



San Benito County Amateur Radio Emergency Services



Use of Amateur Radio Operations in Emergency Operations

This document describes the use of Amateur Radio Operators to assist the County of San Benito California in emergency communications. It was prepared by the San Benito County Amateur Radio Emergency Service (SBC ARES).

Participants – Amateur Radio Operators may participate in two different levels depending on their availability, expertise, equipment, and what they best feel their level of commitment can be. Appropriate FCC licenses are required for those who will be called to operate on the Amateur Radio Frequencies. Basically, there are two levels of participants:

Level 1 Participants	Level 2 Participants
<p>These Amateur Radio Operators have agreed that the emergency communications for San Benito County will be their primary response activity.</p> <p>These operators have participated in previous training and are aware of the basic procedures that will be followed in emergency incidents.</p> <p>These operators could be used immediately in emergencies with minimal direction and preparation.</p>	<p>These are Amateur Radio Operators who chose to not serve as regular volunteer staff, but may be available to work in an emergency.</p> <p>They may also be those operators brought in and trained during an extended emergency.</p> <p>This category are spontaneous unaffiliated volunteers (SUV) / convergent volunteers</p>

<u>ARES Alert Conditions (ALERTCONs)</u>		County ThreatCon
<p>ARES maintains a given Ready Condition at all times. As a situation develops the current ALERTCON level may change. All ARES members should be responsible for knowing the present ALERTCON.</p>		
ALERT 3 Vigilant	Encourage participation in weekly ARES net.	ELEVATED Yellow
ALERT 2 Monitor ARES Repeaters	A situation has developed. Be alert and commence ARES/RACES/ACS "Resource Net" and initiate ARES/County Disaster Service Worker Volunteers (DSWVP) "Communications Class" phone trees, if operable. EOC Activated to Level 1, OES Staff, or higher if required by a specific local threat. ARES District Emergency Coordinator (DEC) is placed on stand by for activation.	HIGH Orange
ALERT 1 Prepare to deploy or actually deploy.	County EOC requests communications support that otherwise would not be met by current public safety agency's resources. EOC activated at a Level 2 or 3 as required. ARES DEC activated and physically at the county EOC. Prepare to stage and deploy currently registered/trained DSWVP operator's according to the needs of the city or county. Direct SUV's/convergent volunteers to report to the county EOC to be sworn in as DSWVP's if they wish to participate in the Worker's Compensation program. They will display their picture I.D's on their outer clothing and present them to officials upon request. NO "self activations" are authorized." Coordinate requests for additional resources, as required.	SEVERE Red

Local Frequencies – For local communications, the following frequencies will be used as described in the ICS-205/217 at the back of this document. For incidents south of Paicines, the South County repeater would be the primary repeater used. Incidents where a mobile unit is set up as a cross-band repeater, on-scene communications will be held on 446.500 MHz (UHF TAC).

GROUPS	
<p>In emergencies, Amateur Radio Operators can be assigned into one of three basic groups. Assignment is based on the number of operators needed, the level of expertise of the operator, the type of equipment available, and the availability of the operator.</p>	
GROUP 1	<p>COUNTY EMERGENCY OPERATIONAL CENTER (EOC) – In most emergencies, the County Emergency Operational Center (EOC) will be activated and one Amateur Radio Operator will be assigned to this center. Currently, the EOC will be stationed at the Hollister Police Department. Depending on the length of the emergency, this position will be rotated on a regular basis during the event. Duties will include:</p> <ul style="list-style-type: none"> • Giving direction and control to other Amateur Radio Operators not at the EOC as directed by the County Office of Emergency Services (OES) • Contacting outside agencies (such as the State OES) for assistance and information as directed by the County OES • Receiving calls from the local Amateur Radio Operators (Group 2) that are relaying important information and requests for assistance • Contacting local home base stations manned by Amateur Radio Operators (Group 3) for relaying incident information and requests.
GROUP 2	<p>MOBILE OPERATORS – Most Amateur Radio Operators will be assigned to this group. This group includes those operators assigned to a fixed or mobile field location. This would include assignments at local agencies (cities, fire, staging, shelters, etc.) or on a mobile task. It is expected that the members of this group own a VHF hand-held and/or a mobile radio.</p>
GROUP 3	<p>HOME BASE STATIONS – Those Amateur Radio Operators that have multiple base radios permanently set up in their residences may fall into this group. In emergencies, a traditional job of Amateur Radio Operators has been to provide long-range communications to areas outside the emergency area. These could include making requests for emergency assistance, relaying the status of the local emergency to outside agencies, and relaying requests for health and welfare checks. The base stations should also monitor the National Simplex channel to direct any outside Amateur Radio Operators coming up on the air volunteering their assistance.</p> <p>They can also serve as a back up to the EOC for local communications when traffic levels are high. They could monitor other radios used by the general public (e.g. Family Radio Service (FRS), General Mobile Radio Service (GMRS) and Citizen Band (CB) frequencies) to relay important information obtained from these bands. Many members of the public have FRS radios and FRS radios could be used in the future by local Community Emergency Response Team (CERT). Conditions of regional roads could be obtained from commercial truck drivers on CB channel 17.</p> <p>It is expected that the Amateur Radio Operators in this group will have a HF and a VHF base station at their residence. Other desirable radios include UHF, FRS, GMRS, and CB radios. It would also be desirable to have a back-up power system.</p>



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COMMUNICATION NETWORKS	
LEVEL 1	<p>REGIONAL NET: COUNTY EOC to STATE OES – Provide direction and control communications between the County EOC and Regional EOC (REOC) located in Oakland. The REOC is the regional office for the State OES.</p> <p>Depending on the equipment availability at the EOC and other considerations, contact with the REOC may be delegated to home amateur base stations.</p> <p>The home base stations will receive direction from the EOC via the Level 3 network.</p>
LEVEL 2	<p>INTER-AGENCY NET: COUNTY EOC to LOCAL AGENCIES – Provide direction and control communication between the County EOC and the Amateur Radio Operator assigned to a local agency's headquarters.</p> <p>Examples would be city halls, fire agencies, public works, airports, animal control, school districts or shelters.</p> <p>This would also include communications to any staging areas.</p>
LEVEL 3	<p>COUNTY EOC to BASE OR MOBILE AMATEUR RADIO OPERATORS – Provide communications between the County EOC and deployed mobile or home base Amateur radio units.</p> <p>Amateur Radio Operators may be assigned to mobiles or to their home base stations. Home base stations may contact outside agencies or other local Amateur Radio Operators when delegated to by the EOC.</p> <p>Direction and communication between the home base stations and the EOC will take place on a Level 3 net.</p>
LEVEL 4	<p>LOCAL AGENCIES to MOBILE AMATEUR RADIO OPERATORS – Provide communications between Amateur Radio Operators assigned to local agencies and to Amateur Radio Operators working under those agencies.</p> <p>This net is also used by mobile Amateur Radio Operators assigned to the same task to contact each other directly.</p>
LEVEL 4R	<p>OUTSIDE RESOURCES NET – Used to establish initial communication with other Amateur Radio Operators who are volunteering their services to the incident.</p> <p>These operators might be those who are arriving from outside the area or other local Amateur Radio Operators who are not aware of the local calling procedures.</p> <p>This net will be used to direct these operators to a staging area or to another location where they can be signed up and assigned to a task.</p> <p>After initial contact is made, further communication will be conducted on a designated Level 3 or 4 net.</p>

LOCATIONS

County EOC – The main conference room at the Hollister Police Department will be used as the County's EOC. The small room at the SE corner of the conference room is the amateur radio communications room. There are two radios on the communications desk: a VHF/UHF unit, and a HF/6m/2m/440 unit. Both are attached to their own vertical antenna on the roof.

Hazel Hawkins Hospital – There are two amateur radio antennas on the roof of Hazel Hawkins Hospital (HHH): a 2-meter vertical, and a HF dipole. They were installed by the local hams and were last serviced in 2006. The coax leads into the Board Conference Room. The coax for each antenna is behind a plastic electrical outlet cover located on the south wall of this room. It would be best to bring a PL-259 barrel connector and a short length of coax a radio to connect to the antennas

EQUIPMENT at EOC

Kenwood	D700	2M/440 Dual Band Transceiver
ICOM	IC-706 MKIIG	HF/6m/2m/440 Transceiver
LDG		Automatic Antenna Tuner
Astron	RS-12	12V Power Supply
Astron	RS-35M, RS-12	12V Power Supply
Diamond	X50A	2M/440 Dual Band Vertical Antenna
HyGain	AV-640	HF Vertical, 8 Bands-40/30/20/17/15/12/10/6 M Antenna

OTHER EQUIPMENT in ARES' INVENTORY

3	Yaesu/Vertex	FT-8800R	2M/440 Dual Band Mobile Transceiver
2	Yaesu/Vertex	FT-60R	2M/440 Dual Band Handheld Transceiver
3			Dual Band Mag Mount Antenna
1			VHF 2M Mag Mount Antenna
1			SMA to PL-259 Adaptor
1			BNC to PL-259 Adaptor
3	Diamond	X-50	Dual Band Base Antenna
1			6 Foot Tripod Antenna Mast (Tripod Deluxe)
1			20 Amp Power Supply w/ Automatic Battery Backup Switch
1			35 Amp Power Supply
2			Large Batteries (Group 31, about 70 pounds)
1			Smaller Battery (Easily Portable with a handle and case)
			Misc RG-58 & RG-8 Cables