



ARES Emergency Plan

El Dorado County, CA Sacramento Section, District 4

Prepared by: Matt Maszczak W6MAZ, ARES Emergency Coordinator El Dorado County

Permission is hereby granted for unlimited whole or partial reproduction and distribution of this document in any format desired, so long as the content distributed remains unmodified. ARES is a registered trademark of the American Radio Relay League, used by permission.. information current as of 3 January 2011, except where noted.

STATEMENT OF PURPOSE

In Section 97.1 of the Amateur Radio Service rules, the FCC describes the fundamental purpose of the Amateur Service, which includes these five principles:

- Recognition and enhancement of the value of the amateur service to the public as a voluntary noncommercial communication service, particularly with respect to providing emergency communications.
- Continuation and extension of the amateur's proven ability to contribute to the advancement of the radio art.
- Encouragement and improvement of the amateur radio service through rules which provide for advancing skills in both the communications and technical phases of the art.
- Expansion of the existing reservoir within the amateur radio service of trained operators, technicians and electronics experts.
- Continuation and extension of the amateur's unique ability to enhance international goodwill.

The Emergency Communications Plan of the El Dorado County Amateur Radio Emergency Service (ARES) endorses and promotes all of the above stated goals and objectives.

The Emergency Communications Plan will address the role of El Dorado County ARES activities in potential emergency situations, and with the various government and non-government agencies which may request its services. It will establish emergency response procedures for El Dorado County ARES members to follow, depending on the type of emergency, and the agency being served.

Most importantly, the emergency plan is an ever-evolving guide for ARES members to follow in emergency situations. Since each situation is unique, flexibility to provide an adequate response to each is a necessity.

The members of El Dorado County ARES conduct periodic drills, training, and instruction to ensure readiness in implementing this Emergency Response Plan. They are also required to have a baseline minimum of Emergency Communication and FEMA training. *See Appendix E: Baseline Training Requirements

The plan will also be a resource for served local agencies to use to enlist El Dorado County ARES services in emergency response situations.

Description of the El Dorado County Emergency Service

1. INTRODUCTION

- 1.1 The El Dorado County Amateur Radio Emergency Service (ARES) is composed of FCC-licensed amateur radio operators who have voluntarily registered their capabilities and equipment for public communications duty.
- 1.2 El Dorado County ARES amateur radio public service communications are rendered without compensation of any kind, in compliance with federal regulations.
- 1.3 The primary purpose and mission of ARES is to provide trained amateur radio operators to provide emergency communications for civilian and government agencies and the general public under the guidance of the El Dorado County ARRL Emergency Coordinator (EC) and leadership team.
- 1.4 The El Dorado County ARES seeks to develop and maintain cooperative relationships with the El Dorado County Office of Emergency Services (OES), the El Dorado County Sheriff's Department, the El Dorado County Search and Rescue, the California Department of Forestry and Fire Protection (CDF), the U.S. Forest Service, Marshall Hospital, and with volunteer units that work with these agencies.
- 1.5 The El Dorado County ARES, under existing agreements of understanding between the American Radio Relay League (ARRL) and ARRL Sacramento Valley Section and the National American Red Cross and its regional chapters, will provide emergency communications services for the American Red Cross in El Dorado County.
- 1.6 The El Dorado County Amateur Radio Club (EDCARC) has agreed to allow the use of its repeater located on Mount Danaher by the El Dorado County ARES for emergency preparedness nets, training, drills, and emergency situations. The repeater frequency is 147.825 MHz –(PL 82.5).

2. ACTIVATING THE PLAN

- 2.1 In an emergency, El Dorado County ARES can be notified by a private or public service agency, by an ARES member or other amateur radio operator. The Emergency Coordinator (EC) or Assistant Emergency Coordinator (AEC) should be notified by radio or telephone as soon as possible.
- 2.2 Once an emergency or potential emergency condition has been identified, the EC, AEC, or designated net control station (NCS), will announce the appropriate emergency level over the El Dorado County Amateur Radio Club (EDCARC) repeater system, send an email message, and initiate a call tree to notify members of

the situation. All ARES members will stand by and monitor the primary frequency. If indicated, a roll call will be conducted.

3. MOBILIZATION PROCEDURE

- 3.1** Upon awareness or notification of a communications emergency, members of the El Dorado County ARES will monitor the 147.825 MHz –(PL 82.5) repeater, and be ready to check in when called by the Net Control Station.

147.495 MHz is the designated alternate county-wide ARES simplex frequency. Upon standby activation, the EC, AEC, or NCS will designate one ARES Member to monitor 147.495 simplex, in order to direct members to the primary or alternate frequencies as required. *See Appendix A, Band Plan for El Dorado County ARES.

The following HF frequencies are used by ARES units throughout the SV section and if they are being used we should QSY up about 10 KHz or more to find an open frequency.

The 75M phone frequency of 3.987 MHz +/- KHz will be used for communicating outside the range of the repeaters.

The alternate 40M emergency frequency of 7.230 MHz +/- KHz may also be used.

- 3.2** The EC or AEC “in charge” may assume net control, or he or she may assign a Net Control Station operator. The NCS usually should not be located in the area affected by the emergency. A home station is often used, but the NCS may be in a mobile or static Emergency Communications Center (ECC), as required by the type and affected area of the emergency.
- 3.3** Until an emergency communications center (ECC) for El Dorado County ARES can be established, the center may be located at the home of a designated NCS. In the event of an emergency activation involving the Sierra-Sacramento Chapter of the American Red Cross (ARC), the operations center will be either at the chapter HQ, El Dorado County Placerville ARC office, Placer County Auburn ARC office, or in a mobile communications van.
- 3.4** The EOC will be activated, when appropriate, for wide-scale emergencies. Wide-scale emergencies may require assistance from operators from outside El Dorado County, on a mutual assistance basis to ensure adequate staffing. For ARES, all requests for mutual aid must go through the EC (or acting EC), the DEC, and/or the SEC.

- 3.5** When an emergency exists outside El Dorado County, the EC may ask for volunteer ARES operators to stand by and be available to respond if and when requested by another EC or official agency. However, adequate emergency coverage for El Dorado County must be maintained.

4. DUTIES OF THE NET CONTROL STATION

- 4.1** Initial duties of the NCS will be to develop a roster of available ARES members and coordinate the assignment of these operators (with the EC or AEC in charge).
- 4.2** The NCS will maintain a list of assignments and establish shifts of no greater than 12 hours duration.
- 4.3** The NCS will also develop and maintain a list of amateur radio operators who are not registered ARES, or VIP members, but who volunteer their assistance. Assignments from this list will be coordinated with the EC, after a brief orientation and proper registration.
- 4.4** Liaison stations will be assigned to the following repeaters and/or simplex frequencies:
- The EDCARC repeater: 147.825- PL82.5
 - 147.495 Simplex
- 4.5** The NCS will maintain on-the-air discipline to ensure efficient and effective operation.
- 4.6** Tactical call signs will be used to denote location or function, to facilitate communications. To conform to FCC rules and regulations, FCC assigned calls need only be used at the end of exchanged transmissions or every 10 minutes during extended communication.
- 4.7** The NCS operator(s), assistant NCS, or an assigned monitor, will establish and maintain a log of all traffic and relevant incidences which will serve as a permanent record of the emergency.
- 4.8** If communications cannot be maintained due to poor propagation or signal strength, the NCS will assign relays at suitable locations to be determined by the nature and extent of the emergency.

5. OPERATIONS

- 5.1** Stations will normally direct all communications through the NCS, except when the traffic is classified as “emergency.” The use of good judgment in determining what constitutes an emergency is essential.

- 5.2 Formal message traffic should be in writing and signed by the originating official, to ensure authenticity and accuracy.
- 5.3 Formal message handling will follow ICS For 213. *See Appendix B: ICS Form 213 Standard Operating Procedure for El Dorado County ARES requires the use of plain language in all communications conducted on assigned VHF/UHF frequencies.
- 5.4 Formal message (record) traffic should always be in standard ARRL form, and numbered consecutively by the originating station.
- 5.5 When processing Disaster Welfare Inquiries (DWI's), the standard Red Cross protocol and format contained in Red Cross Client Information and Release Form 2079I-1 may be used and will be converted to ARRL/NTS DWI format before transmitting. *See Appendix C: ARC Form 2079I-1
- 5.6 Digital modes may be preferred for high volume PTP communications, between network "hubs" and as part of an integrated all-mode network.

6. ARES MUTUAL ASSISTANCE FREQUENCIES (SV SECTION - ALL DISTRICTS)

- 6.1 For inter-county "command and control" communications, mutual-aid, and administrative purposes; whether it be operational, or (more likely) logistical, the frequencies listed below are designated for use by ARRL leaders. (AECs, ECs, DEC, SECs, SMs, Official Emergency Stations, Official Relay Stations, and other appropriate EMCOMM traffic.) For local tactical and all routine and welfare traffic please make your contact and move to another frequency when possible. Use simplex whenever possible. *See Appendix D: SV ARES Mutual Aid.

7. DRILLS, TESTS, TRAINING

- 7.1 The El Dorado County ARES net meets every Wednesday at 2000L on 147.825 MHz –(PL 82.5). The EDCARC makes its repeater system available to ARES for the dissemination of information such as ARES bulletins, drills, tests, training, and actual emergencies.
- 7.2 El Dorado County ARES conducts regularly scheduled meeting/training events to advance and maintain proficiency in communications and equipment standards as well as professional operational expectations and requirements.
- 7.3 The EC, or an AEC, may activate an unannounced drill, test or simulated call up to test for readiness.
- 7.4 Training functions may include participation in local public service events and other activities that improve skills in communication, organization, operating discipline,

and judgment; and formal meetings, classes, drills, and training sessions.

- 7.5 El Dorado County ARES strongly encourages participation in public service events to provide active participation in the public it serves while allowing ARES members to gain experience operating outside of comfort zones and with multiple agencies.

8. EMERGENCY CONDITION NOMENCLATURE

- **Level One** - All Clear. No potential or actual emergency conditions that may require ARES operations have been identified.
- **Level Two** - A potential emergency activation may occur in El Dorado County or elsewhere. Stand by and prepare for possible activation.
- **Level Three** - An emergency or disaster exists. A net has been activated. Monitor the net frequency for further instructions.
- **Severe Thunderstorm Watch** - A Severe Thunderstorm Watch will be issued when conditions are favorable for development of severe thunderstorms. Stand by and prepare for possible activation.
- **Severe Thunderstorm Warning** - A Severe Thunderstorm Warning is issued when severe thunderstorms are occurring and have been spotted or detected by radar. The National Weather Service (NWS) defines a severe thunderstorm as having winds 50 kts (58 mph) or hail greater than $\frac{3}{4}$ " in diameter (about dime-sized). A net may be activated. Monitor the net frequency for further instructions.
- **Red Flag Fire Watch** – A hazardous condition issued by the NWS equivalent to a Level Two emergency and implemented by the CDF. All ARES/VIP volunteers stand by for possible activation.
- **Red Flag Fire Warning** – Same a “Watch” above, but RED FLAG PATROLS and LOOKOUTS will be activated at the discretion of the CDF VIP HAMCO.

Appendix A: Band Plan for El Dorado County ARES

Repeaters	System	Output	Off Set	PL
Primary	AG6AU	147.825	Minus	82.5
Secondary	TBD			
Portable	TBD			

Simplex-VHF		Frequency	DCS Tone	
Primary		147.495		
Secondary	SV ARES	146.550		
Digital	TBD		82.5	
Red Cross		147.420		
Nat. Calling		147.520		

Appendix B: ICS Form 213

ICS-213 (ARES VERSION)						
NUMBER	PRECEDENCE (Select)	FROM STATION	CHECK	PLACE OF ORIGIN	TIME FILED	DATE FILED <small>mm/dd/yy</small>
					:	/ /
TO:		POSITION:				
FROM:		POSITION:				
SUBJECT:						
MESSAGE BODY:						
						5
						10
						15
						20
						25
						30
						35
						40
						45
RECEIVED FROM:		INITIALS:		POSITION:		
<small>Print name</small>						
RECEIVED BY:	<small>(Call sign)</small>	RECEIVED TIME:	:	RECEIVED DATE:	<small>mm/dd/yy</small>	
					/ /	
REPLY						
REPLY TO MESSAGE NUMBER	FROM STATION	CHECK	PLACE OF ORIGIN	TIME FILED	DATE FILED <small>mm/dd/yy</small>	
<small>(Message number above)</small>				:	/ /	
					5	
					10	
					15	
					20	
					25	
					30	
					35	
RECEIVED FROM:		INITIALS:		POSITION:		
<small>Print name</small>						

Appendix C: American Red Cross Form 2079I-1

American Red Cross

Client Information and Release Form

Do you have an immediate family member you have been unable to contact because of the disaster?

The American Red Cross Disaster Welfare Information function can assist you. We will be happy to contact your relative and pass a brief message to them concerning your health and welfare following this disaster.

Please complete the information requested below, sign the form permitting us to contact your relative, and return it to the Red Cross worker with whom you are meeting.

Thank you and we look forward to reconnecting you with your family.

Client Information

Name		Date	
Pre-Disaster Address			
Post-Disaster Address			
Pre-Disaster Phone		Post-Disaster Phone	

Family Contact Information

Name		Relationship to You	
Address			
Phone		E-mail	
Your Short Message:			

Client Release to Contact Family

I authorize the American Red Cross to contact the designated family member to relay the above, informing them of my current health and welfare. I do/ do not grant permission for the above designated family member to notify other family members.

Signature of Client _____ **Date** _____

Printed Name of Client _____

Name of Red Cross Worker _____ **Function** _____

Appendix D: Sacramento Valley ARES Mutual Aid Guide
Sacramento Valley Section

AMATEUR RADIO EMERGENCY SERVICE

MUTUAL ASSISTANCE GUIDE

MARCH 2001
Update

PREFACE

This guide is not intended to supersede, replace, or negate any local ARES plans. It is intended primarily for ECs, AECs, DECs, SECs, and others who serve in a leadership capacity. It is recommended, however, that all EMCOMM personal be familiar with its contents.

It is assumed that persons reading this guide are trained, disciplined operators, are familiar with "FCC Part 97", ARRL operating procedures, local emergency plans, and the Incident Command System (ICS).

The A.R.R.L.'s ARES FIELD RESOURCES MANUAL has an excellent guide [Appendix Seven] that will provide additional information on the ARESMAT concept.

For FEMA home study courses (including ICS) go to www.fema.gov/EMI/ishome.htm on the Internet.

OPERATIONAL AREA

The Sacramento Valley Section is a 20 county area. District 1: Lassen, Modoc, Siskiyou, Shasta; District 2 Butte, Glenn, Shasta, Tehama; District 3: Colusa, Sacramento, Yolo, Yuba and Sutter; District 4: Alpine, Amador, El Dorado, Sierra, Placer, Nevada, Plumas. It is bordered on the north by the Oregon Section, on the east by the Nevada Section, on the west by the San Francisco Section, and on the south by the San Joaquin Valley Section and East Bay Sections. ARRL and other EMCOMM Officials in adjacent, sections, divisions and states are invited to familiarize themselves with this plan.

THE AMATEUR RESOURCE

As any EC knows, trained, disciplined, and dedicated volunteer amateur radio operators are in

short supply.

Your ARES team could be quickly overwhelmed, even in a relatively minor emergency activation. This guide will help you decide when, and how, to summon assistance.

THE LEADERSHIP STRUCTURE

The Emergency Coordinator is the leader of the ARES team at the local level. It is his or her role to ensure that the amateur radio operator volunteer resource is utilized to the best advantage. The EC may have any number of AECs. An AEC may function as a liaison person with a "served agency", may provide coordination in a remote locality, or (more typically) is a "specialist" (e.g. digital communications, public information, computers, etc.) Ideally, all AECs will be capable and ready to function as an alternate EC.

The EC has many "bosses". He (or she) works in cooperation with the director or manager of a "served agency". Within the ARES structure, the EC (or "acting EC") reports to the DEC. The DEC reports to the SEC. The SEC reports to the Section Manager. If your immediate superior is not available, report to the person at the next highest level.

An EC may occasionally work under the direction of another EC. (E.g. - when an EC has responded into another ECs jurisdiction with a team of ARES operators.)

MUTUAL ASSISTANCE PROTOCOL

When an emergency or disaster event requiring auxiliary communications appears imminent, or has occurred, the EC should alert or activate the team immediately. It is better to "scramble" everyone and not be needed, than to be too late. "Denial" that an event may occur, or has occurred, is not uncommon. A so-called "false alarm" provides training, promotes awareness, and will help to evaluate a team's ability to respond.

The same principles apply with reference to summoning outside help. The "we can handle it" syndrome is common. As soon as you suspect that mutual assistance may be needed, notify your DEC or SEC. If agency authorities are reluctant or disagree, you as the EC, may still notify your DEC or SEC that a Mutual Assistance request may be forthcoming. [NOTE: In jurisdictions where the EC is also the RACES Officer, and/or the CDF-VIP HAMCO, this will be relatively easy; but in places where the RO or HAMCO are not coordinating with the ARES, this may be awkward.] ALSO: be sure to notify everyone to "stand down" when the threat or emergency has subsided.

COORDINATING YOUR RESOURCES

As an EC, DEC, or SEC, your primary job is to "coordinate" the amateur radio resource for your

area. During an actual event, be sure to THINK...AND PLAN AHEAD. Talk to local officials and attempt to determine what will be needed for emergency or auxiliary communications in 12, 24, 48, 72, or more hours down the road. Develop a plan, and put it into motion.

The FIRST RESOURCE is the locally registered, trained, and equipped ARES team members.

The SECOND RESOURCE is the registered and trained ARES members or a team from a nearby jurisdiction.

The THIRD RESOURCE are the amateur operators who just "show up". This phenomenon, known as "convergence" is common in emergency and disaster situations. These helpers are usually undisciplined and unfamiliar with ARES procedures and the emergency plan; and they often cause more problems than they solve. However, there are exceptions, so it is important that each individual be evaluated and judged on his or her own merits. This can be time consuming, so it is suggested that you delegate that task to an AEC (or possibly a visiting EC.) Those that are selected to work should be given an orientation to the ARES plan and procedures, and be briefed on the incident. Then, they must be registered with ARES and the served agency.

CALLING FOR ASSISTANCE

The maximum shift (work period) should be 12 hours. This includes you! As soon as you decide that outside help will be needed in order to provide relief for your operators, MAKE THE CALL. Follow the "chain of command" and get the "wheels in motion"! If you are unable to contact your DEC, SEC or the SM, it is acceptable to contact a neighboring EC and summon help. But, since the DEC or SEC will be looking at "the larger picture", regarding Mutual Assistance, it is imperative that you notify your DEC, SEC, or SM as soon as possible.

When you make the call for assistance, inform the DEC or SEC about how long the assistance will be needed.

State the name the agency that they will be serving, the name of the authorizing official, and advise if the agency will be providing meals, sleeping accommodations, and mileage reimbursement. All responding volunteers are required to log times and mileage. Volunteers from outside California must log their odometer readout when they enter the state.

REMEMBER:

1. Only skilled, disciplined, equipped and registered ARES personnel should respond in Mutual Assistance situations; and all personnel should be directed to a command post or staging area to "sign in". If not already registered, every volunteer must be registered with the "served agency", before they are assigned to the field. Be sure to have the registration forms or logs readily available.

2. Responding teams should be given clear directions to the command center or staging area. Inform them of a "talk-in frequency" (it could be shared with operations, but ideally it will be a frequency dedicated to logistics.)
3. As a general rule, an ARESMAT (ARES Mutual Assistance Team) should come with its own leader(s). (The ICS recommends a 1-to-5 ratio). A team may be given a specific task and utilized as a team. Or, individuals may be assigned to work with your team members, or (once oriented to the operation) they may be given independent assignments.
4. Circumstances usually change rapidly. But, if at all possible, use the outside help you have summoned; and utilize their skills as much as possible. Some may be leaders, others may possess technical skills, computer skills, traffic handling, clerical or other valuable skills.

SCHEDULES

The preferred modes of communication for mutual assistance requests, coordination, and scheduling are telephone and e-mail. In events where these commercial services are inoperable or unavailable, use packet or other amateur digital modes if possible. Voice radio communications are the least preferred for these administrative purposes. "QSTs", ARES bulletins, updates, mobile, and tactical communications are, of course, appropriate on SSB or FM phone.

Nets or schedules are necessary to ensure that the flow of information is maintained, and to manage resources effectively. During events that may require mutual assistance, these recommended schedules be implemented for "command and control".

10 minutes before the bottom of every hour (e.g. 1320 to 1330) a VHF ARES leadership net will convene.

10 minutes after the bottom of every hour (e.g. 1330 to 1340) there will be a HF ARES leadership net.

The "top of the hour" is then available for local nets.
(Please see next page for the designated frequencies)

ARES MUTUAL ASSISTANCE FREQUENCIES (SV SECTION - ALL DISTRICTS)

Each county's emergency plan will list the designated, frequencies for intra-county communications.

For inter-county "command and control" communications, mutual-aid, and administrative purposes; whether it be operational, or (more likely) logistical, the frequencies listed below are designated for use by ARRL leaders. (AECs, ECs, DECAs, SECs, SMs, Official Emergency Stations, Official Relay Stations, and other appropriate EMCOMM traffic.) For local tactical and all routine and welfare traffic please make your contact and move to another frequency when possible. **Use simplex whenever possible.**

145.45- Red Bluff - District 1 and 2 (north Central Valley). **Alternate: 444.950+ (110.9) Red Bluff**

146.91- (91.5) - Fredonyer Peak - District 1 and 2 (northeastern CA - Lassen / Modoc).

146.085+ (127.3) MHz Sutter Buttes - District 3 and 4 (south central valley).

3987 kHz (+ or -) LSB is the primary HF frequency.

7232 kHz (+ or -) LSB is the secondary HF frequency.

1982 kHz (+ or -) LSB is the alternate nighttime HF frequency.

NOTE: 3992, 7230, & 1987 kHz are California OES - ACS frequencies.

147.42 MHz FM simplex is the unofficial national frequency for ARES / American Red Cross communications.

147.57 MHz FM simplex has been adopted in some areas as the ARES / SAR frequency

DIGITAL communications will be on normal established channels selected by the digital operators on duty.

D. W. Thorne, K6SOJ, POB 16, Macdoel, CA 96058 – March 2001

Appendix E: Baseline Training Requirements

Emergency Communications Training:

- ARRL EC-001 Emcomm Course
- Completion of the EDARES Basic Communications and Operations Test

FEMA/ICS Training:

- FEMA IS-100
- FEMA IS-200
- FEMA IS-700

Additional Training for Leadership (EC, AEC):

- FEMA IS-800
- ARRL EC-016 Emcomm for Managers