Net Operating Procedures

Sacramento County

Amateur Radio Emergency Service (ARES)

Version 1.0

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Net Operating Procedures
Sacramento County ARES

Contents

Event/Exercise Net Overview

The Amateur Radio Emergency Service (ARES) is affiliated and takes directions from the Sacramento County Office of Emergency Services (OES). The Sacramento County ARES Emergency Coordinator is John Staples, KI6ZWW.

Nets Defined

There are three types of nets which can be used during an ARES event or exercise:

1. Resource net
2. Tactical net
3. Command net

Resource Net: For larger-scale incidents, a Resource Net is used to recruit operators and equipment in support of operations in support of mutual aid operations. As an incident requires more operators or equipment, the Resource Net serves as a check-in place for volunteers to register and receive assignments.

Tactical Net: The Tactical Net is the front line net employed during an incident, usually used by a single government agency to coordinate with Amateur Radio operations within their jurisdiction. There may be several tactical nets in operation for a single incident depending on the volume of traffic and number of agencies involved. Communications include traffic handling, coordination of ARES efforts and resource management.

Command Net: The command net allows the ARES leadership to communicate with each other and resolve amateur radio operations related problems. The net would also be used to allow cities to talk to each other. It is the responsibility of the Command Net control operator to limit communications related to ARES, ARRL, and city/agency only. All other traffic is to be directed to and handled by the resource or tactical nets.

Whether all three nets will be used is determined by the need and size of the event.

Communication Between Nets

Net operators needing to communicate to one of the other nets will make contact on that net's designated frequency. For example: When the Command Net needs to contact the Resource Net operator, the Command Net operator will call out on the Resource Net frequency. When the Resource Net operator needs to contact the Command Net, the Command Net frequency will be used. This will reduce the need for operators to monitor more than one frequency and provide consistency for how communication between the nets is handled.

Resource/Operators Instructions

Deployment of operators, also known as Resources, can consist of remaining at your current location and setting up a fixed station, being directed to go to a staging area with other radio resources and emergency personnel, or an individual deployment to a specific location. Be prepared to be on your own with a go kit and personal supplies for 24 hours.

During an event, operators should monitor the Resource Net frequency. For the Sacramento area, the Resource Net frequency is usually the N6NA repeater at 145.250 (- offset, PL 162.2). When a request for operators is announced on the Resource Net, operators should evaluate whether they are able to volunteer for the Event or Exercise, and if so, contact Net Control. If you are not able to volunteer immediately, but perhaps later, continue monitoring the Resource net for another call for operators. Do not contact the Resource Net unless the need for operators has been announced.

The notification of an emergency may be via an alert system such as Everbridge. Listen to the alert message and follow the instructions exactly as communicated. The instructions may direct operators to listen to the Resource Net for a call out. If this is the message, monitor the Resource Net frequency but do not initiate contact to the Resource Net until directed to do so by net control. If the alert message directs operators to contact the Resource Net, monitor the net for a break in traffic and contact net control.

Operators should be prepared to provide the following information to the Resource Net:
- Call Sign (spelled phonetically)
- First Name
- Current location (City, nearest major intersection)
- Organization affiliation (County name ARES, city/county CERT, SHARP) and Reserve #, if applicable
- Radio Capabilities (VHF, UHF, HF, Digital)
- Operation Abilities (Fixed Station, Mobil, HT)
- Ability to relocate for deployment? If so, how far can you travel? How long can you deploy and do you have any travel restrictions?

The Resource Net operator will take your information and give you instructions on what to do next. The most common directive is to monitor the Resource Net for additional instructions.

While you wait
- Monitor the Resource Net.

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- It is important that the resource pool be up-to-date and all resources remain available for deployment. The Resource Net operator will do regular checks to verify that operators are still available. The Resource Net operator will announce that an availability check is being done and will attempt to contact each resource individually. Do not attempt to contact the Resource Net operator until your call sign is announced. Once contacted, confirm your availability.
- You can monitor other frequencies, but do not deploy on your own. Only the Resource Net can deploy resources.
- Contact the Resource Net if you move your current location. Provide the updated location information when directed.
- Contact the Resource Net if you become unavailable for deployment or need to leave the radio unattended for an extended period of time.

Resource Deployment

- The Resource Net receives instructions from the Command Net on resources needed and where to send them.
- The Resource Net will contact each station and provide information on the capabilities required, if known at the time, and the destination.
- You will need to acknowledge the information and provide an Estimated Time of Arrival (ETA) to the designation.
- If there are delays or issues that are extending travel to the destination, notify the Resource Net and provide a new ETA.
- If you need clarification with directions to your deployment location, contact the Resource Net for further information and assistance in getting to the destination.
- Once at the destination, notify the Resource Net that you have arrived. Typically, the Resource Net will then direct you to contact the Tactical Net for additional instructions. Do not contact the Tactical Net or leave the Resource Net frequency until directed to do so by the Resource Net.
- Once directed to contact the Tactical Net, all further communications will be with the Tactical Net.
- The Tactical Net may release you from further service or direct you to contact the Resource Net for reassignment. If released by the Tactical Net, you do not need to contact any other nets. Your service is complete. If the event / exercise is ongoing and you are available for another deployment, you can contact the Resource Net with your availability.

Communication Guidelines

The frequencies we use in amateur radio are open to the public. When we are involved in an exercise (mock emergency incident), it must be clear to anyone listening that this is not a real emergency. At a minimum, the phrase, *This is an Exercise,* should be included at the beginning and end of each transmission. This phrase should be used during all transmissions.

Resource Net

Resource Net Overview

Net Functions
The Resource Net performs the following functions:
- Performs a general call out for resources, if required
- Logs available resources and their capabilities
- Deploys resources to a destination or to perform a function
- Ensures resources are at the correct location before handing them over to the Tactical Net
- Monitors the availability of the resources that have not been deployed
- Keeps track of resources remaining available

Advanced Preparation Activities (if possible)
- Read this entire document.
- Print copies of the Resource Roster and practice filling it out. Start with identifying resources to be deployed. Then deploy some resources and fill out the appropriate codes in the status column. Practice taking counts of the resources deployed and resources still available.
- Obtain Cell Numbers from Key individuals
- Frequencies to be used
- The Resource Net can get very busy. It is recommended that at least two operators are available to operate the net and manage the resources.
- What GPS protocol is being used, if any?

Supplies Needed
- Watch / Clock
- Pens /Pencils
- Map of the area
- ARES Call Log forms
- Resource Roster forms
- List of valid emergency organizations and affiliations that can be deployed by the Resource net.
- ARES field manual
- Two Radios or capability to monitor and transmit on at least two frequencies.
  Optional:
  - A second radio operator. (highly recommended)
  - Cell Phone
  - Laptop/tablet with Internet access
  - Phonetic Alphabet listing
  - Ham Radio Terms

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Net Setup

After arriving at net control location:

- Obtain frequencies, if not already known, for the Resource Net, Tactical Net, Command Net and any additional frequencies that may be used. Common frequencies used by Sacramento Valley ARES can be found at www.sacvalleyares.org under the Document/Band Plans.
- Set up and test Radios on specified frequencies.
- Organize paperwork, pens/pencils, and radios so they can be easily accessed by one person
- Fill out event information on Resource Roster (Event name, date, time).
- Contact into Command Net and let them know you are operational.
- Find out from Command Net what capabilities are needed. They may not know until later.

Control Operator Regular Activities

This list contains a list of regular activities that need to be performed by the Resource Net operator.

- Perform Resource Net in use announcement at the top of each hour
- Perform resource availability check at 30 minute intervals or as needed
- Monitor ETA of resources enroute to a deployment destination

Deployable Resources

Many radio operators will be monitoring the Resource Net and calling in to volunteer. In an event or exercise, only approved operators can be considered as a resource to be deployed and those operators must be capable of being deployed under the guidelines of the controlling agency. The Sacramento County Office of Emergency Services (OES) is the controlling agency for Sacramento County ARES. Operators must be registered with the Sacramento County OES or be sponsored by an agency that has been approved by the Sacramento County OES. The Resource Net operator should make sure operators are approved to be deployed. For Sacramento County ARES, a member list is available on the Sacramento County ARES web site.

Spontaneous volunteers – Volunteers that are not official Disaster Service Workers, meaning they are not affiliated with an official emergency response organization, are not recognized by organization in charge of the incident and are therefore not capable for deployment. For Sacramento County ARES, these operators would not be covered under the OES insurance. These operators could be used to assist the Resource Net in activities in non-deployment activities such as monitoring other frequencies, assisting with driving instructions for operators being deployed, or obtaining other location information if they have access to a computer or other GPS devices.

Resource Net Procedures

As with any net, all contacts should be logged on an ARES Amateur Radio Incident Log. This net will also use the Sacramento County ARES Resource Roster to track resources as they check in and are deployed.

When the Resource Net is operating for an exercise (mock emergency incident), anyone listening to the frequency needs to be aware that this is not a real incident. At a minimum, the phrase "This is an Exercise" should be included at the beginning and end of each transmission.

In even a small scale event or exercise, the Resource Net can get very busy with communicating on the radio and keeping track of the resources. A second operator is suggested to divide the duties between radio operation and updating and monitoring the Resource Roster.

When communicating with the Command or Tactical nets and operating within an Exercise, use the following phrase when communicating. *Command, this is Resource Control with exercise traffic.* In a real emergency, the word *Exercise* will not be used. If this is an emergency, use the phrase *… with emergency traffic*.

Net operators needing to communicate to one of the other nets will make contact on that net's designated frequency. For example: When the Command Net needs to contact the Resource Net operator, the Command Net operator will call out on the Resource Net frequency. When the Resource Net operator needs to contact the Command Net, the Command Net frequency will be used. This will reduce the need for operators to monitor more than one frequency and provide consistency for how communication between the nets is handled.

Communication with the Resource Net operator and the Command net operator will be over their designated frequencies. The Command Net will contact the contact the Resource Net operator on the Resource Net frequency. The Resource Net operator will contact the Command Net operator on the Command Net frequency. The Tactical Net will operate the same way with its designated frequency.

At any time during the event/exercise, the EOC may want a count of resources deployed and resources available for deployment. When the net is closed at the end of the event/exercise, be prepared to take a final roll call of the remaining undeployed resources. Refer to the Resource Net Final Roll Call script if needed and document the count on the back of the Resource Roster page 1. Include the name and call sign of the resources that checked in.

Resource Initial Check-in
When directed by the Command Net to call out for resources, call out for volunteers using the Resource Net Check-In script.

For each operator that calls into the Resource Net, fill out a new line on the Resource Roster and include the date and time of the contact. Next, ask the calling station the following and enter the information on the Resource Roster:

- Call Sign
- First Name
- Current location
- Organization affiliation (County name ARES, city/county CERT, SHARP) and Reserve #, if applicable
- Radio Capabilities (VHF, UHF, HF, Digital) (place an X in the appropriate box)

- Operation Abilities (Fixed Station, Mobil, HT) (place an X in the appropriate box)
- Can you relocate for deployment? If so, how far can you travel, how long can you deploy, and do you have any travel restrictions?
- Leave the Status column blank to identify the resource as available

After logging all the volunteers, remind them to monitor the Resource Net and to contact the Resource Net if they become unable to deploy. If any resource on the Resource Roster notifies the Resource Net that they are unable to be deployed, update the status on the Resource Roster to (N), Not available.

Availability Checks
On a regular basis, (every 30 minutes is recommended) depending on the needs of the event and time available for the Resource Net operator, verify that each available resource on the Resource Roster is still available for deployment. Do not attempt to contact resources that have been deployed or otherwise labeled (N) No Longer Available.   Refer to the Resource Net Roll Call script.
Call out to each available resource on the resource roster and confirm their availability.   Log the contact time on Confirm Availability column on the Resource Roster. If no contact is made, change the resource status to (N) No Longer Available. This station is no longer available for deployment. If the station contacts the Resource Net afterwards, the Resource Net operator can make the determination to place the station back on available status. A new entry on the Resource log should be made to put the resource available again.

Hourly Exercise Announcement
Every hour, if possible, the net operator should announce use of the frequency or repeater so regular users are aware of the event/exercise in progress. Follow the Resource Net In Use Announcement script.

Resource Deployment
The Command Net will contact the Resource Net on a predetermined frequency and identify the resources needed. The Command Net should provide the following:

- Number of resources needed
- Radio Capabilities needed
- Operation Capabilities needed
- Location to send the resources - Specific instructions on the location, landmarks, routes, cross streets, building numbers, GPS coordinates or Google Map coordinates
- Contact person's name if applicable
- Special circumstances, conditions, or physical capabilities of resources

Review the Resource List and match the requirements requested by the Command Net with the available resources. Look for resources closest to the deployment location, if possible.

One resource needed at a location:

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Select a resource that meets the needs requested by the Command Net from the available resources on the Resource List. The Resource Net Operator will contact the resource and provide the following:

- Radio Capabilities needed
- Operation Capabilities needed
- Deployment location
- Contact person's name if applicable
- Special circumstances, conditions or physical capabilities of resources

Request conformation of the information and request an ETA to the deployment location from the resource.

Write the Destination and ETA in the Status/Deployment box on the Resource Roster. Update the Status to (E) for enroute to destination.

The Resource Net Operator will contact the Command Net with the ETA for the resource.

Monitor the expected ETA for the resource. If the expected ETA has passed, contact the resource for an update and a new ETA. Contact the Command Net with the new ETA.

More Than One Resource needed at a location:

Select resources that meet the needs requested by the Command Net. Organize the resources into groups broken down by the locations where they are needed and taking into account the current location of the resource. If multiple groups are needed, contact one group at a time and complete the deployment process before calling the next group. Call each resource in the group and solicit a confirmation that they are listening for instructions before calling to the next resource in the group. If a resource does not respond, mark them Not available on the resource form. Make sure all members in the group are present before continuing with instructions. This will also allow the operators to hear the call signs of other members in their group.

Provide the following information to all the group resources at once:

- Radio Capabilities needed
- Operation Capabilities needed
- Deployment location
- Special circumstances, conditions or physical capabilities of resource
- Contact person's name if applicable
- Tell the resources that a roll call will follow and that an ETA to the destination is needed from each resource.

Perform a roll call asking each resource to confirm understanding of the information and provide an ETA to the destination. For each resource, write the Destination and ETA in the Status/Deployment box on the Resource Roster. Update the Status to (E) enroute to destination.

Resource Net Operator will contact the Command Net with an ETA for the Resource. It is the responsibility of the Resource Net to make sure each resource makes it to the needed location.

Monitor the expected ETA for each resource. If the expected ETA has passed, contact the resource for an update and a new ETA. Contact the Command Net with the new ETA.

Net Close Out

Termination Roll Call
When the incident/exercise has been deemed terminated by Incident Command, a roll call of remaining resources will be initiated by the Resource Net. Refer to the Resource Net Final Roll Call script. Do not attempt to contact resources that have been deployed or otherwise labeled (N) No Longer Available. If any resources do not respond to the roll call just go to the next resource. The net will then be closed using the Resource Net Termination script. Stations still on stand-by (available for deployment) will be informed of incident termination and thanked for their service.

Termination Roll Call
At the end of the net, the operator should produce metrics about how resources were utilized during the event/exercise. Recommended metrics include, but are not limited to:

- Net frequency and repeater (if used)
- Net open and close times
- Number of deployment locations
- Number of resources deployed
- Number of resources that became unavailable for deployment
- Number of resources available at the termination of the net
- Number of unique resources that checked in to the net. Only count each call sign once.
- Technical issues (repeater problems, needing to go to backup frequencies, etc.)

Other Organization Resources
Place holder for how we manage resources from other organizations.

Tactical Net

Place holder for Tactical Net information

Command Net

Place holder for Command Net information

Attachments

Resource Net Check –in:

This is _____ (Name & Call) net control for the Sacramento County Amateur Radio Emergency Service (ARES) Resource Net. (This is an exercise) This is a directed net and all communications should be routed through net control.

We will now accept check-ins from all interested amateur radio stations. Once checked in, we ask that all operators continually monitor the Resource Net for additional instructions. When you check-in, please give your call sign, phonetically, followed by your first name. I will acknowledge each operator and gather the needed information before continuing. Please speak slowly and for each operator I will ask for the following information:

- Current location: City and nearest major intersection
- Organization affiliation (County name ARES, city/county CERT, SHARP) and Reserve #, if applicable
- Radio Capabilities (VHF, UHF, HF, Digital)
- Operation Abilities (Fixed Station, Mobil, HT)
- Can you relocate for deployment? If so, how far can you travel?

(DROP)
Available operators please come now.

(FOR EACH OPERATOR)
Did you copy the information needed?

(DROP) (await response)
I am ready to copy.

(FOR EACH CHECK-IN, LOG VOLUNTEER INFORMATION)
Are there any other check-ins for the Sacramento County ARES Resource Net?

Stations that have checked in are asked to please stand by and to monitor this frequency for deployment assignments. Periodic Roll Calls will be performed to ensure continued availability of resources. If you become unavailable, contact the Resource Net Control Operator so we can take you off the list.

This is _____ (Name & Call) net control for the Sacramento County ARES Resource Net. (This is an exercise.)

Resource Net In Use Announcement:

This is _____ (Name & Call) Net Control operator for the Sacramento County Amateur Radio Emergency Service (ARES) Resource Net. (This is an Exercise) This is a directed net and all communications should be routed through net control. This repeater is activated as a Resource Net for an (Event; Exercise) conducted by the Sacramento County ARES under the jurisdiction of the Sacramento County Office of Emergency Services. This repeater will be in use for (State duration or end time – Examples: Until the event is concluded. At this time the duration is unknown; until day/time; Until the Exercise concludes at day/time).   (DROP)

While the (Event; Exercise) is in progress we ask that regular traffic be postponed or moved to another frequency until the (Event; Exercise) is concluded. If an emergency should arise, and you need the repeater, please contact net control by saying BREAK-BREAK. A double break signifies emergency traffic. The net will provide assistance until the emergency is terminated or the traffic is moved to another frequency. This is _____ (Name & Call) Net Control operator for the Sacramento County ARES Resource Net. (This is an Exercise)

Resource Net Roll Call

This is _____ (Name & Call) Net Control operator for the Sacramento County Amateur Radio Emergency Service (ARES) Resource Net. (this is an exercise) The net will now conduct a roll call of all amateur radio operators currently checked into this Resource Net with an available status. When your call sign is called, please acknowledge by repeating your name and call sign.   This is _____ (Name & Call) Net Control for the Sacramento County Amateur Radio Emergency Service (ARES) Resource Net (this is an exercise).

CONDUCT ROLL CALL

This is _____ (Name & Call) Net Control for the Sacramento County Amateur Radio Emergency Service (ARES) Resource Net. Should you become unavailable for deployment for this incident at any time, please notify Resource Net control. (this is an exercise)

Resource Net Final Roll Call

(Option 1) – Call out for remaining operators - Create a list of the remaining operators, name and call sign – use back page of Resource Roster page 1.

This is _____ (Name & Call) Net Control operator for the Sacramento County Amateur Radio Emergency Service (ARES) Resource Net. (this is an exercise) The Resource Net is closing. Will now conduct a roll call of all amateur radio operators currently checked into this Resource Net with an available status.

I will acknowledge each operator one at a time. Please come with your name and call sign.

Repeat until there are no more operators by saying:
Next operator please come now.

(Option 2) – check operators off the Resource Roster list.

This is _____ (Name & Call) Net Control operator for the Sacramento County Amateur Radio Emergency Service (ARES) Resource Net. (this is an exercise) The Resource Net is closing. Will now conduct a roll call of all amateur radio operators currently checked into this Resource Net with an available status.

When your call sign is called, please acknowledge by repeating your name and call sign.

Go through the Resource Roster for all resources still available (Status – blank) and mark all the remaining operators in the Confirm Avail. column.

Repeat until there are no more available operators remaining on the Resource Roster

Resource Net Termination

This is _____ (Name & Call) Net Control Operator for the Sacramento County Amateur Radio Emergency Service (ARES) Resource Net. (this is an exercise) The Resource net is being terminated at this time.

We wish to thank Sacramento ARES and non ARES members for participation in today's (Event; Exercise). We also wish to thank the control operators of the _____ repeater system (for Sacramento ARES – N6NA) and the repeater users for standing by. We are returning the _____ repeater system back to normal operation. This is _____, (Name & Call) Resource Net Control Operator for the Sacramento County ARES Resource Net. The Resource Net is officially closed at _____ (local time) (this has been an exercise).