Ventura County ACS / ARES
Area 2

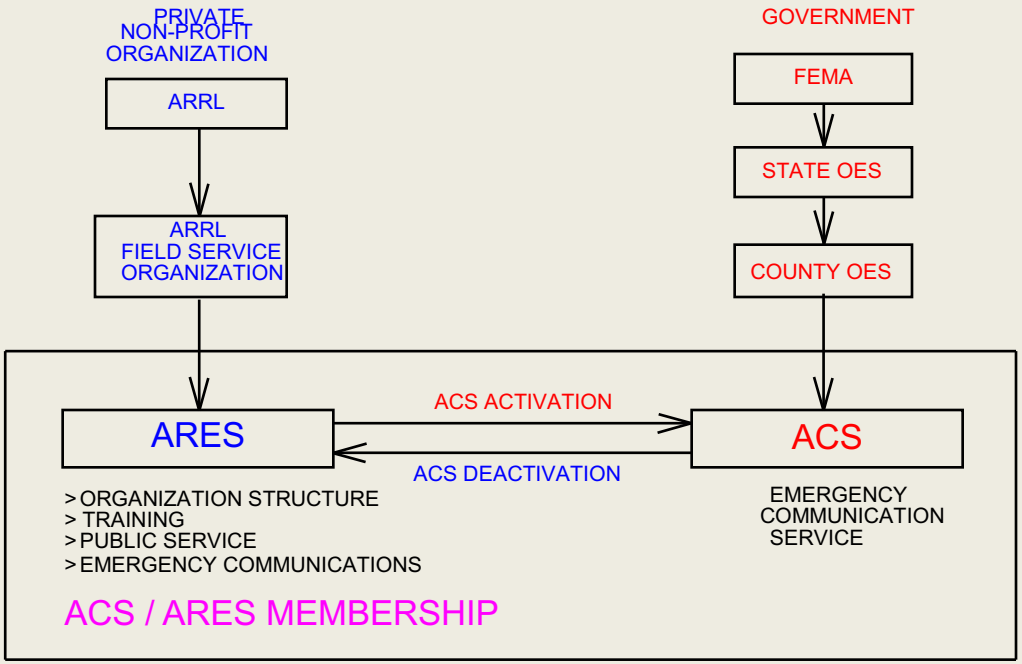
March 2021

OVERVIEW

What is ACS / ARES ?

- ACS / ARES is a volunteer organization of Amateur Radio Operators & Non-Radio Operators which:
- Provides emergency radio communication services to:
  - County,
  - Cities,
  - Law Enforcement,
  - Hospitals,
  - Red Cross,
  - Schools, and
  - Other critical government agencies
- When all other forms of electronic communications fail.

ACS / ARES
TWO ORGANIZATIONS-ONE MEMBERSHIP



ARES = Amateur Radio Emergency Service
ARES is always active. ACS = Auxiliary Communications Service

ACS functions only when activated by Ventura County OES in response to a government declared emergency. All ACS operations terminate when OES deactivates ACS at the end of an emergency.

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ARRL = American Radio Relay League
FEMA = Federal Emergency Management Agency
OES = Office of Emergency Services

Two Forms of Emergency Communications

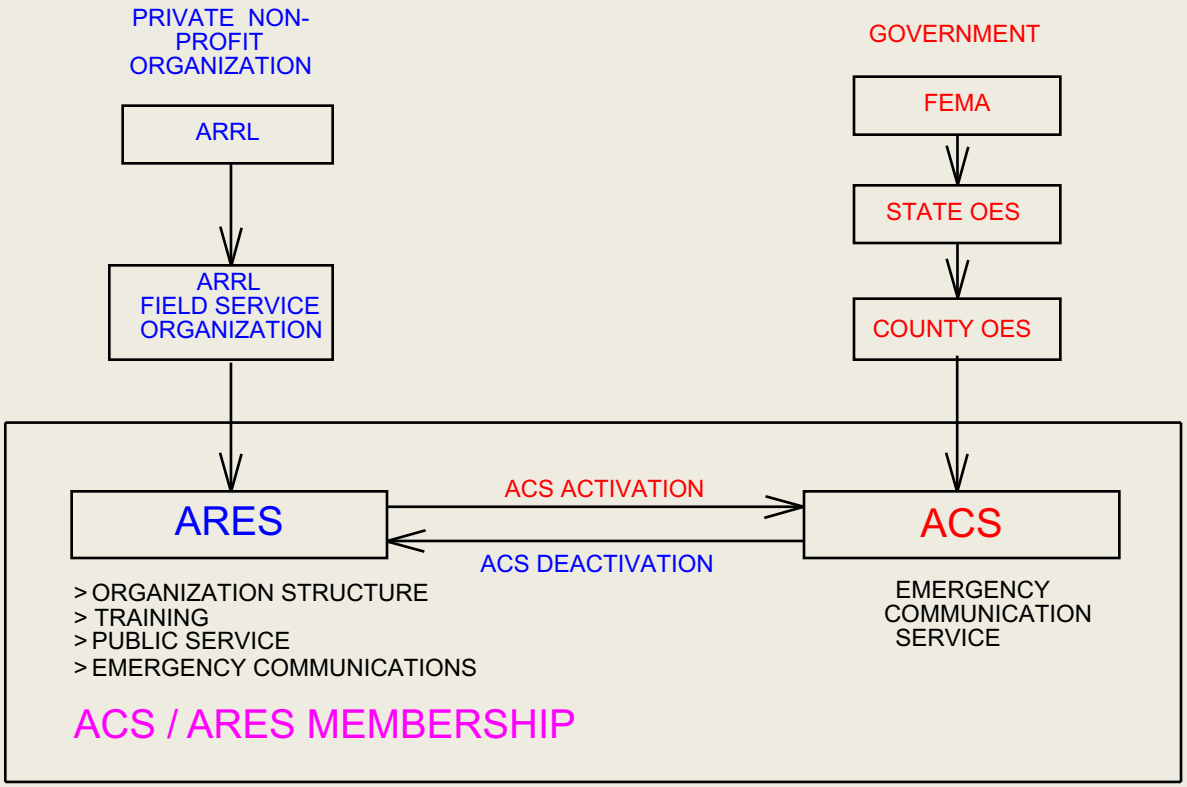
Agency Communications

- ACS focus
- Serve: Law Enforcement, County, Cities, Hospitals, Schools, CERT/DART
- During an emergency this is what we do.

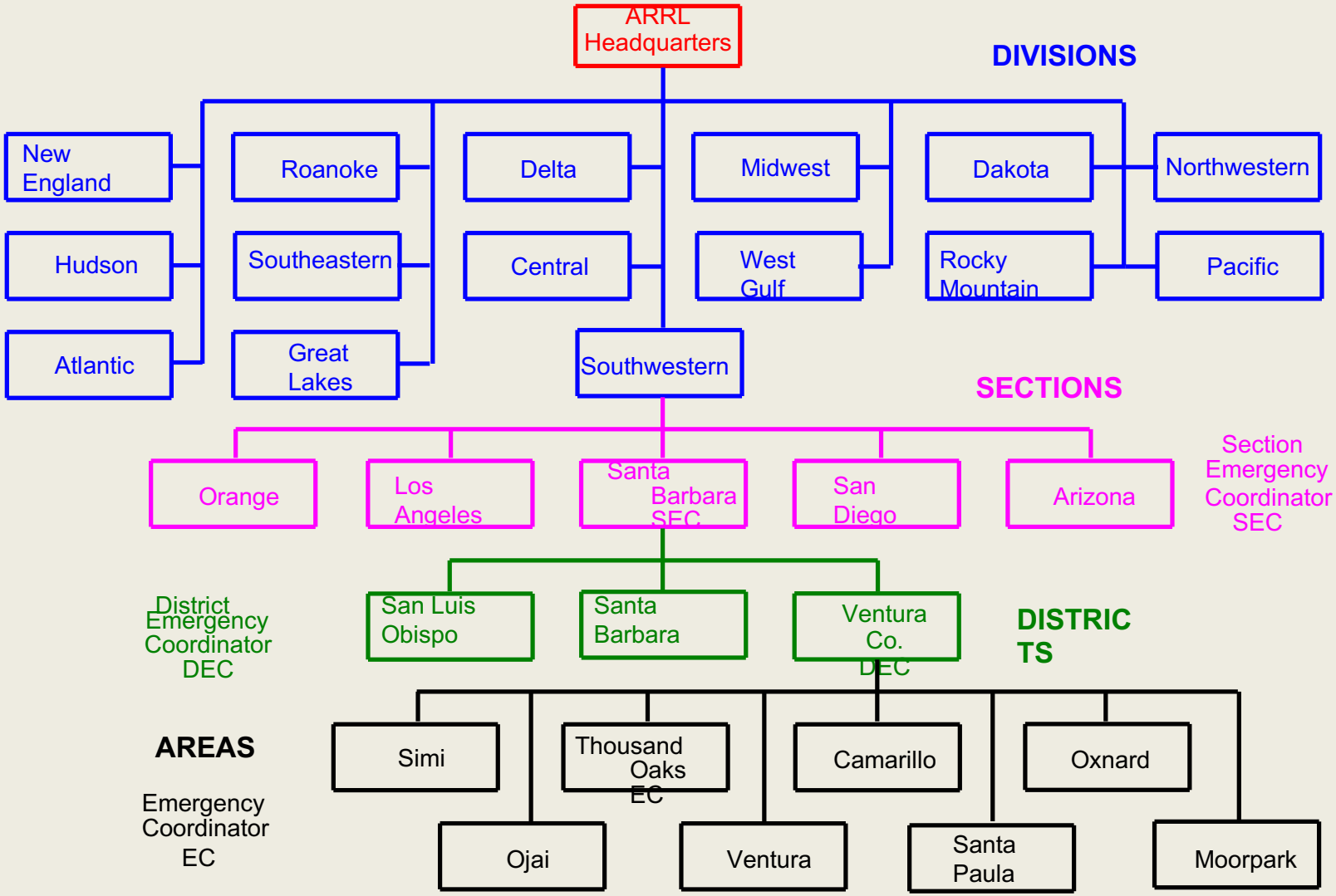
Health & Welfare Comm.

- ARES focus on National level
- People-to-People emergency communications via amateur radio
- During an emergency we Do Not do this.

ARES Organizational Structure

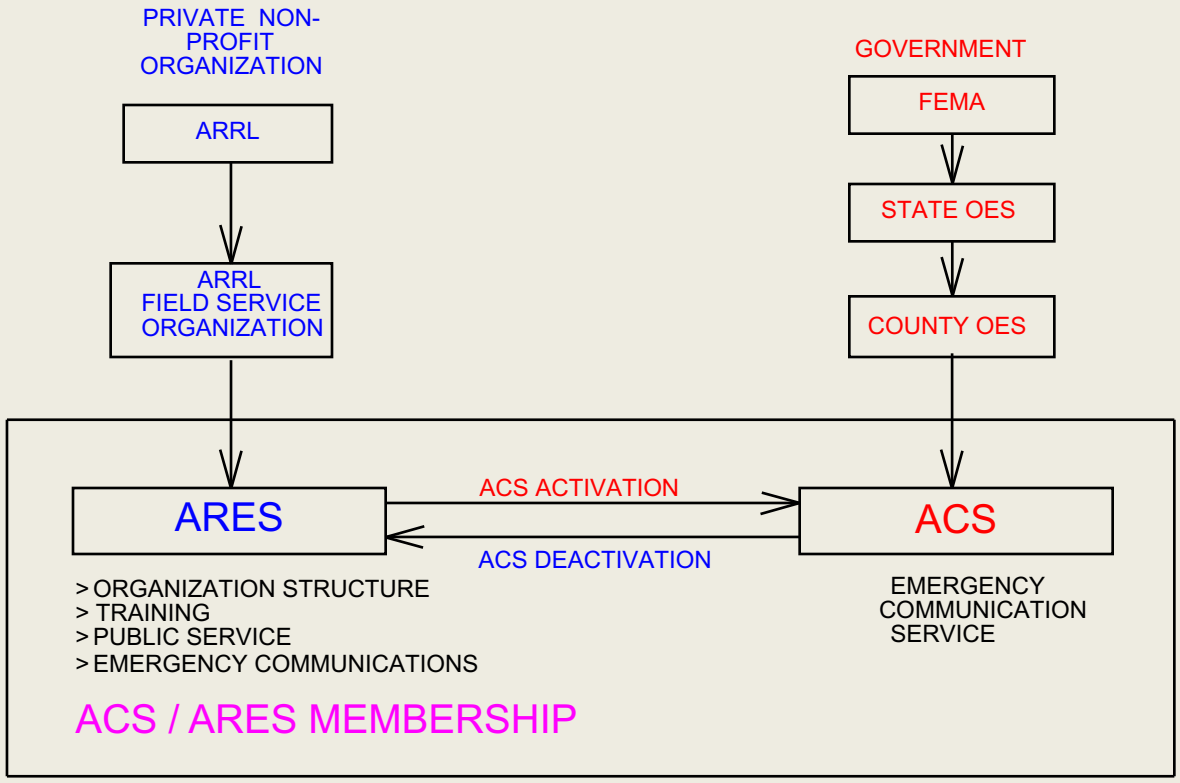


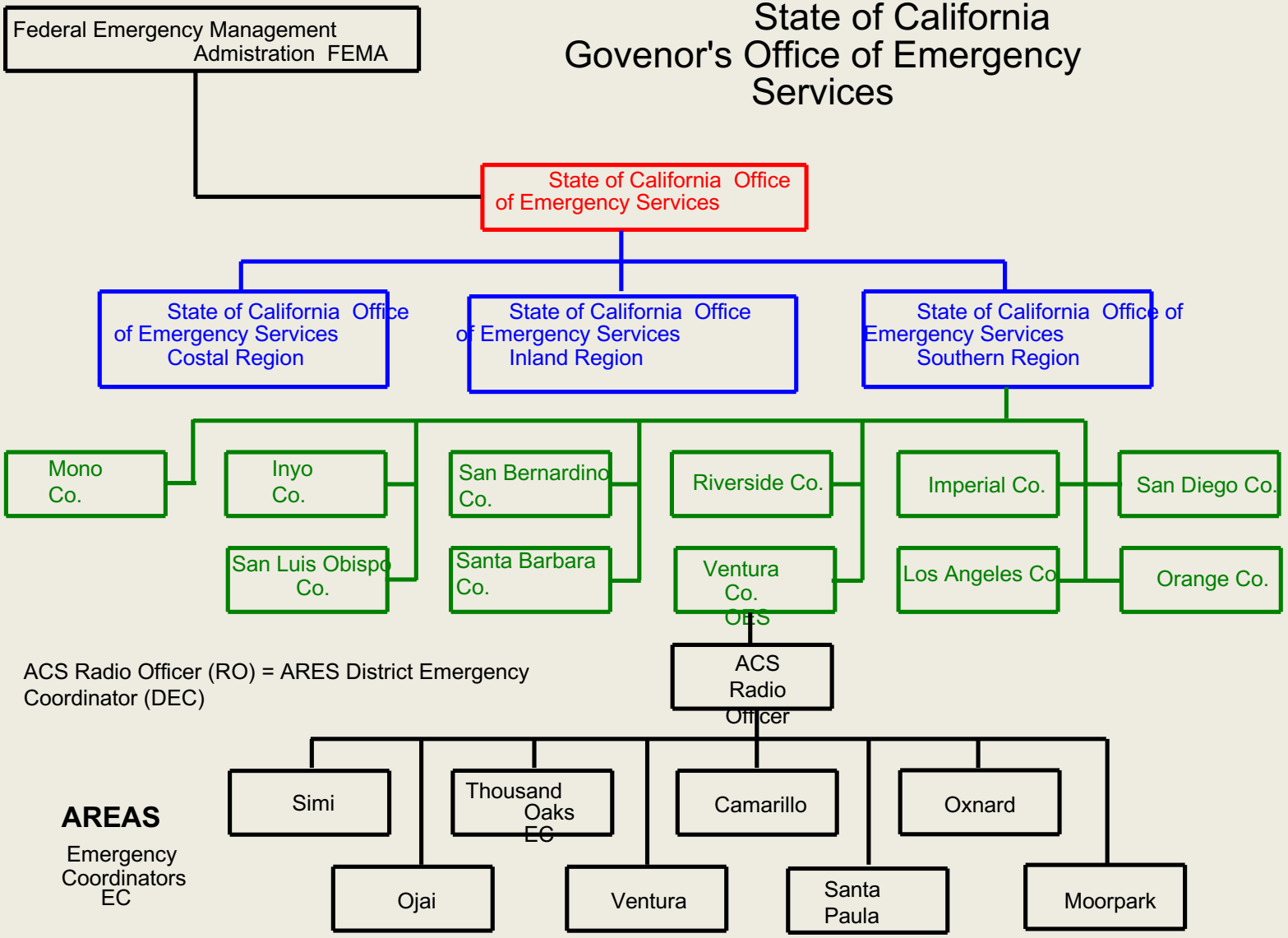
ARES Organization



ACS Radio Officer (RO) = ARES District Emergency Coordinator (DEC)

ACS Organizational Structure




Federal Emergency Management Admistration FEMA
State of California Govenor's Office of Emergency Services
State of California Office of Emergency Services
State of California Office of Emergency Services Costal Region
State of California Office of Emergency Services Inland Region
State of California Office of Emergency Services Southern Region
Mono Co.
Inyo Co.
San Bernardino Co.
Riverside Co.
Imperial Co.
San Diego Co.
San Luis Obispo Co.
Santa Barbara Co.
Ventura Co. OES
Los Angeles Co
Orange Co.
ACS Radio Officer (RO) = ARES District Emergency Coordinator (DEC)
ACS Radio Officer
AREAS
Emergency Coordinators EC
Simi
Thousand Oaks EC
Camarillo
Oxnard
Ojai
Ventura
Santa Paula
Moorpark

OES Administrative Regions

Southern Region

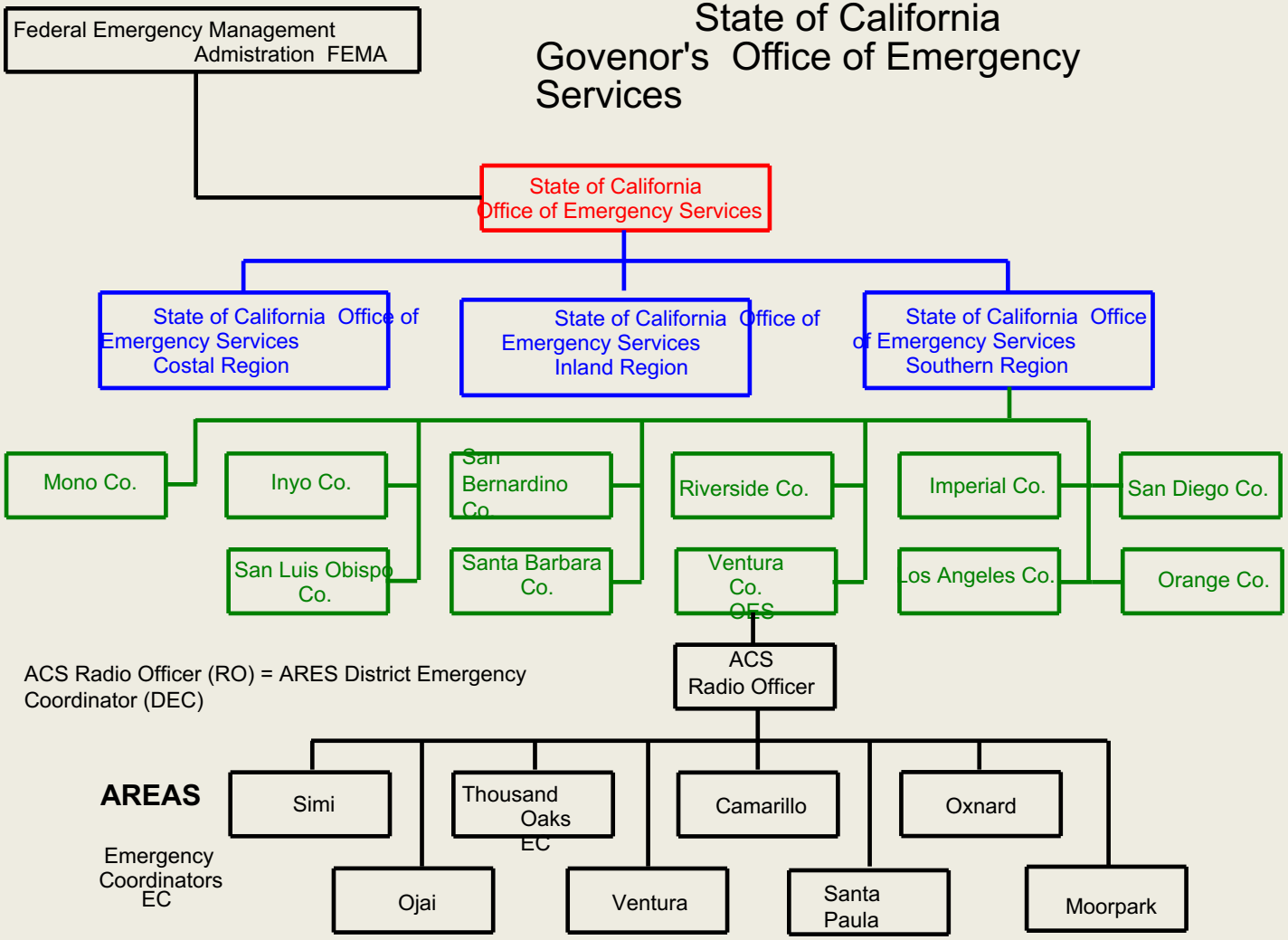
District Emergency Coordinator
Radio Officer Duties

- During an Emergency:
  - Activate ACS under direction of Ventura County OES.
  - Coordinate the responses of the 8 Areas to the emergency.
  - Work with the 8 Areas to cover the emergency communication needs of County wide vital governmental, private, and volunteer agencies.
  - Coordinate mutual aid assistance between the 8 Areas
  - Coordinate mutual aid with adjoining ARES Districts.
  - The District Emergency Coordinator / Radio Officer assumes authority and responsibility for emergency communications response and performance of ACS/ARES personnel County wide.

Emergency Coordinator Duties

- In times of disaster, evaluate the communications needs of the local area and respond quickly to those needs.
- Establish emergency communications networks that will serve the needs of governmental, private, and volunteer agencies in the local area, operate the networks on a regular basis, and periodically test those networks with realistic drills.
- Promote ACS/ARES as a voluntary, non-commercial, emergency communications service for the benefit of the public.
- Establish a working relationship with all governmental, private, and volunteer agencies in the local area which might need the services of ACS/ARES.
- Recruit local ACS/ARES members.
- Manage and coordinate the training, organization, and emergency preparedness of local ACS/ARES members.

Emergency Coordinator Duties



ACS Activation

- We are NOT allowed to self activate !
- If an emergency occurs, do not go to any of the Area 2 supported sites until Ventura County Office of Emergency Services (OES) has activated ACS.
- Tune to the Area 2 Repeater 147.885 MHz, negative offset, pl 127.3 to determine situation
- Tune to the County ACS frequency on 145.200 MHz, minus offset, pl of 127.3 to determine situation.
- If these frequencies are down, then go through the Area frequencies until you find out who is on the air.

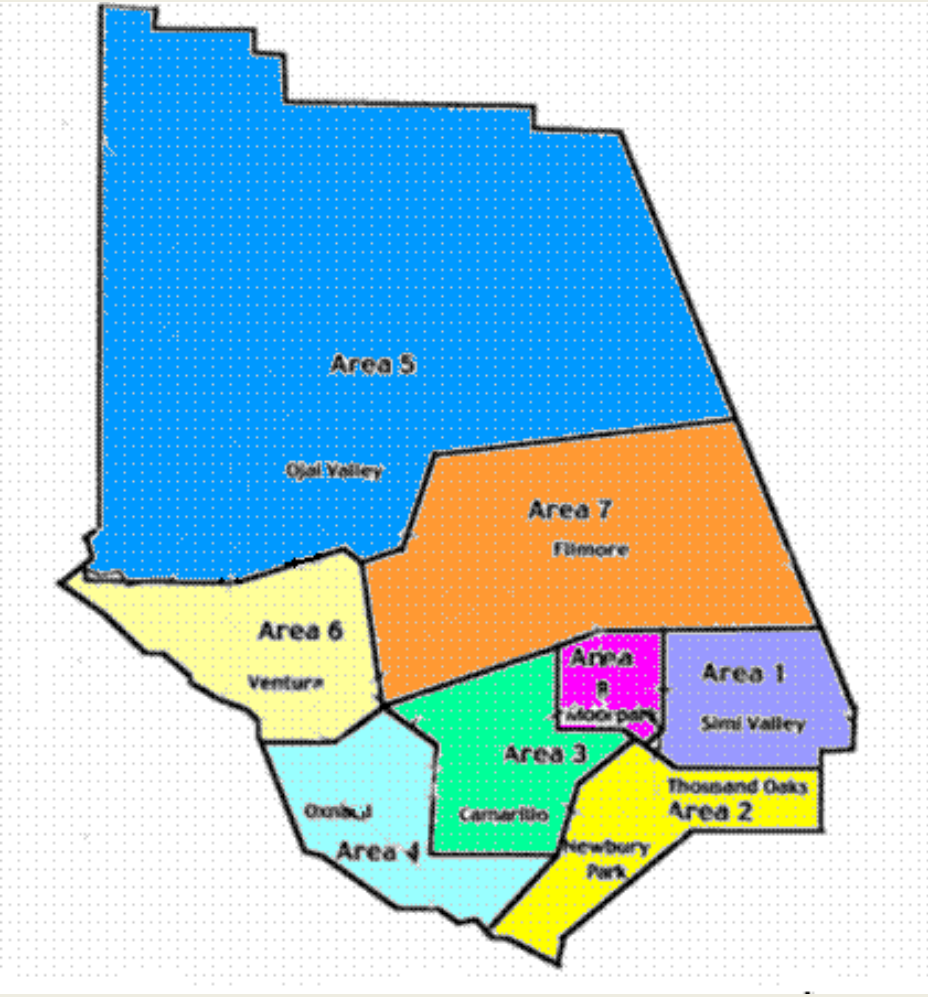
ACS Activation

- If or when appropriate, activate Area 2 Net
  - Designated Net Control operates from home until ACS activated.
  - This net operates as Area 2 Check-in Net to determine names / availability of Area 2 members.
  - Area 2 Net and Analyst will be put into operation only after ACS activation.

ACS Activation

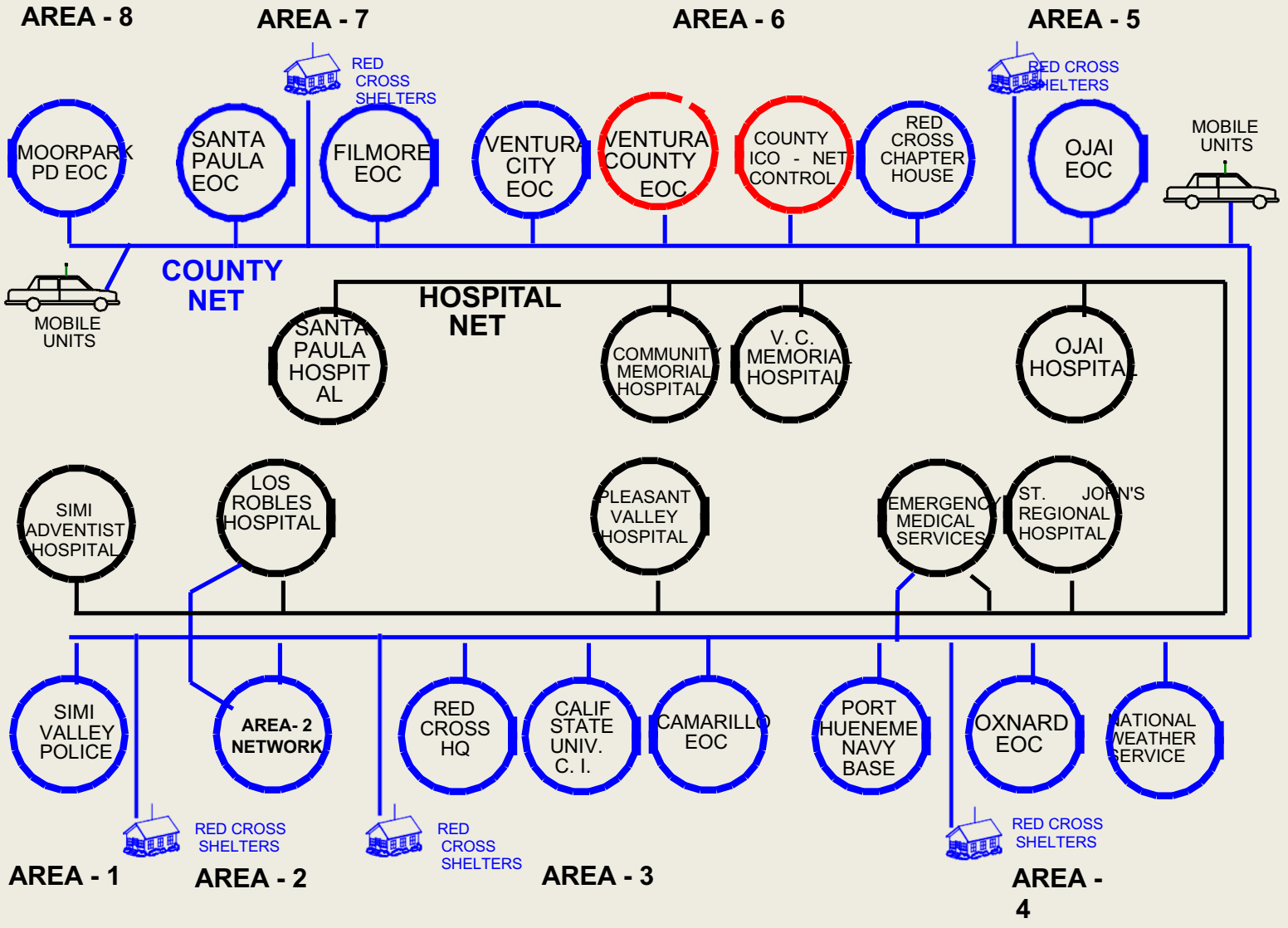
- We are not covered by County insurance until ACS is activated by OES.
  - Injuries to ourselves are NOT covered by County insurance.
  - Injuries we cause to others are NOT covered by County insurance.
  - If County is sued, they will NOT be covered by their insurance.
  - Once activated, then we and the County are covered by their insurance.
- We terminate all operations upon ACS deactivation.

Ventura County ACS/ARES Geographical Areas

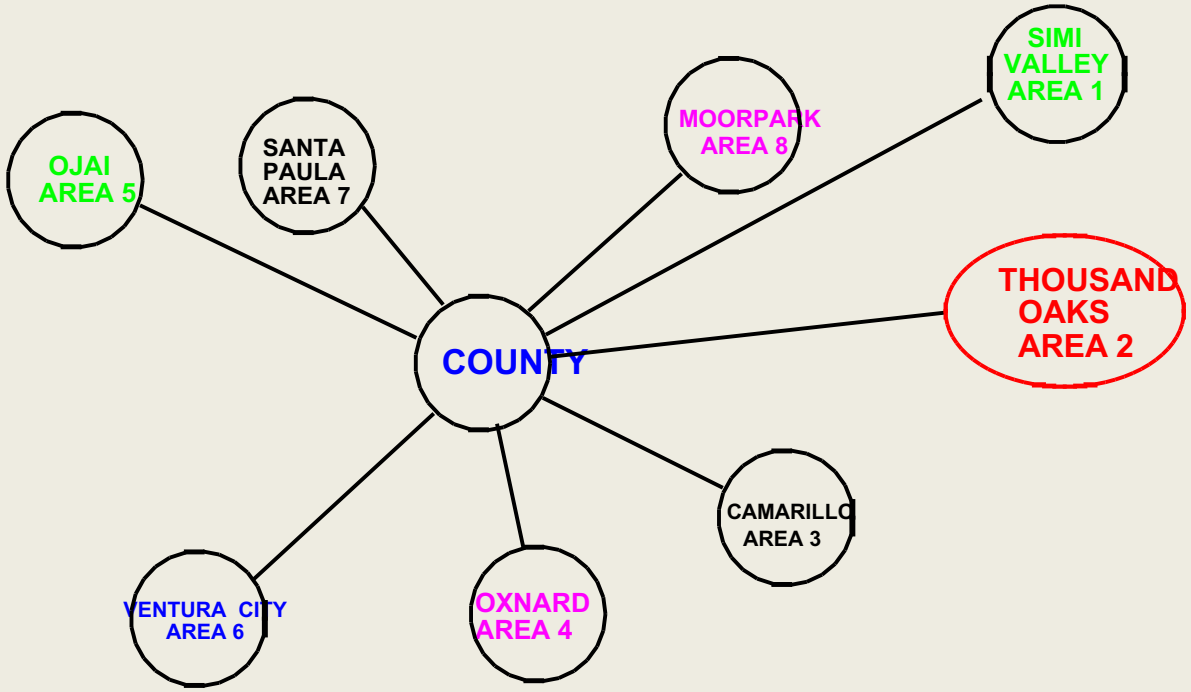


- Each Area is unique and has its own set of emergency communication problems to solve.
  - Each Area has its own Emergency Communications Plan.
  - Each Area has its own set of internal communication networks.
  - There is no one size fits all
- The District Emergency Communications Plan ties together the 8 Areas.

VENTURA COUNTY ACS/ARES
VOICE EMERGENCY COMMUNICATIONS NETWORK



EMERGENCY COMMUNICATIONS



- Thousand Oaks is one of 8 ACS/ARES Areas within Ventura County
- Thousand Oaks is ACS/ARES Area 2

AREA 2

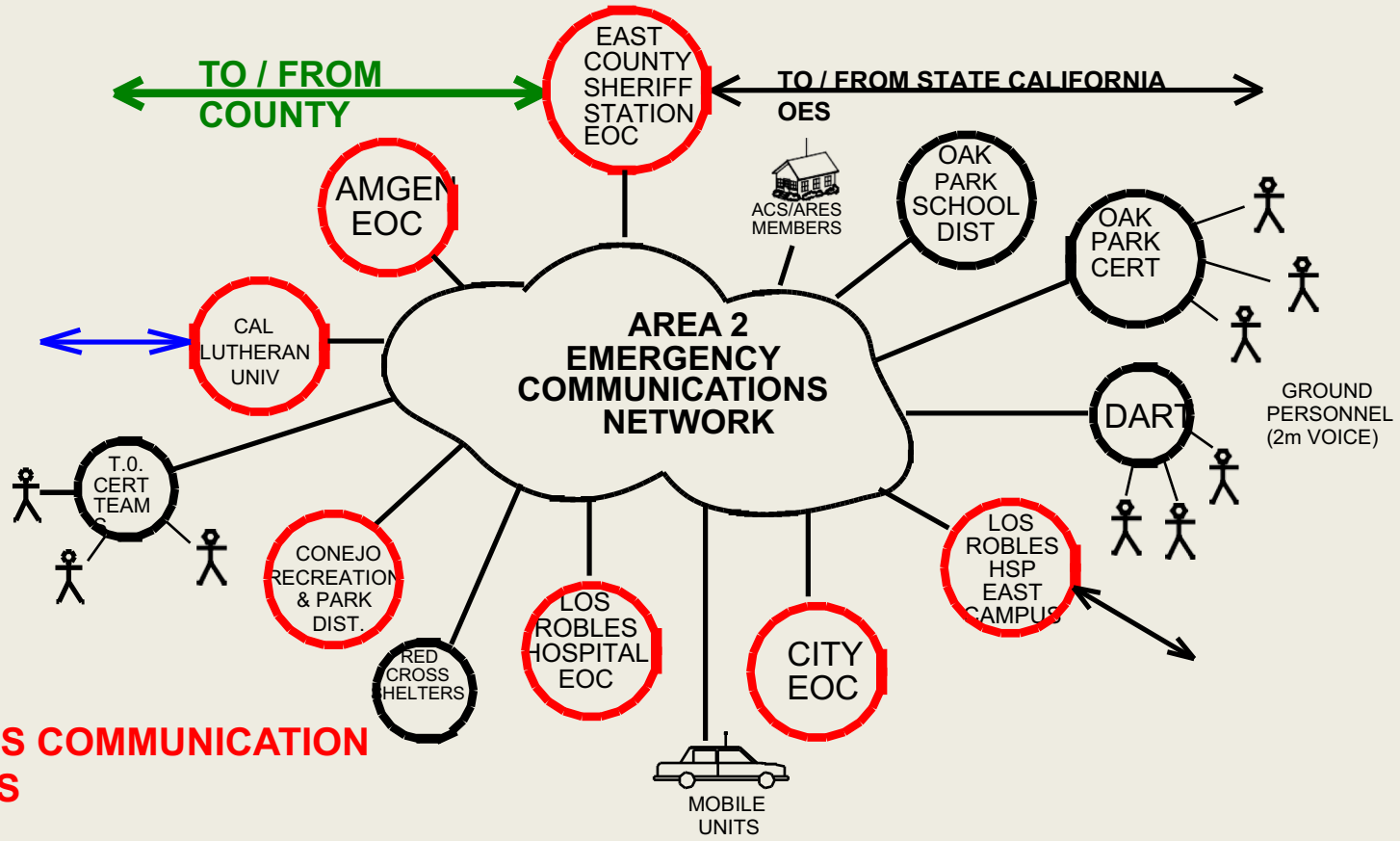
Emergency Operation Centers
Agencies Supported by Area 2

- East County Sheriff's Station (ECSS)
- City of Thousand Oaks (at Civic Arts Plaza)
- Los Robles Hospital Main Campus
- Los Robles Hospital East Campus.

Emergency Operation Centers
Partners Supported by Area 2

- California Lutheran University (CLU)
- Amgen Inc
- Oak Park School District
- Oak Park CERT

ACS/ARES EMERGENCY COMMUNICATIONS SYSTEM FOR THOUSAND OAKS (Area 2) >



ACS/ARES COMMUNICATION SERVICES

1. Provide Customer - To - Customer communications
2. Collect, verify, & integrate information on the extent of a disaster as it evolves.
3. Provide Customers with big picture information on the scope of the disaster.
4. Provide an Info-Net for collecting information from and providing information to area amateur radio operators.

Services Provided - Area 2

- Emergency Communications
  - Provide emergency radio communications between all Area 2 EOCs and supported agencies and partners.
  - Connect Area 2 into Ventura County ACS emergency radio nets.
  - Handle interagency message traffic.
- Provide Information
  - Using the extensive ACS communication networks, collect, verify, & integrate information on the extent of the evolving disaster.
  - Produce topic specific summary reports on the crisis.
  - Provide summary reports to EOCs and supported agencies.
- Info-Net
  - Provides information to and collects information from all area amateur radio operators concerning the evolving crisis.

Communications

- Most Area 2 customers have fairly good emergency communications within their individual organizations, but have poor communications with other agencies.
- Emergency (priority) cell phone, satellite phone, and trunked radio systems are generally used for inter-agency communications.
- These systems, if they exist and are working, are all person-to-person communication systems with the following problems:
  - The number called is often busy (everyone is trying to call the same number).
  - These are “first come – first served” systems in which low priority traffic can monopolize the system blocking higher priority traffic.
  - The person called is often not there, no one answers the phone.
  - Calls for help often go unanswered.

Customer to Customer Communications

- The ACS Radio Communications System is a “party line” architecture with the following characteristics:
  - Everyone can hear everyone else creating a conference call environment that enables agencies to work together to resolve the crisis.
  - An ACS Net Control Operator insures an orderly prioritized flow of traffic on the network.
  - The Net Control Operator is always listening.
  - No call ever goes unanswered.
  - People can be located and message traffic routed to them.

- The ACS Communications System is a de-centralized, highly dispersed system which continues to operate when all other forms of electronic communications have failed.

Information Flow

- EOC Incident Commanders need detailed information on the extent of the evolving crisis and on local conditions.
- This information is needed in order to make critical decisions governing their response to the emergency and the safety of their personnel.
- Most Area 2 customers lack the communication networks necessary to gather the needed big picture information.
- News broadcasts, if they can be received at all, focus on the “mass casualty sites” providing very little useful detailed information on the extent of the disaster and local conditions of interest to our customers.
- The extensive ACS communication networks provide the means to, collect, verify, & integrate information needed by our customers.

Information Flow

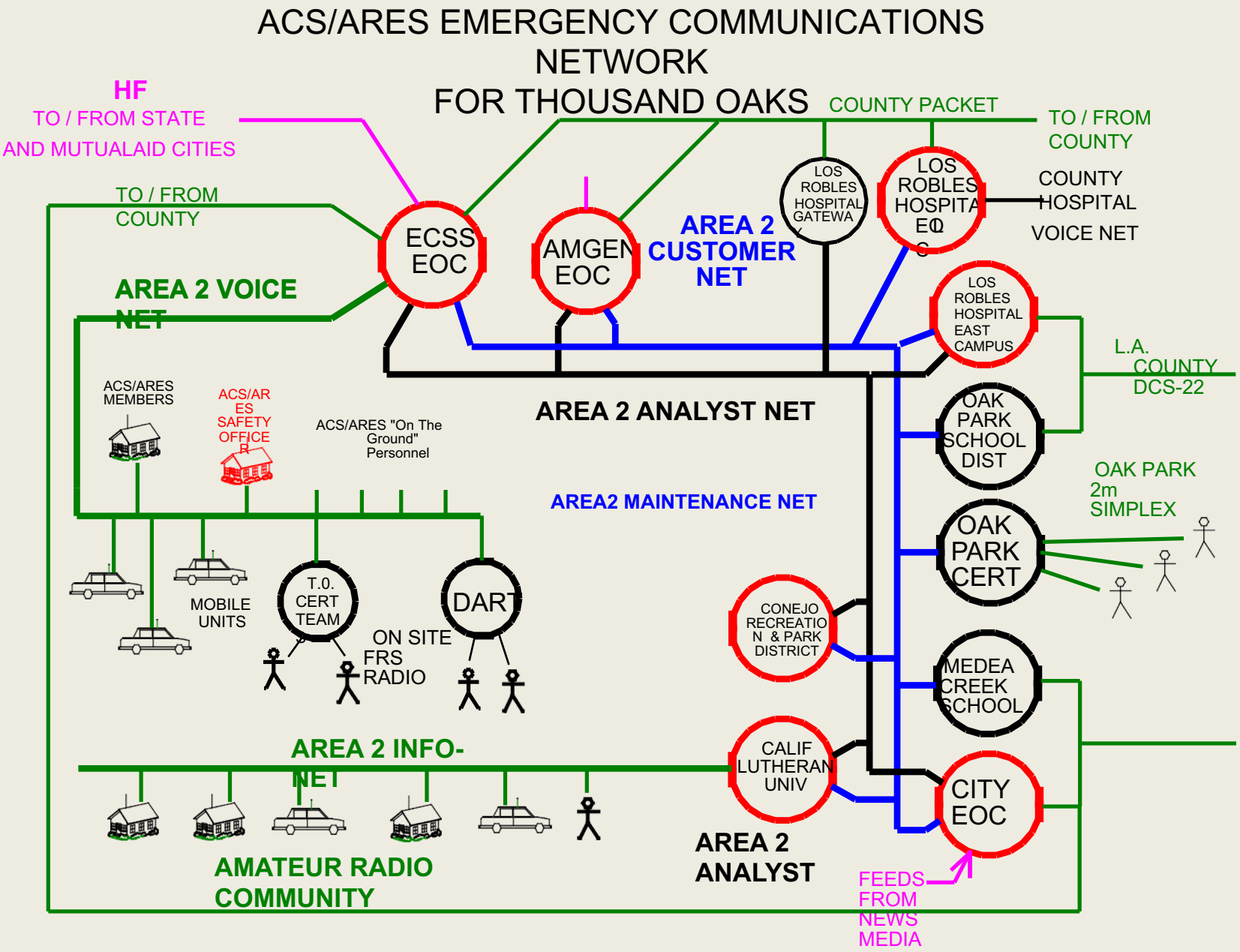
- ACS radio operators at each Area 2 EOC are assigned a specific radio net to monitor: County ACS net, hospital net, L.A. County net, HF nets, simplex nets, etc.
- EOC radio operators send critical information received on their monitored nets, to the Area 2 Central Analyst.
- Information received via the Info-Net is also sent to the Analyst.
- The Analyst pieces together all the received information to form a “Big Picture Report” organized by topic: road closures, areas of major damage, utility outages, etc.
- The Analyst distributes a Big Picture Report via packet radio to all EOCs at the “top of each hour”.
- The Analyst will be located at the Area 2 Lead EOC

Info - Net

- During an emergency, most nets identified in this plan will be restricted to ACS members performing their assigned task.
- Within Area 2 the number of non-ACS amateur radio operators far out number ACS members.
- During an emergency these non-ACS hams will need a voice net which they can check into to get information for themselves and their families on the evolving crisis.

Area 2 Distributed Architecture

- The ACS/ARES Area 2 Emergency Communications Plan is implemented as a distributed architecture in both
  - Assignment of people, and
  - Placement of equipment.
- Work load is distributed across all locations to avoid:
  - People at one location being overloaded with work, while
  - People at other locations sit idle.
- Radio equipment is distributed:
  - If some sites are destroyed,
  - The remaining sites will have sufficient resources to keep the Area 2 network running, providing services to our Area 2 customers.


ACS/ARES EMERGENCY COMMUNICATIONS NETWORK
FOR THOUSAND OAKS
HF
TO / FROM STATE
AND MUTUALAID CITIES
COUNTY PACKET
TO / FROM COUNTY
TO / FROM COUNTY
ECSS EOC
AMGEN EOC
AREA 2 CUSTOMER NET
LOS ROBLES HOSPITAL GATEWA
LOS ROBLES HOSPITA EO C
COUNTY HOSPITAL VOICE NET
AREA 2 VOICE NET
LOS ROBLES HOSPITAL EAST CAMPUS
L.A. COUNTY DCS-22
ACS/ARES MEMBERS
ACS/AR ES SAFETY OFFICE R
ACS/ARES "On The Ground" Personnel
AREA 2 ANALYST NET
OAK PARK SCHOOL DIST
OAK PARK 2m SIMPLEX
AREA2 MAINTENANCE NET
OAK PARK CERT
MOBILE UNITS
T.0. CERT TEAM
DART
ON SITE FRS RADIO
CONEJO RECREATIO N & PARK DISTRICT
MEDEA CREEK SCHOOL
AREA 2 INFO-NET
CALIF LUTHERAN UNIV
CITY EOC
AREA 2 ANALYST
AMATEUR RADIO COMMUNITY
FEEDS FROM NEWS MEDIA

NETS

Area 2 Networks

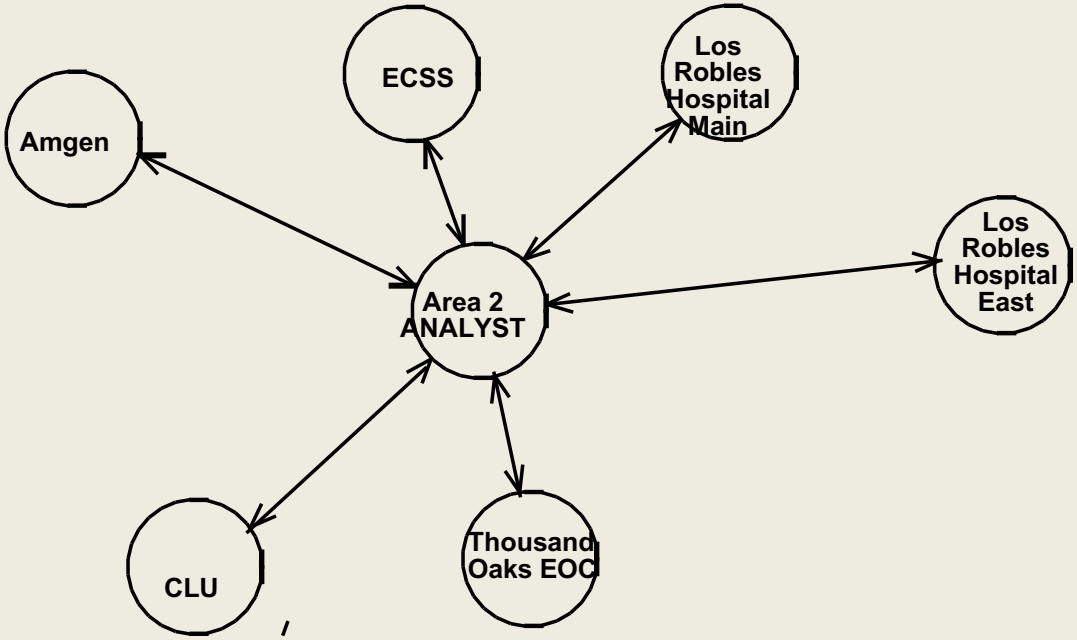
- Area 2 Voice Net (147.885 MHz repeater)- Ch 2
  - ACS Area 2 Member Check-in and Staffing Net
  - Communications for Area 2 EOCs and mobile units
  - Support for DART and CERT teams
  - ECSS Net Control/ TO City Alternate

- Area 2 Info-Net (146.850 MHz repeater) – Ch 32
  - Implements the Area 2 Info-Net function.

- Area 2 Maintenance Net (447.020 MHz repeater)- Ch 32
  - Resolution of packet problems
  - Resolution of other technical problems

Area 2 Networks

- Area 2 Voice Net (449.440 MHz repeater)– Ch 2
  - Carries voice message traffic between all Area 2 EOCs and supported agencies.
  - Net Control periodically verify that all net stations are “OK”
- Area 2 Analyst Net (224.700 MHz repeater) – Ch 2



Area 2 Networks

- Area 2 Analyst Net
  - Used to collect information from the Area 2 EOCs and to distribute Information Reports.
  - Star network, Analyst traffic to and from EOCs only.
  - Analyst position consists of Central Analyst and Analyst Radio Operator.
  - EOCs send reports to Analyst, on information which they have received on their monitored channels which may be of interest to Area 2.
  - Hourly Reports distributed by Analyst to all EOCs.

Ventura County ACS Nets

- County ACS Voice Net (145.200 MHz repeater) – Ch 9
  - ACS County wide voice communications.
  - Direct voice communications between County ACS and all Area EOCs.
- County ACS Packet Net (145.050 MHz simplex) – Ch 53
  - ACS County wide packet communications.
  - Los Robles Hospital main campus, ECSS, and Amgen directly connect to this net.
  - Gateways between this net and the Area 2 Packet net on 223.580 MHz provided by Los Robles Hospital, ECSS, and Amgen.

Ventura County ACS Hospital Net

- The Ventura County ACS Hospital Net provides voice communications between all hospitals within Ventura County.
- Area 2 connection to the Ventura County 224.100 MHz (7)Hospital Voice Net monitored by Los Robles Hospital Main Campus.

L.A. County DCS-22 Net

- The L.A. / Ventura County line cuts through the eastern third of the Conejo Valley Community.
- L.A. County Disaster Communications Service (DCS) Site 22, located at Los Hills Sheriffs Station, is the L.A. County equivalent of ACS Area 2.
- DCS-22 serves Westlake Village, Agoura Hills, Calabasas, Hidden Hills, Topanga, and Malibu
- It is critical that Area 2 and DCS-22 exchange information on the evolving crisis to protect our respective communities.
- This information exchange occurs on the 2 meter DCS-22 repeater on 147.225 MHz.

State and Regional HF Nets

- Connection to the California State Office of Emergency Services, and the associated Southern Region HF nets provided by the ECSS ACS radio room.

- The radio room provides both HF voice and HF Pactor III Winlink data connections to the State and Regional HF nets.

Southern Region VHF/UHF Nets

- Primary communications with the California Office of Emergency Services Southern Region, via the Southern Region VHF/UHF nets, is provided by County ACS.
- The ECSS ACS radio room serves as the Ventura County ACS backup/alternate location for connection to the California Office of Emergency Services Southern Region VHF/UHF nets.
- Area 2 will provide this service only if directed to do so by County ACS.
- The frequencies for these nets will be provided by County ACS along with the assignment.

Area 2 Tactical Calls
(Voice Communications)

SITE	Voice Tactical Call
East County Sheriff's Station	East County Sheriff's Station
Amgen	Amgen
Los Robles Hospital Main Campus	Los Robles Main
Los Robles Hospital East Campus	Los Robles East
Thousand Oaks EOC	Thousand Oaks City
California Lutheran University	CLU
Oak Park Unified School District	Oak Park School District
Medea Creek Middle School	Medea Creek School
Oak Park CERT	Oak Park CERT
Area 2 Central Analyst	Area 2 Analyst

ACS Area 2 Emergency Nets

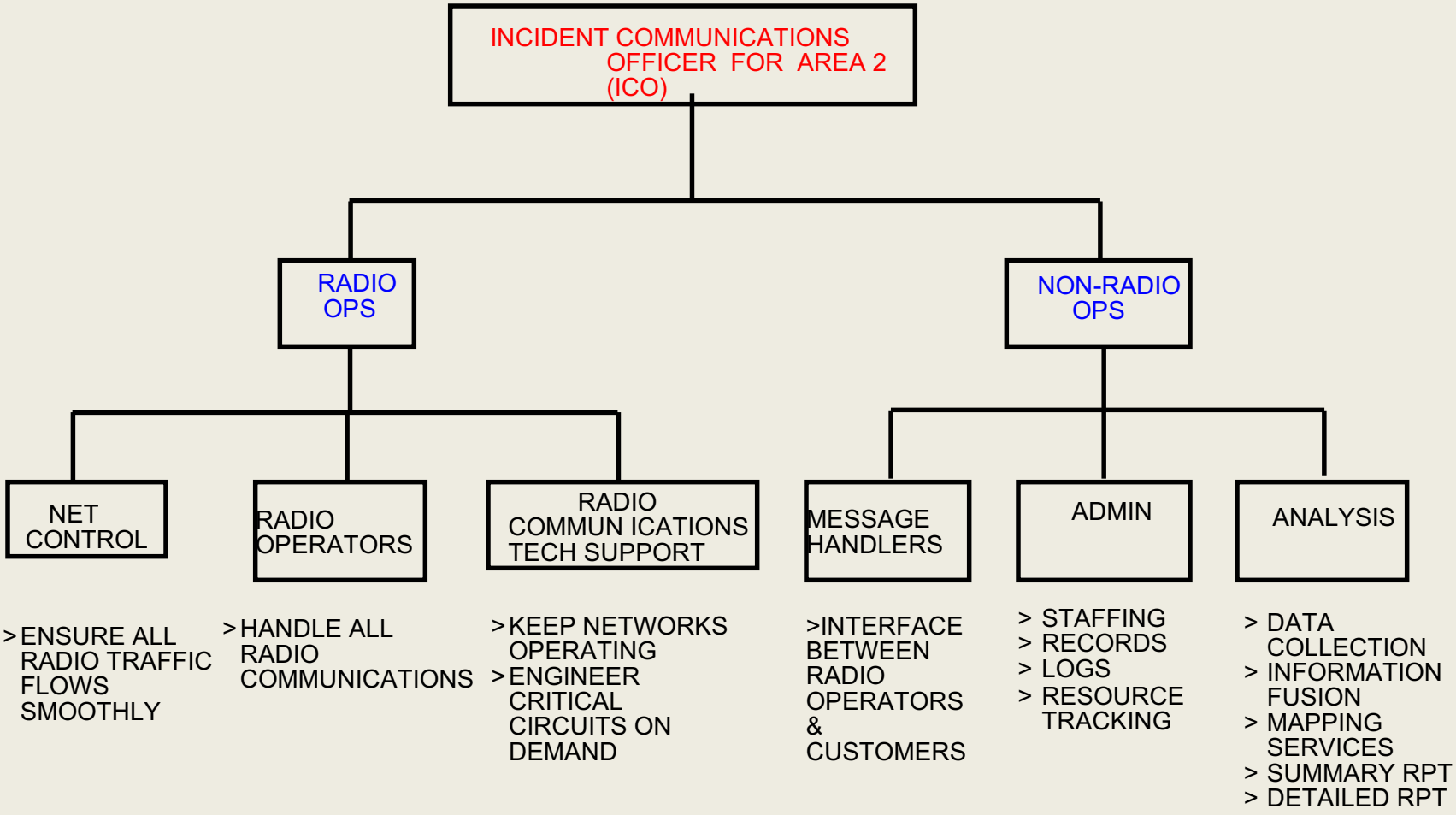
Net	Frequency	Off Set	PL	Repeater Name	Call
Area 2 Voice Net	146.885 MHz	minus	127.3 Hz	BOZO	N6JMI
Area 2 Info-Net	147.850 MHz	minus	94.8 Hz	Grissom	K6AER
Area 2 Voice Simplex	146.445 MHZ			.	
Area 2 - Voice 220 MHz Net	224.700 MHz	minus	156.7	Hughes	K6HB
Area 2 Analyst Net	223.580 MHz			Packet Simplex	
Area 2 Customer Net	449.440 MHz	minus	131.8 Hz	Amgen	W6AMG
Area 2 Maintenance Net	447.020 MHz	minus	127.3 Hz	Rasnow	KC6IJM
L.A. County DCS-22	147.225 MHz	plus	94.8 Hz	DCS-22	K6DCS

Other Frequencies

Adjacent County Rpt					
Net	**Frequency**	**Off Set**	**PL**	**Repeater Name**	**Call**
L.A. Mt. Dissapointment	145.300 MHz	minus			K6CPT
L.A. County DCS-22	147.225 MHz	plus	94.8 Hz	DCS-22	K6DCS
Santa Barbara Broadcast Pk.	147.000 MHz	plus	131.8 Hz	Broadcast Pk	WB6OBB
Santa Barbara Santa Ynez Pk	145.180 MHz	minus	131.8 Hz	Santa Ynez Pk	WA6COT
Santa Barbara Downtown	146.790 MHz	minus	131.8 Hz	Downtown	K6TZ
County Simplex Freq.					
Area	**Frequency**				
Area 1 Simplex	145.510 MHz				
Area 2 Simplex	146.445 MHz				
Area 3 Simplex	146.550 MHz				
Area 4 Simplex	146.595 MHz				
Area 5 Simplex	147.555 MHz				
Area 6 Simplex	147.510 MHz				
Area 7 Simplex	147.540 MHz				
Area 8 Simplex	146.535 MHz				
County Wide Simplex	145.615 MHz				

STAFFING

ACS / ARES AREA-2 STAFFING POSITIONS



ECSS EOC Radio Room Staffing (per shift)

- ACS County Voice Net
  - 1 radio operator for County Voice Net
  - May operate HF Net as needed
  - May operate DCS Interop Net as needed
  - May operate Simplex as needed
- ACS Area 2 Net / Info- Net
  - 1 radio operator for Area 2 Nets
  - May operate 220/440 as needed
- ACS Area 2 Analyst / Digital Nets
  - 1 radio operator
  - Operate Info-net

ECSS EOC Radio Room Staffing

- Message Handlers
  - 2 Message Handlers providing the interface between ECSS EOC personnel and ACS radio operators.

- Area 2 Operations Officer Position
  - 1 Area 2 Operations Officer
  - 1 Area 2 Administrator
  - Area 2 Operations Officer controls ACS operations within Area 2 during an emergency.
  - Area 2 Operations Officer reports to the Ventura County ACS Incident Communications Officer.

Thousand Oaks EOC Staffing (per shift)

- ACS Area 2 Net
  - 1 radio operator for Area 2 Net
  - May operate 220/440 band as needed
  - May operate Simplex as needed
- ACS County Voice Net & ACS Area 2 Analyst
  - 1 radio operator for County net if TO is Lead EOC
  - May operate Info-Net if TO is Lead EOC
- ACS Digital Nets & HF Net
  - 1 Digital operator
  - HF operator
- Message Handlers as available

All EOC Staffing (per shift)

- ACS Area 2 Net
  - 1 radio operator for Area 2 Net
  - May operate 220/440 Band as needed
  - May operate Simplex as needed
- ACS Area 2 Digital Net
  - 1 radio operator for Digital Net
- ACS Area 2 County Net/Analyst
  - 1 radio operator for County/Analyst interface
- Message Handlers as available

OPERATIONS

Emergency Communication

Voice

- 2 Meter
- 220 band
- 440 band
- HF Band
- 6 Meter
- Simplex

Digital

- Fldigi
- Packet
- Winlink
- CW/Morse Code

Field Operations

- Handhelds
- Trailers

Training and Testing

- **Training**
  - –Voice and digital training conducted on-the-job and scheduled classroom instruction
  - –Self study used for FEMA courses
- **Operational Readiness Tests**
  - –Area 2 ORTs conducted monthly
  - –All Area 2 EOCs staffed
  - –Training conducted in each EOC
  - –Different scenarios practiced each ORT

Management Team

- Section Emergency Coordinator: John Kitchens NS6X
- District Emergency Coordinator: Rob Hanson W6RH
- Assistant DEC: Rick Tate KQ6NO
- Area 2 Emergency Coordinator: Zak Cohen N6PK
- Area 2 Assistant ECs:
  - –Andy Ludlum K6AGL
  - –Stu Sheldon AG6AG
  - –Charley Pember KG6CLT

ACS / ARES

- Providing Emergency Radio Communications:
  - Anywhere
  - Anytime
  - Under any conditions