual members are encouraged to monitor these nets and to assist when possible with any distress traffic. However, they should remember that these nets are emergency communications nets and

their leaders may not need or want other parties involved.

Counties and Districts may be partially or fully alerted by their ECs and DEC's as necessary. Local VHF and UHF repeaters are commonly used for emergency nets and usually require no special alerting.

Any EC or Assistant EC may put a County net on activated status at any time, consistent with the County and District emergency plans. If the operation seems likely to continue for more than a few hours, the EC should notify the DEC, briefly describing the nature of the emergency.

The DEC may extend the alert to other Counties in his district at his/her discretion. Any DEC or assistant may put the District net on emergency status at any time, consistent with the District and Section emergency plans. The DEC will notify the SEC immediately by radiogram, email or telephone of any District operational alert

When a local or District official begins emergency use of an HF circuit, the SEC and Net Manager should be notified immediately by radio or landline. The SEC may (or may not) designate the ad hoc net as an emergency circuit at his/her discretion. The SEC or his designee will promptly notify the Section Manager, Net Manager and STM of any formal activation of the Section Emergency net on an NTS net frequency.

## **Recruiting and Relief**

Once the operation is under way, it may be brief, or it could last for days. Relief operators must usually be recruited for operations that last more than a few hours. Keeping each active operating position filled during a long operation is a necessary but time-consuming task that should not be allowed to interfere with the EC/DEC's other duties. Such recruiting is best conducted by the Administrative AEC — the one who keeps the radio membership records and sends monthly reports to the DEC. If an EC believes he will exhaust the pool of reserve operators, he should advise the DEC and request reinforcements from other counties. If reserves within the District have been depleted, the DEC must advise the SEC of the need so that other Districts can be tapped for assistance.

Every effort should be made to assign trained, experienced operators to critical posts, avoiding "walk-ons" of unknown ability. Any "broadcast" recruiting by public announcements must be authorized by the SEC. Operators recruited by such methods can create more problems than they solve.

## **Net Control - NFEN**

Net control should not be located in a disaster area. Net control should be located so as to hear stations in the impacted area as well as possible.

The Net Manager should select net control operators on the basis of signal quality and strength and operating skills, and should take propagation into account. NCS will appoint relay stations as necessary.

A two-hour emergency-net control shift is the norm, but the NM will adjust this duty cycle as convenience and necessity require. GATEway stations should not be used as NCS, except perhaps during very slow activity hours, or when their GATEway services are not being utilized.

If destructive QRM occurs on an emergency net frequency, the SEC should be notified promptly by telephone or radio (but not on the net frequency). If the NCS is unable to move the troublesome station by polite request, the SM may ask the FCC to intervene.

## **Monitor Mode**

During a Hot-Standby Alert, each regular Section Net continues its accustomed meeting schedules. No NCS is usually assigned to 3950 KHz when formal nets are not in session, but AREC operators are asked to monitor the frequency as convenient, in case an activation should develop. Rag Chew discussions have their usual place on the frequency. That is "Monitor Mode" operation. It saves the energies of NCS operators and others for use when they are needed.

## **Directed Mode**

When NFEN is activated, the alert status may be at any level, but is usually at Fully Operational. It is at the discretion of the SM or designee that the NFEN becomes activated. At that point, the net shifts to "directed mode" and a Net Control operator designated by the Net Manager assumes control of the frequency in the name of the Northern Florida Emergency Net. Thereafter, for the duration of the activation, stations wishing to contact other stations through the net must first access Net Control by saying "Net Control" or "Net Control from KG4ZZZ" and waiting for NCS to reply.

During directed operation, NCS calls a roll of GATEway stations in activated Districts at least hourly depending on the level of activity. NCS will ask all stations to listen for weak signals, but net control operators should not maintain a constant chant, even when the frequency would otherwise seem idle because of slow business or quirky conditions. Constant transmissions can interfere with stations trying to contact the net.

In order to keep the primary net frequency as uncluttered as possible, it is used primarily as a dispatch frequency. Stations with Welfare and Priority traffic are normally sent to a side frequency to handle it.

Distress calls made on the primary net frequency, however, are always handled on that frequency and all other net business ceases until the distress traffic is cleared. Net status automatically shifts to Directed Mode, Condition Fully Operational, until all distress traffic has cleared.

If the activity level is very low, the net frequency is maintained primarily for formal Priority traffic or tactical traffic. See "Policies and Definitions" section above.

If curious operators ask what's going on, NCS should have a brief, "canned" response ready, such as: "We're supporting the National Weather Service in a weather emergency. "

NCS should respond immediately if other stations, not realizing the frequency is occupied, try to begin operation there. A polite but firm request to respect the emergency frequency is usually all that's required. A slight shift in frequency by the emergency net should be made if reasonably necessary. The SM or SEC should be notified if interference becomes destructive and persistent or seems to be intentional. If the NCS is unable to move the troublesome station by polite request, the FCC may be asked to intervene.

## **The GATEway System**

Every GATEway station serves the entire District.

All that's necessary to send a message from a county EOC to anywhere outside the County is simply to send it from the County EOC to a District GATEway station. That station has both a two-meter radio on the District Net and an HF station on NFEN. The two-meter operator just hands the message to the HF operator, or vice versa. Within minutes the message has passed to an HF GATEway on NFEN and has been delivered by telephone or email.

GATEways may be clustered in or near major urban areas or they may be dispersed anywhere in the District within range of the VHF District Net. Either way, the function is the same, with the District Net playing the central role. In a few cases, a DEC may find it necessary to operate the District Net on two different repeaters because of propagation, technical repeater problems, or stubborn geography. In such cases, GATEways might link the repeaters via voice relay on either HF or VHF. All GATEway operations in each District are managed by the DEC through ADECs.

## **Selecting GATEway Stations**

DECs will provide a current listing of potential GATEway stations to the SEC. DECs may change the designation of GATEway stations at anytime through verbal notification to the SEC and notifying the net control of the active GATEway station. An active Gateway station will notify the net control station of his/her designated replacement before leaving the net. They may use voice or digital modes depending on the assignment. They should be of high-quality performance, with good signals that under normal conditions cover the entire Section and beyond.

Selection and recruitment of GATEway Stations are responsibilities of the District Emergency Coordinator.

GATEway stations may be located anywhere within range of the VHF District Net in homes, clubhouses or any site where good antennas and 24-hour operations are feasible. They may be located at public sites such as the County EOC. The SWP will not be considered to be, or used as, a GATEway station. It will receive traffic from GATEways (usually the Tallahassee GATEway) and pass traffic from the SEOC to GATEways.

No matter where sited, however, the station must serve the whole AREC system — not just its home County or District or some specific agency or organization.

In any high-performance station, the antenna is the primary consideration. The best station cannot be effective when driving a poor antenna; yet a modest station with a high-performance antenna can be extremely effective.

A GATEway should have a minimum power output capability of 100 watts, and 500 watts or more is highly desirable under poor propagation conditions. Emergency power is highly desirable to run the station at reasonable output. However, not all GATEways need full-scale auxiliary power if operation can be shifted when necessary to a backup GATEway with either commercial or emergency power.

A GATEway cannot function without VHF links to the County EOC and other local points designated by the EC or DEC. ECs are strongly encouraged to use the County and District VHF nets and avoid using HF at all, if possible, for local communications. This reduces congestion and confusion on the HF Emergency Net and expedites all traffic. It also reduces demands on Counties with scarce personnel better used on other assignments.

## **The Digital Traffic System**

### **Digital Modes**

The DEC/EC may elect to utilize any digital mode to provide a more efficient and effective means of communication, however, operator resources provided from other areas may not be familiar with all modes and may not have equipment compatible with local computers and interfaces.

### **The APRS Connection**

The Amateur Packet Reporting System — APRS - is a digital technology based in packet radio, but automatically relaying its messages. Unlike conventional packet it thrives in either a VHF, UHF or HF environment virtually in real time, using digipeaters.

APRS displays a map on a computer screen, showing the location of each transmitting station it hears. This can include all kinds of moving stations — land mobiles, boats, aircraft; even the Space Shuttle.

The icon moves across the map as the mobile progresses. If the transmitting station sends a text message, those receiving the signal can read the text by clicking the icon. The map can be "zoomed" to show any desired piece of real estate, from the whole country to a few square blocks in a city or the streets of the smallest towns.

Since the signals are "digipeated" — i.e., automatically passed along to distant digipeaters (digital repeating stations) and other receiving stations — an APRS net can cover large geographic areas. If these areas overlap coverage of, say, an HF emergency net APRS can be a useful back-channel for the net filling gaps caused by the vagaries of HF propagation. APRS can run in parallel both with regional VHF nets and Section-wide HF nets, covering portions of the same geography at the same time. This allows GATEway operators on NFEN, for example, to communicate directly with each other via APRS without disturbing the HF operation. No net control is required for APRS.

When APRS and voice nets run in parallel (overlapping some of the same geographic coverage), the voice NCS can easily monitor APRS visually at his operating position as the voice net proceeds. If NCS does not have APRS capability, he can designate an APRS-equipped station to relay information to the voice net as appropriate.

APRS is especially useful in real-time severe weather reporting. As each station reports its weather, its icon pops upon the map on the APRS receiver at the National Weather Service, and its weather dab can be extracted by the click of a mouse. Wide geographic distribution provides an excellent idea of the extent of the weather being reported.

Technical information on APRS appears in an Appendix A of this plan.

The Northern Florida Amateur Radio Communications Plan recognizes the widespread use of APRS and the reliance of the State Warning Point on VHF APRS.

## Message Handling

Voice communications take two basic forms in nearly all operations in which emergency communications plays a part : "Tactical" – Direct (person-to-person), or "Formal" – Sent through a third party to reach its intended addressee.

Formal communications must be used when information is passed through any third party to reach its destination. Sometimes it is desirable to use radiogram form just to preserve a record of what information was sent — and received — even when no third party relays it

Tactical ("informal") communications are useful and necessary. They allow an EC to speak directly over the air with other members or with the DEC.

Formal radiograms, however, are basic to virtually all assistance to third parties. That's because, when people's lives and property are at stake, any risk of misunderstanding, or of transmitting erroneous information is close to intolerable.

## Message Precedence

ARRL prescribes four message precedence's: Routine, Welfare, Priority and EMERGENCY (equivalent to SOS or MAYDAY). In every ARRL radiogram, a "precedence" indicator follows the message number in the preamble. Net Controls must observe message precedence when dispatching traffic.

## Routine

Nearly all of the day-to-day messages handled on the National Traffic System (NTS) carries a Routine ("R") precedence. Routine traffic is generally handled on any Northern Florida Emergency Net. It is not unusual, however, for inexperienced operators to assign a "Routine" to messages that should, in fact carry a "Priority" label. The NCS should ask if the traffic is related in any way to the emergency situation. If the answer is "yes," the operator holding the traffic should be instructed to reclassify it as "Priority" and offer it again

Welfare messages (incoming or outgoing) carry a "W" precedence, a notch above Routine and a notch below Priority. They may be handled at the discretion of the Net Manager unless Priority traffic is pending, or the net is on Red Alert.

## Welfare

Unfortunately, when an emergency net accepts even a few "W" messages, it sends a signal to scores of operators, who have been listening silently, that here is a chance to cram some inquiry traffic into the disaster area, triggering a landslide of welfare message listings. Incoming welfare traffic is not included in the mission statement of a the NF Emergency Net. Each county and district should have a plan to handle outgoing welfare traffic especially for family notification from shelters when telephone lines are inoperative. Independent nets often spring up specifically to handle welfare inquiries, and NCS should make a brief announcement about every hour that such nets are operating and their frequency.

Additionally, the NF Digital traffic system incorporates welfare traffic in its mission statement; it can handle bulk traffic with ease. Welfare traffic listed on NTS nets quickly reaches the Northern Florida digital system and can sometimes be delivered just as quickly.

People who try to push welfare inquiries close on the heels of a disaster may not realize that even a message that reaches its destination city may not be deliverable, so only outgoing welfare traffic is handled. Typically in the wake of a disaster, normal communications within the impact zone are disrupted. What local telephones are still working – including cellulars – are invariably saturated with urgent emergency-related traffic. In addition, streets may be blocked, street signs and landmark buildings destroyed, and sometimes the area is infested with venomous snakes, making it extremely hard to

deliver messages, even if spare personnel is available to try it.

Welfare messages are not handled while Priority traffic is pending. Emergency nets handle no Routine traffic at all.

## Priority

In emergency operations, most of the traffic handled on emergency nets will carry a Priority ("P") precedence, meaning that they are relevant to the existing emergency and therefore should be moved toward their destinations as rapidly as possible. Since virtually all messages listed are designated "Priority", Net Control dispatches them in any convenient order. But "P" traffic volume on some emergency nets can become quite heavy, meaning that some messages must wait in line behind others of (presumably) equal importance. For such situations, Northern Florida has adopted a fudged version of the Priority category – "SEOC Priority" – which presumes that some messages are slightly "more equal" than others. Messages originating at the Florida Division of Emergency Management or addressed to DEM, are handled ahead of other Priority messages. GATEways holding such traffic should list it that way with NCS, but message transmissions in progress will not be interrupted for SEOC Priority traffic either coming or going.

All emergency-related messages to or from the SEOC carry a Priority precedence. They should be listed with Net Control as "SEOC Priority." Such messages are handled ahead of other Priority messages on the net.

NOTE: The practice of using "BREAK" or "BREAK BREAK" to announce distress traffic should be strongly discouraged; it has no universally understood meaning. Always use the international standard "MAYDAY" to announce traffic of life-or-death importance. The standard CW signal is "SOS," sent as a single character – *not* spaced as three letters.

## Emergency

Messages having a life or death urgency are assigned a precedence of Emergency. In the emotion of disasters originating stations may assign an Emergency precedence to a H&W inquiry. The NCS cannot judge the content or precedence of the message but when this situation occurs, the SEC and STM should be made aware of the practice.

## SERVING SERVED AGENCIES

Amateur Radio Emergency Communications exists for the purpose of providing supplemental communications for government and private organizations involved in emergency and disaster response and mitigation. In Northern Florida, AREC groups serve all of the 43 counties including the other agencies that serve those counties.

When an agency asks Northern Florida AREC or the county EOC for communications assistance, it gets the full benefit of the entire AREC organization, including its nets, repeaters, mobiles and emergency power sources, as well as operator's personally-owned radio equipment, and the benefit of the state tracking system. Even more important than the equipment, the organizational structure includes cooperative planning with the agencies to learn their needs, training programs, and the services of scores of operators, few of whom are visible at the disaster site.

## The AREC Full-Service Organization

The AREC field organization is designed to support as fully as possible, upon request, to any and all emergency response

and disaster relief organizations. However, AREC retains its own identity and organizational structure, personnel and physical infrastructure while providing communications support.

When dealing with served agencies we must remember that AREC is a self-contained emergency organization, and retains its own identity. When an AREC operator is assigned to a duty post anywhere, he/she remains an AREC operator with a state tracking number for the full length of the AREC assignment. That operator is responsible directly to the EC (and designated assistants) and to no one outside the AREC organization.

The AREC infrastructure includes privately-owned radios, antennas, AREC-dedicated and cooperating repeaters, and accessory equipment. Even more important than the equipment, the organizational structure includes numerous nets, training exercises, and cooperative planning with the agencies to learn their needs.

When officials of any organization request support in Northern Florida, they get the full benefit of all of this, as well as the personal service of hundreds of volunteer operators, most of whom are not visible in the emergency or disaster area.

When an agency asks the county or state EOC for AREC communications assistance, it gets the full benefit of the AREC group's entire organization including its nets, repeaters, mobiles and emergency power sources. When dealing with served agencies we must remember – and remind the agencies – that AREC is a self-contained emergency organization, and retains its own identity.

We must never allow officials of a served agency to take control of AREC operators assigned to them, or to absorb them into their own organization, though they may sometimes attempt that. We do not recruit and train operators for other groups to use.

Officials of emergency and disaster response agencies who desire AREC assistance should contact the following AREC representative:

Section Manager  
Rudy Hubbard WA4PUP  
POB 843, Milton FL 32572  
Phone: 850 -626-0620  
Email: wa4pup@bellsouth.net

One may also contact any District Emergency Coordinator or County Emergency Coordinator, whose names addresses and phone numbers can be obtained from the county or state Emergency Managers.

## **Support for DEM**

AREC procedures for support of the State EOC and State Warning Point (SWP) apply whether the impacted area is in Northern, Southern, or West Central Florida. During major critical situations, the Florida Division of Emergency Management activates the State Emergency Operations Center (SEOC) in Tallahassee.

The State Warning Point (SWP), located in the State Emergency Operations Center (SEOC) in Tallahassee has an amateur station, the State Warning Point Amateur Station (SWPAS). While it is a fully-equipped station and can operate on all activated Northern (and upon request) Southern Florida nets, it expects primarily to receive traffic from and send traffic to the Tallahassee GATEway station(s).

DEM sometimes offers assistance to other states stricken by disaster. When this happens, Northern Florida AREC may be requested to provide liaison back-up communications with AREC stations in the other states - usually in the Southeast. Generally, the SEC asks the STM to work out or to recommend a liaison scheme, to get it done and report it back to the SEC. This is usually requested many hours before the circuits must be up and running, allowing ample time for planning and execution.

If the emergency is limited to Northern Florida, the Northern Florida HF Emergency Net may be activated. If the disaster

involves only Southern Florida or West Central Florida, the Northern Florida net may or may not be activated depending on propagation conditions and other circumstances. In any case, Northern Florida GATEways are assigned specifically to assist with Southern Florida and West Central Florida traffic..

## **Situation Reports**

DEM staffers deal in what they term "SITREPs" - Situation Reports. These terse messages from disaster agencies are intended to provide the SEOC with updates at frequent intervals but they are often delayed. After evaluating SITREPS collected by AREC officials and provided to the SEOC/SWP at intervals, DEM has asked AREC to continue the practice. The procedure described below is relatively simple in concept but it serves DEM well and keeps the SEC and other ARES members better informed about the situation; relating to the emergency.

SITREPs benefit not only DEM and AREC, but our other served agencies as well. AREC officials will gather information about the emergency and transmit it to DEM.

## **SITREP Procedures**

First the SEC notifies specific DECs that SITREPs are expected every so-many hours, and lists the types of data needed. The interval may vary from hourly to daily. DECs not in the impact area might not be asked for SITREPs at regular intervals, at least at first. The DECs notify their ECs of the request with specific instructions as to types of data needed.

## **EC's SITREP duties**

AREC operators assigned to the County EOC and other Served Agency locations are usually among the first activated. The EC will instruct each operator staffing those points to collect certain information and report it to the EC by radiogram on the County Net by a specific deadline. When the EC has collected the necessary data, he/she reports it to the DEC by the fastest means available

## **DEC's SITREP duties**

Each County SITREP and each District SITREP must carry place, date and time so that no confusion arises as to when and where the report originated. Originating operators must sign their SITREP messages to the DEC. The DEC SITREP must retain citations of sources for each reported fact from the County SITREPs. Originating operators should retain copies of all SITREPS for a reasonable period in case they are needed for reference later. One year is a desirable minimum. The DEC combines this information from all counties, and checks with the originating operators to verify anything that looks doubtful or incomplete before sending the composite District SITREP to the SEC and SM by the agreed-upon deadline. Speed - but not haste - is very desirable. SITREPs should not be held up for additional information. DECs should send what is available at deadline. Supplemental data can be sent along when it is available.

## **PLANNING**

An ARECP is basically a scheme for making the best use of limited amateur radio resources to provide maximum communications help to other emergency response organizations when they need it.

## District ARECP's

Each DEC must develop a written ARECP for his/her District subject to review by the SEC. The plan should permit the counties to operate independently in small emergencies but allow counties to cooperate smoothly with each other and to intermesh effectively with the District and Section AREC nets.

The District Net serves as the primary on-air AREC coordination and training circuit for the District. During emergencies it handles traffic among the District Counties and between them and major agency headquarters (including the state Division of Emergency Management, the National Weather Service, National Hurricane Center, and Red Cross) outside the District. Traffic coming into the District from outside, or going out of the District, usually passes through the District net GATEway.

The District plan must:

- List the Counties within the District.
- Describe procedures to be used by ECs to alert the DEC and other ECs in the District.
- List VHF/UHF frequencies to be used for communications between counties (the District net).
- Describe procedures for liaison with Section HF nets, including the use of GATEway stations.
- List specific locations requiring special attention when involved in emergencies.
- Describe any special measures required at each designated special site (e.g. a portable repeater, or special antenna arrangements). In addition, the District plan must include the following verbatim portions of the current Section ARES plan:
  - Definitions
  - Policies
  - Emergency Coordinator
  - Alerting Procedures
  - GATEways
- Provide a plan for outgoing health and welfare traffic.

## County ARECP's

Each Emergency Coordinator (EC) must develop a written ARECP for his/her County subject to review by the DEC. The plan should permit the County to function independently in local events, yet intermesh smoothly with the District and Section plans.

The county plan must:

- List AECs by title (not by name or call) and describe their duties. The EC should appoint an AEC for each major area of the ECs responsibility. Several duties may be combined in a single AEC in counties with few AREC operators. These duties include (but are limited to):
  - Administration (keeping records, making reports)
  - Training and recruiting
  - Liaison with each served agency
  - Managing the County AREC Net
- Describe procedures to alert AECs and other AREC operators for emergency duty.
- Describe procedures to alert the DEC and other ECs in the District as necessary.
- List Amateur VHF/UHF frequencies to be used within the County.
- List Amateur VHF/UHF frequencies to be used between counties (the District net).
- Describe procedures for keeping contact with activated District and Section HF nets.
- List the most likely types of anticipated emergencies and describe suitable responses to each, including evacuation, weather reporting, searches in primitive areas, and HAZMAT spills.
- List specific locations, if any, requiring special attention in certain emergencies. Examples: flood-prone areas, chemical or explosive manufacturing plants.
- Describe the kinds of special attention required at each designated special site (e.g. a portable repeater, special antenna arrangements, boat mobiles or hazmat precautions).
- Provide instructions for GATEway Station operation in support of District activities.
- Provide a plan for outgoing health and welfare traffic.

In addition, the County plan must include the following verbatim portions of the Section plan:

Definitions  
Policies  
Emergency Coordinator  
Alerting Procedures  
GATEway System

Copies of the plan should be widely distributed to amateur radio operators, and specifically to the SEC, the DEC, all Assistant ECs, other ECs in the District, Net Managers, regular net control operators and other AREC operators and officials. Copies should also be provided to agencies supported by AREC.

## **Drills and Training**

Drills and Training are an essential function of preparing for performance during emergencies. It is known through experience that individuals and organizations will execute a function based on training and knowledge of the emergency plan. Participation by AREC operators in regular Section traffic nets is excellent emergency training and should be encouraged by AREC officials at every opportunity.

It has been observed that AREC operators sometimes have a less than thorough knowledge of the NFECP even though wide distribution of plan has been accomplished. It is the responsibility of all operators of the NFAREC organization to be prepared for emergencies. There is little time during emergency nets and operations to brief poorly trained individuals in procedures.

The DEC and each EC should design specific test operations to identify weak points in their systems, and then devise ways to eliminate them or work around them. Draining exercises should incorporate elements of scenarios likely to occur in the Districts or Counties in which the training is being held. The training should take into account rapidly changing conditions including, but not limited to:

- Deteriorating weather conditions
- Conflicts in command by jurisdictional units not observing Incident Command System
- HAZMAT situations where safety of communicators are involved (remove yourself from danger)
- Suspicious object situations not being addressed properly by local law enforcement (remove yourself from danger)
- Communications involving Privacy Act matters
- Communications that are being interfered with (transmitter hunt)
- Situations where hostilities or violence are occurring nearby
- Situations where theft is likely (security of communications and personal equipment)
- Situations where there is no supervision
- Situations where individuals are operating under extreme stress.

Each session of any AREC net should be regarded as a training exercise. Frequent "repeater down" drills should be run to familiarize AREC operators with hot spots and holes in simplex coverage and to devise work-arounds when the repeater goes off the air.

The Northern Florida Emergency Communications Net meets Monday through Saturday at 0900 ET, 0800 CT, (disregarding UTC) on or near 3950 KHz or 7254 KHz. The Northern Florida Phone Net meets each evening at 1930 Eastern (1830 Central) on 3950 KHz.

Each District should be represented by at least one GATEway station each day. Each County EC should make a strong

effort to have his/her county represented in each Section Net at least several times a week. NFARCN and NFPN are often the first nets on which notice of potential emergencies is given. NFARCN is frequently the first net on which major and minor changes in the Section organization are announced and discussed.

All AREC-related messages, announcements, and other information from these sessions should be relayed promptly to the EC and/or the DEC as appropriate.

## **Simulated Emergency Test**

Each October, on the third full weekend, ARRL sponsors a nation-wide Simulated Emergency Test (SET) in which AREC and other organizations can test their nets, personnel, procedures and equipment. SET offers an excellent opportunity for County and District AREC groups to invite direct participation by the agencies served by AREC. The date is elastic; it can be any time between 1 September and 31 October.

The SEC may direct a coordinated Section-wide SET exercise, or DECs may conduct independent drills specifically designed for local applications within their Districts.

The flexible date allows AREC planners to coordinate joint exercises with and local or regional served agencies. In the event of a major Section-wide emergency operation within a few weeks of the scheduled SET date, the SEC may cancel the exercise and treat the actual operation as the SET, including the formal SET report filed by each EC.

## **Local Drills and Exercises**

At least once each month, each EC should conduct a one or two-hour test of emergency readiness among his/her amateur radio operators. They can test any phase of the group's capabilities, e.g.:

- Check the range of a portable repeater in a temporary location.
- Install and test a permanent antenna at an agency HQ.
- Survey the County to find dead spots in the AREC repeater coverage.
- Run a local net session exclusively on emergency power or on simplex or both.
- Start and run every emergency generator owned by the AREC group. Repair the defective ones.
- Hold a surprise net session at an unusual time to see how many stations check in.

After every exercise and every actual operation, the AREC officials involved should conduct an intensive debriefing session. Local and District plans should be updated to take advantage of the experience.

## **Appendix A: Northern Florida Automatic Packet Reporting System Emergency Procedure**

### **Background.**

The Automatic Packet Reporting System (APRS) has been in use for several years now and has proven to be a highly effective tool when used for emergency communications. Many areas within the section employ APRS in a myriad of different ways. In the last few years numerous requests from AREC operators around the section have been received asking the section leadership to establish policy and procedures to standardize the use and implementation of the APRC mode of communication. As a result of those requests, a survey was conducted of a majority of the District Emergency Coordinators who participated by providing how APRS is used within their respective districts. What was ultimately learned from this survey was that no two districts employ the use of APRS in the same fashion. As a result of this survey, the section leadership has established the following policy on the use of APRS during AREC declared communications emergencies.

### **Policy.**

The method and manner in which APRS may be used during communications emergencies will be left to the discretion of the respective District Emergency Coordinators and their associated county Emergency Coordinators. It is well established that local AREC leaders know best how to support their needs and should have the latitude to make decisions in their best interests. Communication Emergencies have historically proven to be quite localized in nature and the section leadership does not foresee the need to establish and maintain a section-wide APRS net. Where a theater of operation crosses district boundaries, it will be the responsibility of the affected District Coordinators to coordinate their APRS initiatives in a manner that will be in the best interests of all concerned.

Normally, APRS operations will be conducted on the national APRS frequency of 144.39 Mhz. However, DECs have the discretion to use alternate frequencies if they feel ongoing net operations or network congestion is adversely affecting their APRS operations.

APRS provides a unique graphical representation of what is happening within a given theater of operation. This has been best exemplified during hurricane operations where storm tracks are plotted. Traditionally, AREC operators have maintained these plots in a coordinated manner. However, incorrect or interfering plots from stations outside the theater of operation have rendered AREC plots of this data to be questionable or ineffective. Therefore, it is the policy of the North Florida Section to not sanction the plotting of these storms by AREC participants. Of course, if AREC operators wish to continue to maintain these plots, they may do so with the understanding that they are doing so of their own initiative and that the plottings are not under the auspices of the Northern Florida Section.

## Nets

APRS can run in parallel with both the regional VHF nets and the Section-wide HF net. The VHF frequency of operation is usually 144.39 or 145.790 mhz as specified by the DEC for each district. All digis are located on this frequency. When necessary, ARES Districts may alter the local VHF frequency to avoid interference, but this could cause some confusion; the National Weather Service and County EOCs, among others, could be trying to monitor. No net control is required for APRS.

When APRS and voice nets run in parallel (overlapping some of the same geographic coverage), the voice NCS should monitor activity on his APRS screen if possible. If the NCS does not have APRS capability, a relay or GATEway station should be designated to relay APRS information to the voice net as appropriate.

## VHF

Local APRS nets should be organized so that each county uses the closest digi and paths should be kept short so as not to interfere with other counties. The ECs and EOCs can address neighboring counties as necessary. Operators should become familiar with the OPS-DIGI List and to pre-program a complete list of alternate digi paths so that their normal unproto can be set to the local digi call. This procedure cannot address the specific unproto path for every operator within the Northern Florida Section. The setting of effective unproto paths should be left to the APRS coordinator or users' group in each area so that everyone uses the Net efficiently. This is a vital part of the APRS program and its importance cannot be overstated.

## HF APRS

An HF GATEway station should be assigned to each District to relay messages from assigned stations (such as EOCs or ECs) to the state EOC, from District Weather Stations to the NWS, and from the Section Liaison to the National Hurricane Center. The path to the NWS may or may not require HF gating and should be left to the discretion of the District Weather Station. Two or more GATEways could operate on different bands - e.g. 30, 40 and 80 meters, assuring that propagation changes will not adversely affect throughput. HF GATEway frequencies are 3.585 MHz LSB, 7.085 MHz LSB, and 10.151 MHz. The 30 meter frequency may have to change, because 10.151 MHz is the standard APRS calling frequency and may get too congested for emergency traffic. However, it should be considered a backup frequency. If we lose the frequency diversity of 40 and 80 meters, then we could look for a station on 30 which can hear both the GATEway and the NHC and digipeat through that station. Permission should be requested and an explanation of the emergency given prior to placing this station in the path. If resistance is encountered on the Waterway Net a bulletin can be posted requesting help and an alternate frequency listed. The advantage of 10.151 LSB is the concentration of APRS stations across the country that can aid in determining the conditions and propagation. All of this contributes to the enhancement of the plan. All gates using the KAM PLUS dual port TNC should have their MYGATE parameter set to NFLGATE and their unproto path should be set to NFLGATE,WIDE/ APES VIA digicall where the digicall would be replaced by the local digi's callsign. If access to the GATES is to be controlled, a BUDLIST can be maintained on the GATE's TNC. VHF stations who are assigned by their Emergency Coordinators should set their unproto path to [digicall,] NFLGATE,NFLGATE,WIDE in order to be gated. Your local digi's callsign may be needed before the first gate if you can't hit the gate direct To repeat, only EC assigned stations should be using the HF gateways due to the fact that the NHC doesn't need to see the local chatter and the throughput from vhf at 1200 baud to HF at 300 baud will cause serious channel overload if chat traffic is allowed.

## Weather Stations

The assigned District Weather Station will be responsible for posting the weather objects for the District and no other station should interfere with his or her duty. His data will be current and will most likely be obtained from the NWS or the Internet Wx sites. When the object is located physically within the boundaries of one District but shows weather threatening another District, the unproto path can be extended to the neighboring region to give advanced warning. Individuals with weather measuring devices such as the Ultimeater, may post their observations using the (w)eather (E)nter command so that the NWS can monitor current conditions. When a Section wide condition exists, such as a hurricane, a Section Wx station will be responsible for transmitting data to the National Hurricane Center. A station will be assigned that duty by the Section Manager. The mode and frequency for passing data to the NHC is still under consideration, but will most likely be HF APRS.

## EOC Stations

The assigned operator should maintain a good OPS DIGI list so that his station can effectively communicate with others on the net. This should include the path NFLGATE, NFLGATE, WIDE for accessing the GATEway. Authorization may be required for access to the GATE; see HF APES section above.

## Mobile Stations

While some Districts may not have mobile APRS capacity, it should be mentioned here. There are many uses for mobile operations in an emergency net such as this. GPS/TNC beacons can be used to track the EC's or Assistant EC's location while traveling. Portable weather monitors could be set up for measuring coastal conditions during a storm. Shelters can be equipped with APRS terminals to pass traffic concerning occupancy and needs. Such a system would not rely on the operator sitting in one point at all times since messages would be posted and acknowledged automatically. Each District should develop its own plans regarding mobile and temporary APRS stations.

## Appendix B: Florida HF Nets

<i>Net</i>	<i>Symbol</i>	<i>Time</i>	<i>Frequency</i>
Florida Medium Speed Net	FMSN	1830ET/1730CT Daily	7051 KHz CW
Florida Amateur Sideband Traffic Net	FAST	1730ET/1630CT Daily	3940/7243 KHz LSB
Florida Midday Traffic Net	—	1200ET/1100CT Daily	7242 KHz LSB
Florida Phone Traffic Net	—	0655ET/0555CT Daily	3940 KHz LSB
Southern Florida ARES® Net	—	0800ET/0700CT Saturday	3940 KHz LSB
Northern Florida Amateur Radio Communications Net	NFARCN	0900ET/0800CT Mon - Sat	3950/7254 KHz LSB
Tropical Phone Traffic Net	—	1700ET/1600CT Daily	3940/7243 KHz LSB
Northern Florida Phone Net (NFPN)	NFPN	1930ET/1830CT Daily	3950 KHz LSB
QFN, NFL/SFL Combined Net	QFN	1900 & 2200ET/1800 & 2100CT Daily	3651/7051 KHz CW

## Appendix C: NF AREC on the Internet

### Email

Email is an important factor in day-to-day operation of Northern Florida AREC. Email notifies AREC operators and officials of activations, deactivations, drills, and other activities. Email delivers most situation reports (SitREPS) to DEM. Scores of AREC operators use it to exchange information and friendly chat.

## Appendix D: SITREP Standards

It is vitally important that SITREPS contain no rumor or unverified information that is not clearly so identified. A report of "a tornado at East Podunk," for example, should be amended to read "buildings damaged by high winds at East Podunk," unless the National Weather Service has officially declared it a tornado. It is helpful, however, to pass along certain unverified information if it can be attributed to a specific source: A report similar to the following would be acceptable: "County Road 114 flooded at Goose Creek bridge south of Percyville. Eyewitness report by H. P. Maxwell W1AW. No independent confirmation."

Conflicting information can be reported in the same manner, citing both versions and noting the conflict. Generally, requested SITREP subjects in any given activation might include several of those below, but each situation generates its own requirements. The SEC's requested topics may change from report to report and are not limited to those given here for general guidance only:

- Weather obs - temperature, wind speed and direction, tide, barometer, precipitation.
- Severe weather - funnel clouds, heavy rain, high winds or tides, rising streams, freezing rain....
- Casualties -be very specific about source of this info, but do NOT use names of victims.
- People needing evacuation - nature of threat, numbers and location.
- Any unusual events or matters needing immediate attention, including relief operators for ARES stations. (Jump teams?)
- Areas to be evacuated - and total population of each.
- Number of shelters to be opened, and their combined capacity
- Number of shelters to be staffed by AREC
- Name of agency managing shelters.
- Total number of shelter occupants per county – No names of shelterees. Use official estimates of numbers if no specific figures available.
- Degree of commercial power loss in specific areas. (Usually an estimated number of users. Indicate any critical facilities, such as hospitals, that may be affected.)
- Structural damage to buildings and causes of damage. Give locations (but not street addresses), structural type and use of building (nursing home, store, factory).
- Curfews (who declared, when effective, area affected)
- Polluted water supplies
- Hospitals closed, overloaded, or non-functional
- Time and date County EOC was activated
- Number of AREC operators assigned to duty and when activated
- List AREC-Served Agencies activated
- Changes in alert level of AREC nets.
- Changes in activation status of the District and each county.
- Road/street/bridge closings. Be specific about the location.

## Appendix E: FCC Regulations Part 97

### Subpart E – Providing Emergency Communications

97.401 Operation during a disaster.

(a) When normal communication systems are overloaded, damaged or disrupted because a disaster has occurred, or is likely to occur, in an area where the amateur service is regulated by the FCC, an amateur station may make transmissions

necessary to meet essential communication needs and facilitate relief actions.

(b) when normal communication systems are overloaded, damaged or disrupted because a natural disaster has occurred, or is likely to occur, in an area where the amateur service is not regulated by the FCC, a station assisting in meeting essential communication needs and facilitating relief actions may do so only in accord with ITU Resolution No.640 (Geneva, 1979). The 80 m, 75 m, 40 m, 30 m, 20 m, 17 m, 15 m, 12 m, and 2 m bands may be used for these purposes.

(c) when a disaster disrupts normal communication systems in a particular area, the FCC may declare a temporary state of communication emergency. The declaration will set forth any special conditions and special rules to be observed by stations during the communication emergency.

## **Radio Amateur Civil Emergency Service (RACES)**

RACES is a volunteer communications arm controlled by regional, state and county Emergency Management Agencies. However, the Florida Division of Emergency Management communications indicates a preference for AREC to provide volunteer communications between the State EOC and the Northern Florida Section.

## **Appendix F: Deployment Teams**

Self-supporting mobile teams have been a staple of AREC operations for many years. Deployment teams can go quickly to distant locations to help in AREC operations. They can be first responders where no local Amateurs are available. They can provide relief operators to let exhausted local operators to get some rest. Each Northern Florida DEC should maintain at least one such team ready to respond to a call within two hours or less of notification. The ideal would be two or three jump teams in each District. All deployment teams should obtain a Florida State tracking number before responding to an emergency communications request.

## **Suggested organization**

Each DEC appoints an assistant to recruit a pool of operators from the District, train and organize them, and keep them functional. Volunteers are chosen in part for their ability to drop whatever they may be doing and hit the road with their "ready kits" already loaded.

## **Deployment**

Normally, no relief teams are sent to another District unless specifically requested by the DEC or Emergency Manager in the impacted area.

Relief teams must obtain a state tracking number before deploying to an impacted area. Operators should not just "show up" and expect to go to work.

When a deployment team is activated, the coordinator designates a team leader from among the members on a particular assignment. After the leader is fully briefed, he and his team depart for the assigned site or staging area as quickly as possible.

Upon arrival, the team should be able to set up a station on emergency power, operate on VHF/UHF and/or HF on designated frequencies, and maintain radio contact with other AREC stations as required.

The coordinator provides a reliable base station link with home for the team members as necessary.

## **Scheduling operator relief**

As soon as local AREC operators in the target area begin to report for duty posts, the DEC in the impacted area would notify the SEC that relief crews will be needed to staff various positions in about 24 hours, relieving worn-out local

operators.

The notice would specify the number of operators and any special equipment needed, e.g.; emergency power, portable repeaters, special antennas, ATV, AMTOR or APRS, or high-speed CW operators, for example. The SEC then attempts to locate suitable teams. He sends them to a staging point near the impacted area to await further instructions.

The SEC arranges for a second-wave replacement team if necessary, and attempts to keep fresh operators moving into the impact area about every 24 hours until they are no longer needed.

The first deployment teams typically should be scheduled to arrive in the target area or staging area about 24 hours after local AREC units go on Activated Alert status.

In severe impact incident situations where personal trauma of the local AREC asset is considered at risk the SEC may assemble a Forward Command Assistance Team (FCAT) to accompany the initial the first wave of deployment teams. The purpose of this team is not to take over the role of the DEC or EC in the incident area but to relieve the impacted personnel so that they can take care of personal matters and get sufficient rest during times of extreme stress. The local DEC and EC will continue to be full participants to the extent that they are able and that they decide given the circumstances, utilizing the FCAT as needed. One function of the FCAT will be to program stress reduction activities for all AREC volunteers in the impacted area and keep the SEC apprised of all matters affecting the welfare of team members.

## **The reporting point**

At the reporting point the leader reports the teams arrival to the host EC. The host EC will advise the team how to reach specific duty sites, and on what frequency to check in. On that frequency, the impact-area EC will direct the team to its specific duty assignments.

## **Preparedness**

The jump team should be self-supporting in transportation, fuel, food, water, emergency power, and sleeping accommodations in addition to their communications equipment.

## **The ready kit**

Each member should prepare his own "ready kit" and keep it in his vehicle or at a specific place where it can be picked up without delay. Typically, the ready kit would include provisions for at least three days of fully self sufficient existence with the understanding that deployment may extend beyond three days.

## **Appendix G: Northern Florida AREC Counties by District**

Capital District - Franklin, Gadsden, Hamilton, Jefferson, Leon, Madison, Taylor, Wakulla  
Crown District - Bradford, Baker, Duval\*, Jax Beaches, Clay, Nassau, Putnam, St Johns  
East Central District - Flagler, Lake, Orange, Seminole, Volusia  
East Panhandle District - Bay, Calhoun, Gulf, Holmes, Jackson, Liberty, Washington  
Suwannee District - Alachua, Columbia, Dixie, Gilchrist, Lafayette, Levy, Suwannee, Union  
West Central District - Citrus, Hernando, Marion, Sumter  
West Panhandle District - Escambia, Okaloosa, Santa Rosa and Walton

\*Note that Duval county is split into two EC jurisdictions each, making in effect two "Counties" for AREC organizational purposes. This split reflects differences in demography, geography and commercial orientation.

## **Bibliography**

Every AREC official should be familiar with the District and Section plans. These plans are based on standard procedures recommended by the American Radio Relay League. The following publications, available from ARRL, explain League policies and procedures in detail:

- Public Service Communications Manual
- Guidelines for ARRL District Emergency Coordinators
- Guidelines for ARRL Emergency Coordinators
- The ARRL Operating Manual
- FCC Regulations Part 97 (Amateur Radio)
- ARRL Net Directory (current edition) for info on 3<sup>rd</sup> party countries and net frequencies and schedules  
in various states and Sections
- ARRL Repeater Directory
- ARES® Field Resources Manual