



# Disaster Response Plan and How We Fit In

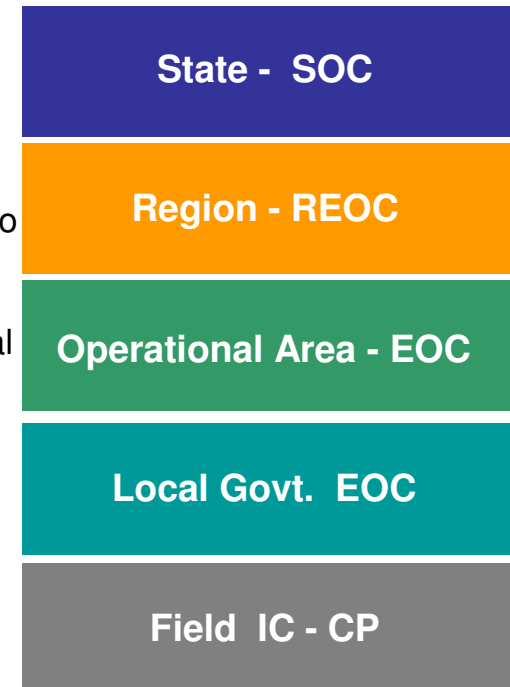
Presentation to the  
Torrance Amateur Radio Association

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LA County Disaster Communications Service  
06 February 2019



# Emergency Management Handled at the Lowest Level Possible

- **Field** – Carry out *tactical decisions and activities in direct response to an incident or threat*. The Incident Commander (IC) operates from a Command Post (CP)
- **Local Government** – Cities and special districts *manage and coordinate the overall emergency response and recovery activities* within their jurisdiction. Local governments are required to use SEMS when their EOC is activated or a local emergency is declared in order to be eligible for state reimbursement.
- **Operational Area (OA)** – An OA encompasses a county's boundaries and all political subdivisions located within that county, including special districts. The OA facilitates and/or *coordinates* information, resources and decisions regarding *priorities among local governments within the OA*. The OA serves as the coordination and communication link between the Local Government Level and Regional Level.
- **Region** – The Regional Level manages and *coordinates* information and *resources among OAs within the mutual aid region* and also *between the OA and the state level*. California is divided into three Cal OES Administrative Regions – Inland, Coastal and Southern. The Regional Level operates from the Regional Emergency Operations Center (REOC).
- **State** – The state level of SEMS prioritizes tasks and *coordinates state resources* in response to the requests from the Regional level. The state level also serves as the *link between the state and the federal emergency response system*. The state level requests assistance from other state governments and coordinates with the Federal Emergency Management Agency (FEMA) when federal assistance is requested. The state level operates from the State Operations Center (SOC).

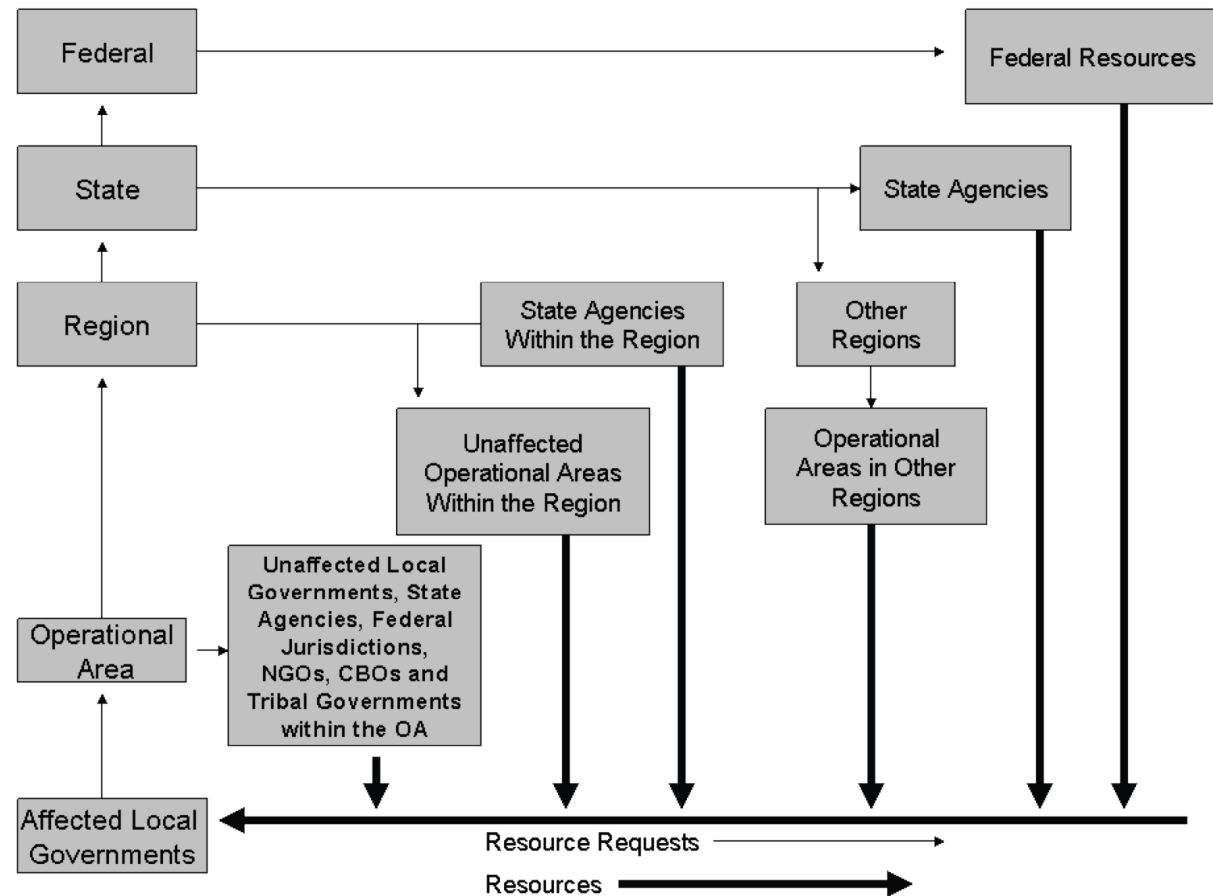


Source State of California Emergency Plan



# Mutual Aid Flow of Requests and Resources

- At each level when resources are overwhelmed, the mutual aid process continues
- Counties are the state's Operational Areas
- Once a county emergency is declared, the Sheriff is the Director of Emergency Operations
- When normal means of communication are unavailable, amateur radio is pressed into service both up and down the chain

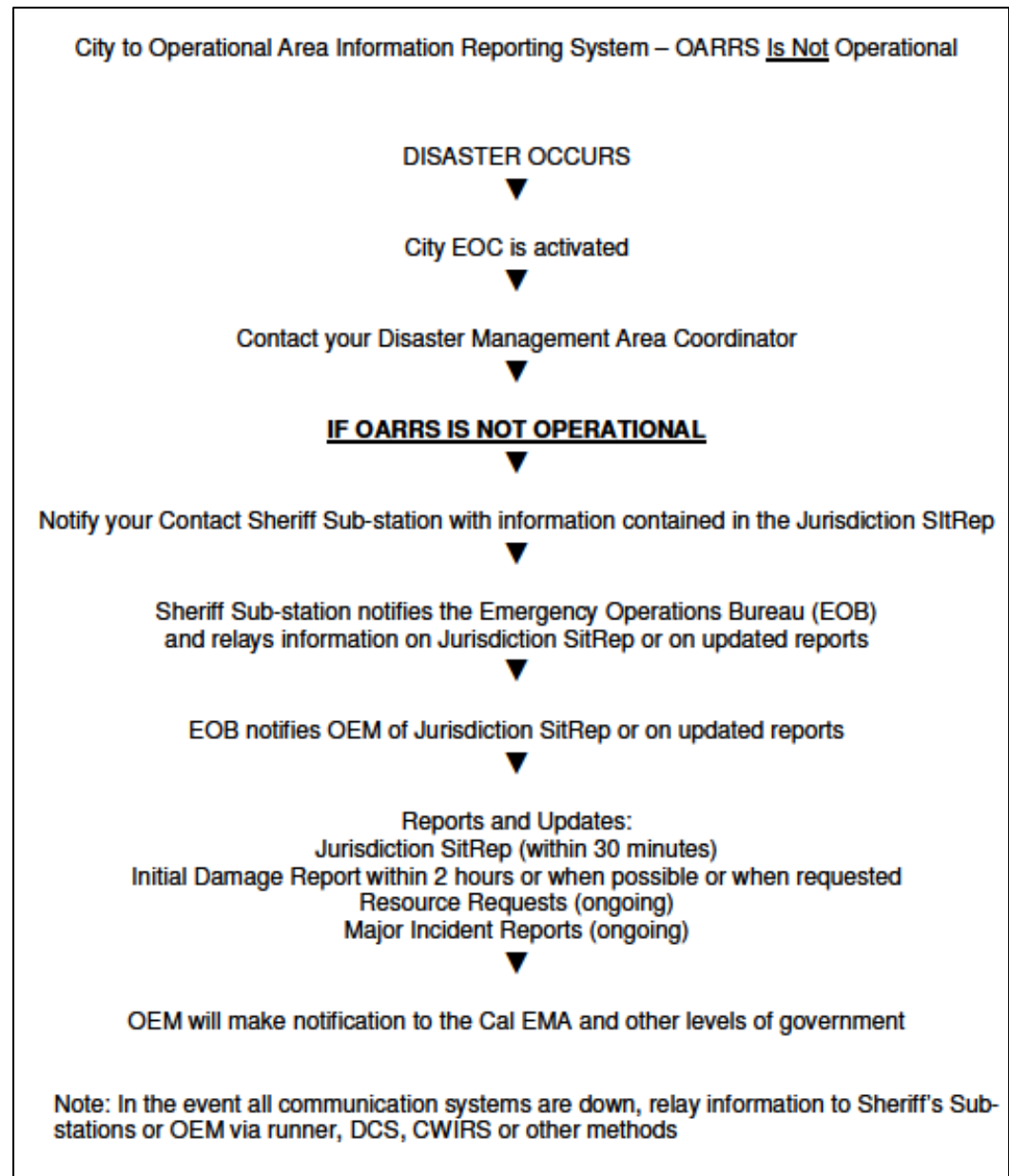


Source State of California Emergency Plan



## City to OA Info Flow

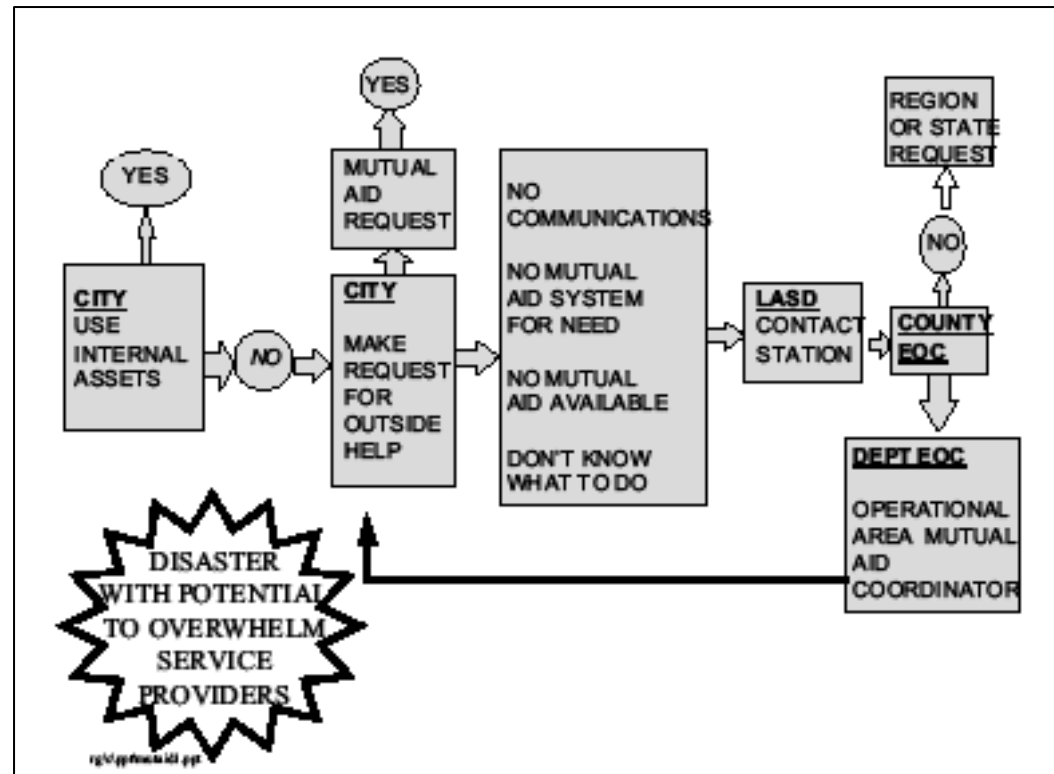
- Operational Area Response and Recovery System (OARRS) is the normal way cities interact with the County EOC
  - Web based automated system for collecting disaster info
  - Relies on the Internet
- The next option is the Countywide Integrated Radio System (CWIRS) 800 MHz P25 trunked radio system
  - 88 cities
  - ~16 talkgroups
- What happens when they are not available?





# City Assistance Requests

- When resources are overwhelmed cities seek mutual aid
  - From adjacent cities or
  - From the Operational Area
- If mutual aid is not available due to
  - Lack of normal communications
  - Lack of an existing system
  - City has been so devastated that managers are not sure of what steps to take
- Request for Operational Area support will be made via the city's "contact" Sheriff Station
- If normal means of communication are down, amateur radio steps in.



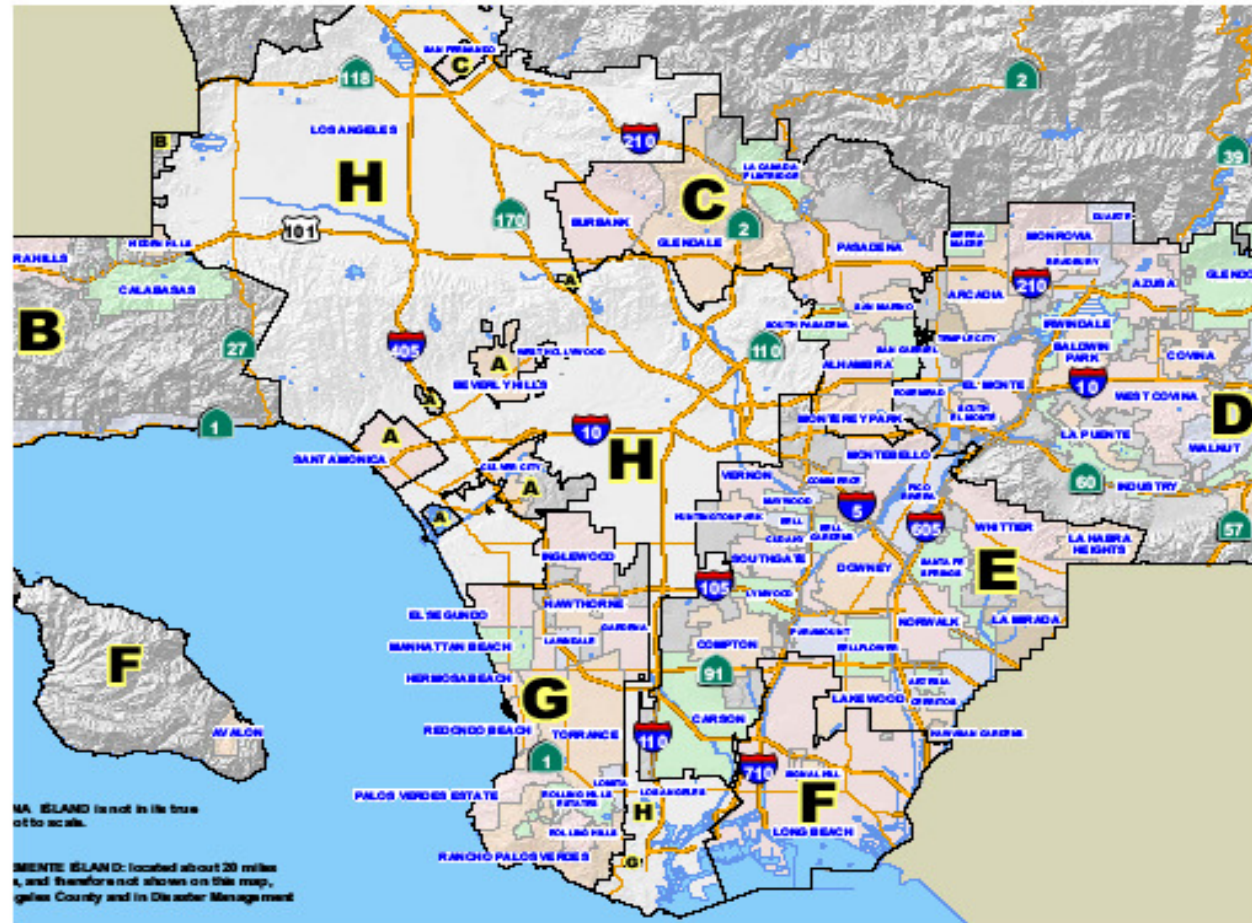
Source LA County Operational Area Emergency Response Plan





# Los Angeles County Disaster Management Areas

- The local level is the individual city and the other cities in their Disaster Management Area
- Ours is Area G
  - 14 Cities
  - 2 Sheriff Stations
- Fire Departments routinely get mutual aid from other area cities and the County



Source LA County Office of Emergency Management



# DCS for Coverage for Area G

- South LA DCS has been vacant for at least a decade
- Lomita has the critical mass to support both
- Combining the Districts is a practical solution
- Common frequency plan and staffing
- Provides cohesion to Area G

**Area G City Contact Sheriff Stations**

City	Primary Sheriff Station	Alternate Sheriff Station
EL SEGUNDO	South Los Angeles Station 3	Carson Station 16
GARDENA	South Los Angeles Station 3	Carson Station 16
HAWTHORNE	South Los Angeles Station 3	Carson Station 16
HERMOSA BEACH	South Los Angeles Station 3	Lomita Station 17
INGLEWOOD	South Los Angeles Station 3	Carson Station 16
LAWNDALE	South Los Angeles Station 3	Lomita Station 17
LOMITA	Lomita Station 17	Carson Station 16
MANHATTAN BEACH	South Los Angeles Station 3	Carson Station 16
PALOS VERDES ESTATES	Lomita Station 17	Carson Station 16
RANCHO PALOS VERDES	Lomita Station 17	South Los Angeles Station 3
REDONDO BEACH	Lomita Station 17	Carson Station 16
ROLLING HILLS	Lomita Station 17	Carson Station 16
ROLLING HILLS ESTATES	Lomita Station 17	Carson Station 16
TORRANCE	Lomita Station 17	Carson Station 16





# Disaster Communications Mission

## LA County DCS

- Primary mission – Support emergency management at the county level when normal means of communication fail
  - Providing communications assets county wide and staffing to the County/Operational Area EOC, Sheriff's Stations and other county agencies
  - Provide interoperability with the city radio organizations and the Governor's Office of Emergency Services (OES) Auxiliary Communications Service for status and resource requests up and down the disaster response structure
- Secondary mission - Support mutual aid and augment the emergency communications needs of the cities
  - Support City EOCs
  - Field operations
- Conduct events and training to improve emergency communications skills

***TARA DSV Mission is analogous at the city level***

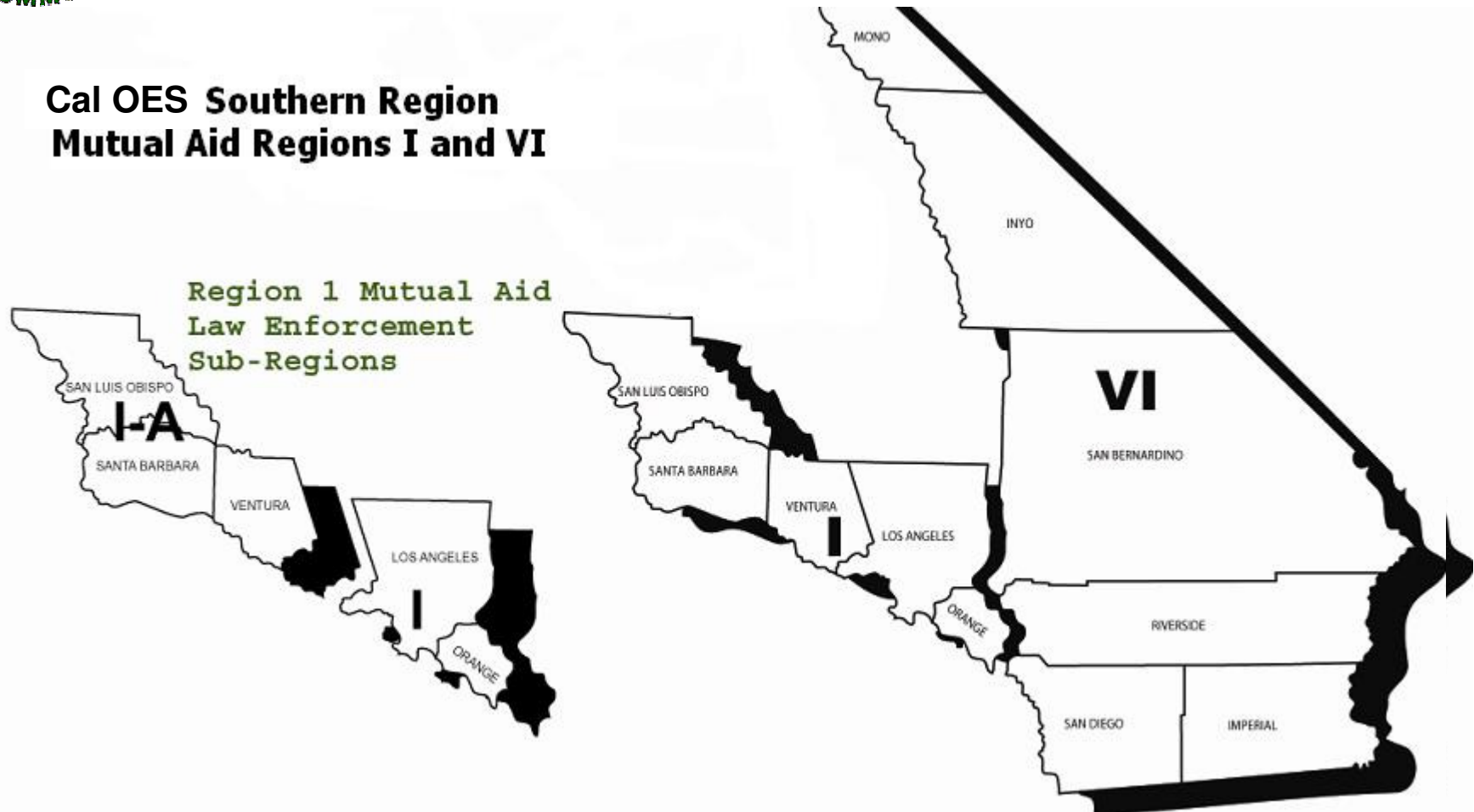






# Cal OES Southern Region Covers 11 Counties

## Cal OES Southern Region Mutual Aid Regions I and VI

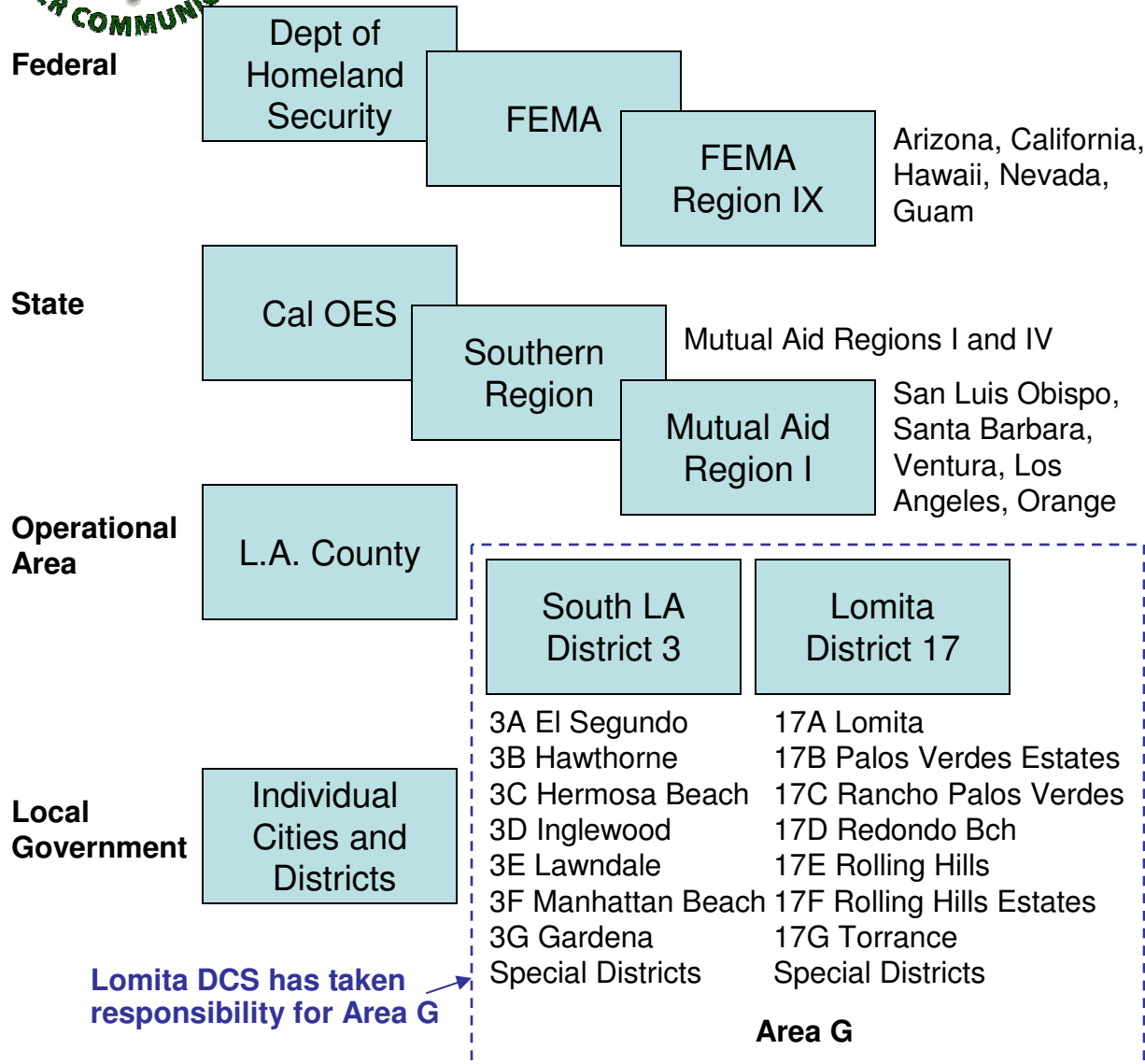


- Area managed by Southern Regional EOC

Source State of California Emergency Plan



# Levels of Emergency Management Applied to Us



## Auxiliary Communication Links & Nets

- **DHS/FEMA NOC** *WGY900*  
Washington
  - *Region IX Oakland* *WGY909*  
FNARS\*, SHARES\*\*  
Federal Frequencies
- **Cal OES SOC**  
Sacramento (Mather)  
STACOM\*\*\* State HF *KNHH558*  
CESN\*\*\*\* *W6EMA*  
40m, 75m, 160m
- **Cal OES REOC**  
Los Alamitos *K1OES*  
SW ACS UHF net
- **L. A. County CEOC** *K6CPT*
  - County DCS VHF nets
- **Station 3 & 17 EOCs** *W6LMT*
  - District DCS VHF/UHF nets
- **City Groups** *Various*
  - City VHF/UHF nets

\*FEMA National Radio System

\*\*SHARed RESources HF Radio Program

\*\*\*STAtE COMMUNICATIONS Net

\*\*\*\*CalifORNIA Emergency Services Net



# Lomita DCS Radio Room

- Every Monday we operate
  - County nets
    - 2m, 220, 6m & 10m
  - District nets with the city organizations
    - Check into city nets
    - Cross link W6TRW 2m + K6RH 440
    - 2m simplex, 220 simplex
    - PV West 440, voice and digital
- We support various other exercises and drills like the monthly PVPUSD Schools Net



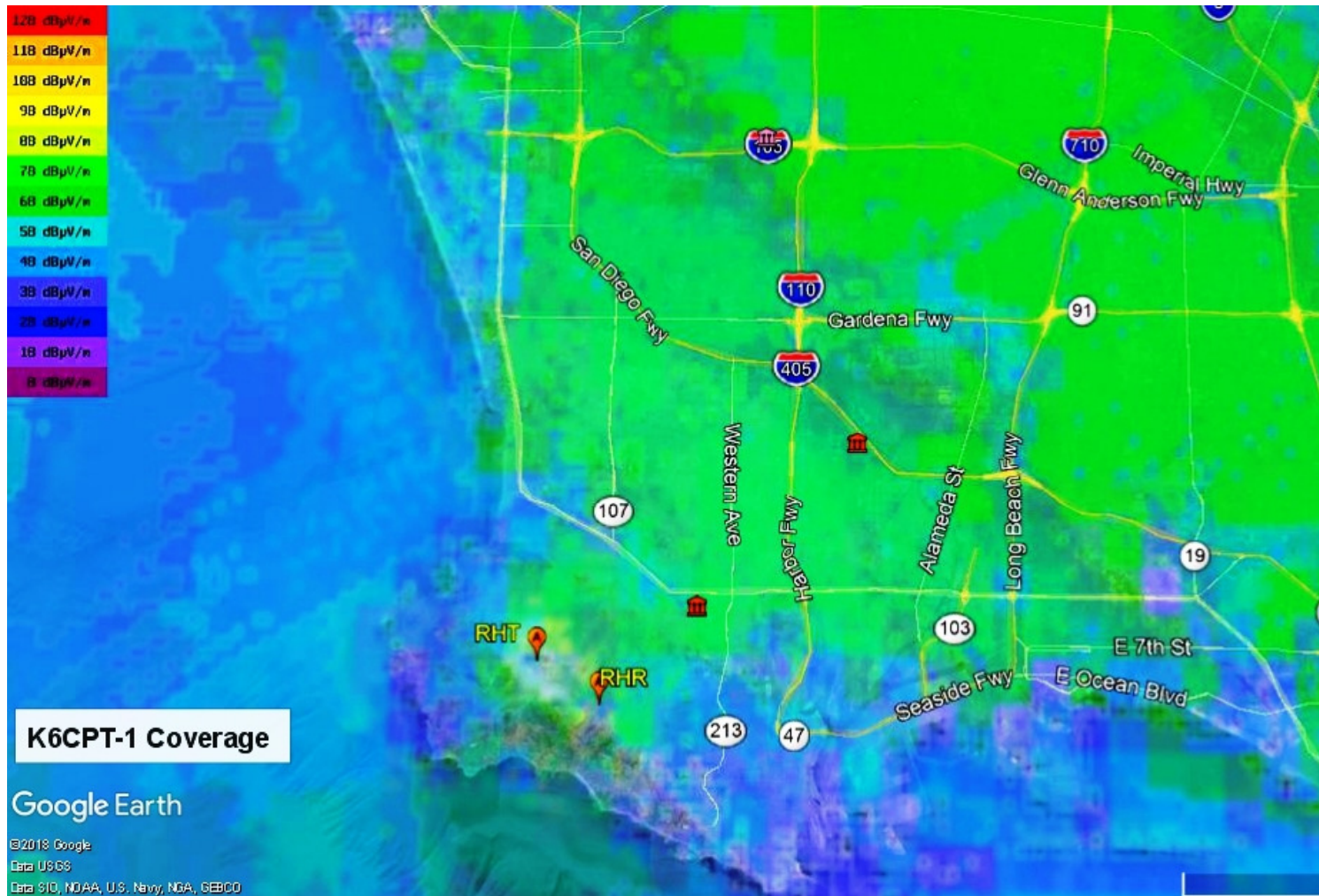




# County Repeaters We Use

## 7-Site Simulcast System South Bay Coverage

Simulcast  
System  
Goal is to  
have  
hand-held  
coverage  
anywhere  
in the  
County

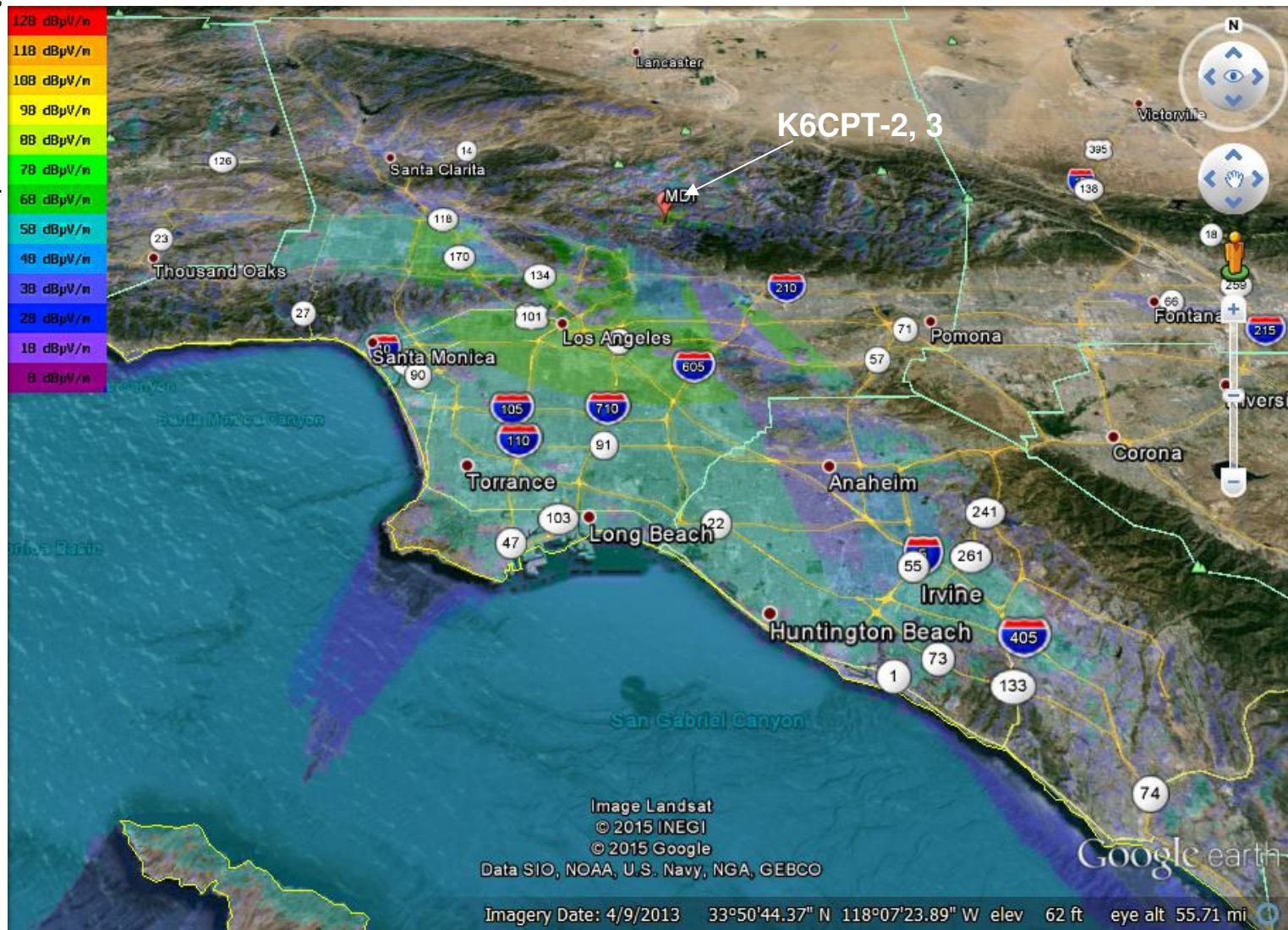






# County Repeaters We Use County 2m + 220 Coverage

Mt.  
Disappoint-  
ment hosts  
the County  
220  
repeater

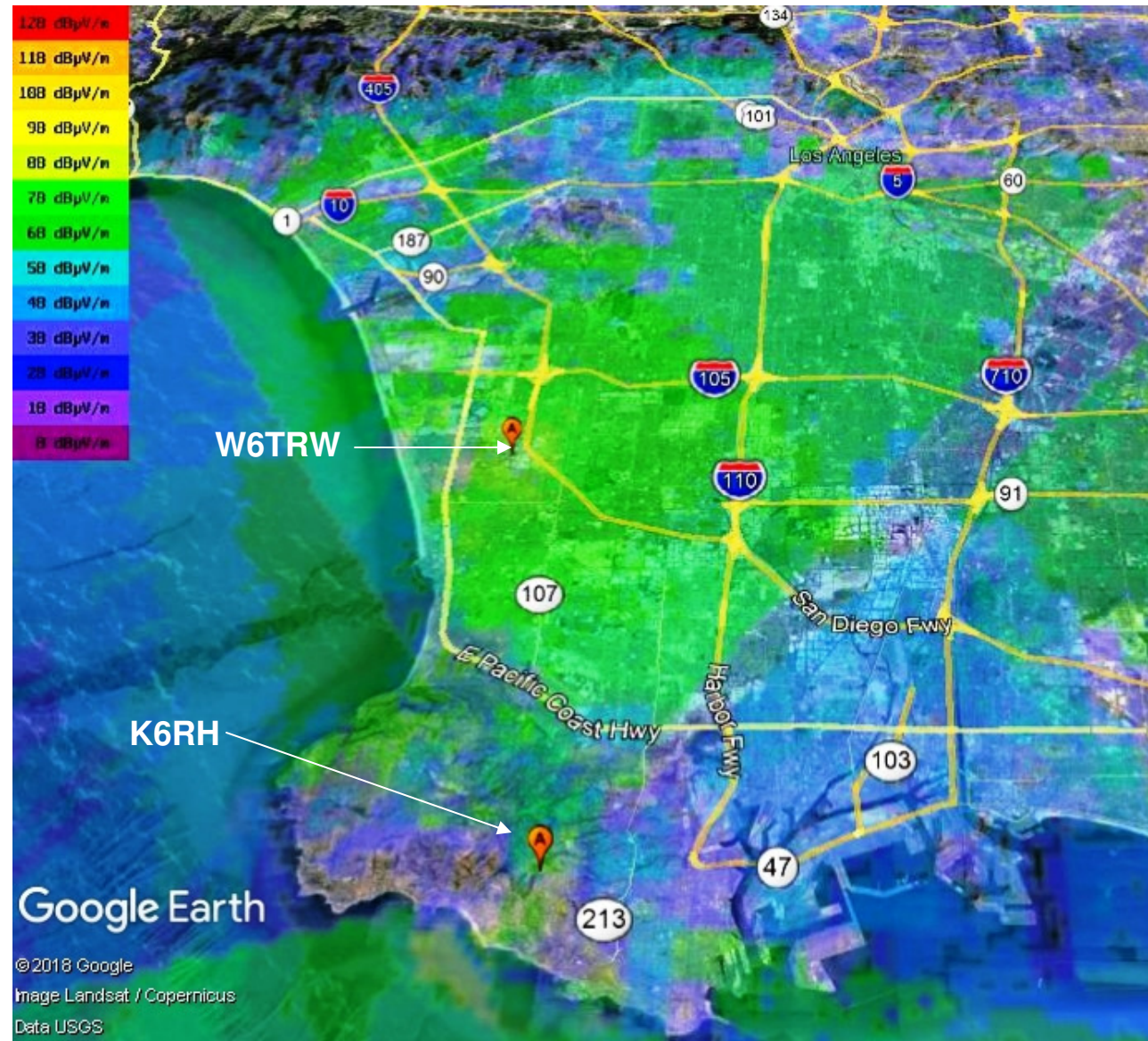






Linking two  
repeaters  
provides good  
coverage over  
Area G

## District Repeaters We Use Linked District Coverage





# Digital Communications

## Narrowband Emergency Messaging System

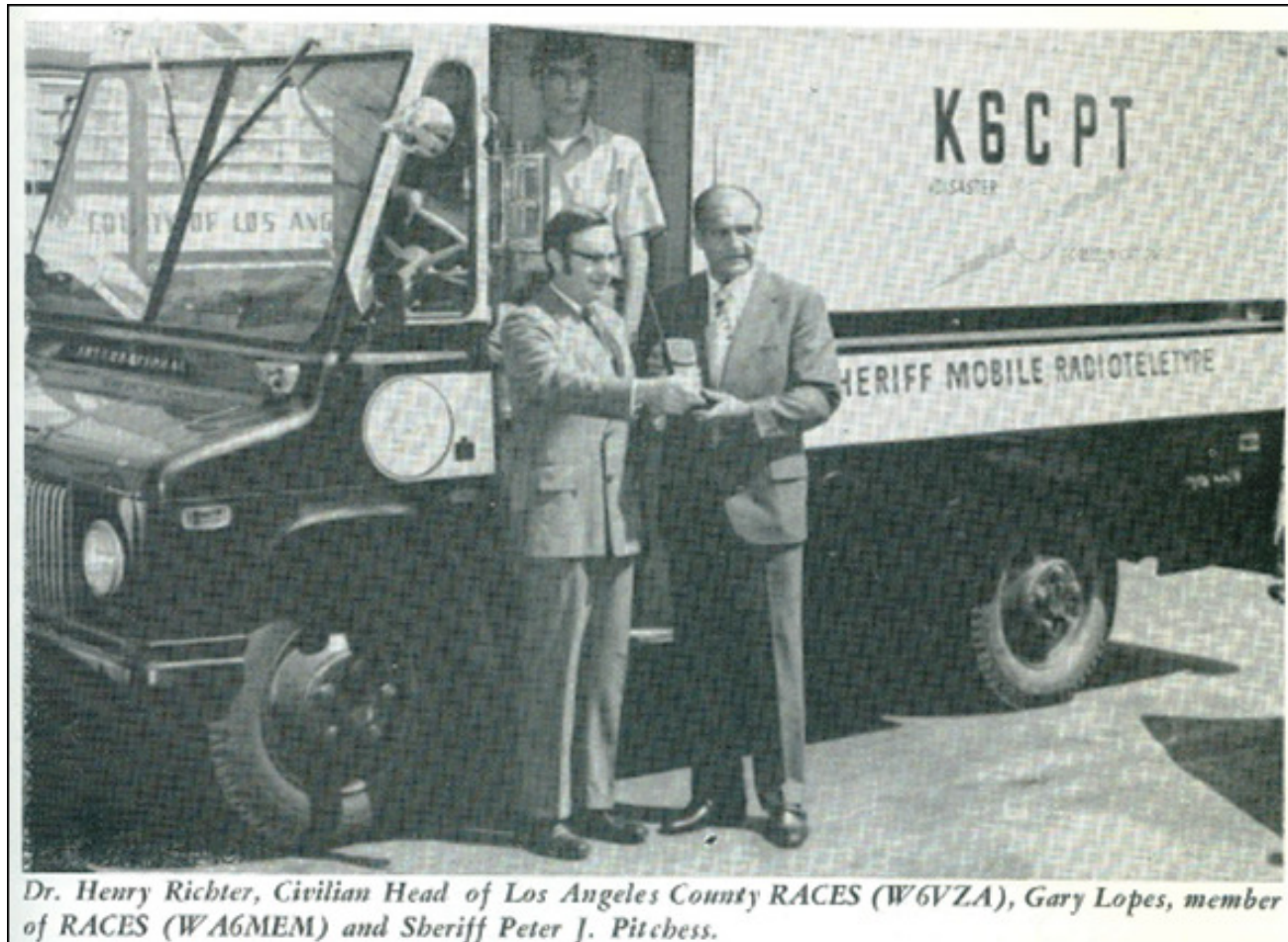
- Some disaster response traffic is better suited for digital mode than voice.
  - Voice is too slow and error prone for long or involved messages
- NBEMS – a simple and easy way to send error-free digital messages
  - You don't have to buy an expensive modem or software
  - You don't even need a dedicated connection to your radio
- NBEMS produces messages on standard forms used in disaster management
  - Incident Command System (ICS)
  - Red Cross
  - ARRL Radiogram
  - Military Auxiliary Radio System
  - CSV spreadsheets
- NBEMS works with Windows, Linux and Mac computers and can be used on HF too







## Digital is Not New



*Dr. Henry Richter, Civilian Head of Los Angeles County RACES (W6VZA), Gary Lopes, member of RACES (WA6MEM) and Sheriff Peter J. Pitchess.*

WA6MEM is the K6RH trustee



## Exercise the Plan with Drills

- Routine nets to demonstrate interoperability
- Great Shakeout – an opportunity every October to test the amateur disaster radio plan by passing relevant traffic
- Simulate all primary methods of communication unavailable:
  - Landline telephones, cell phones and the internet OARRS (Operational Area Response and Recovery System) not available. CWIRS talkgroups are overloaded.
  - Amateur radio is the only reliable mechanism
  - Cities and county departments assess the impact
  - Cities send their initial Situation Report (SitRep) to their Contact District Sheriff Station DCS by voice or NBEMS ICS 213; update as necessary
  - Cities send their Resource Requests (if any) to their Contact District Sheriff Station DCS by voice or NBEMS ICS 213
  - Contact Sheriff Station DCS forwards reports to DCS Station EOB for the County EOC

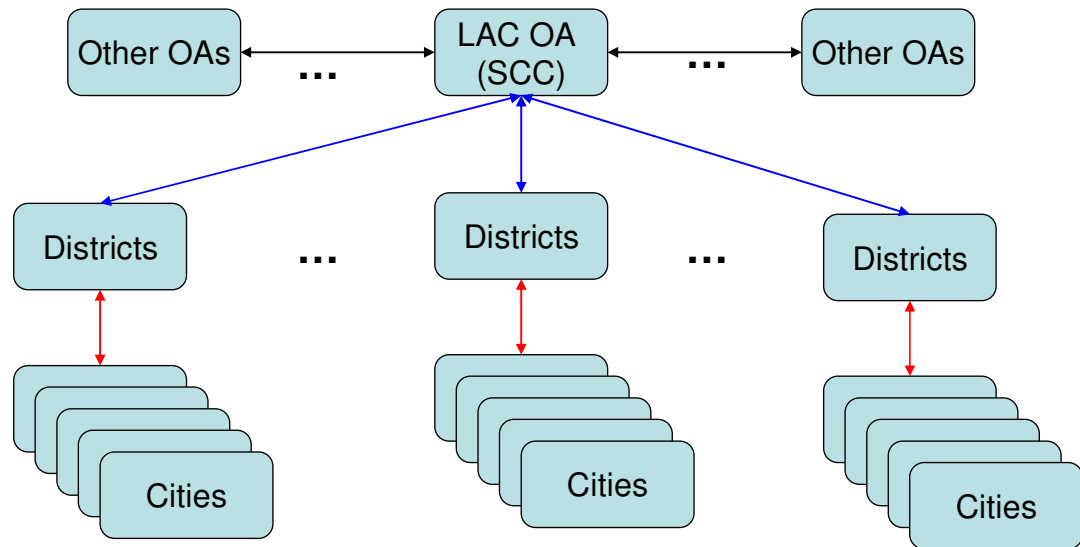


# Cal OES Southern Region May Radio Rodeo

- Demonstrate connectivity from the city to the Southern Region EOC using multiple frequencies
- Emphasis on mobile assets



## OES Southern Region Exercise Structure



- ←→ Cal OES Southern Region Frequencies
- ←→ LAC DCS County Wide Frequencies
- ←→ Each District's Tactical Frequencies





# Communications & Fleet Mgmt Bureau

## Mobile Communications Units

- Several deployable communications assets
- Most capable of desolate, off road operations
- Support
  - Interagency communications
  - Remote dispatch
  - Mobile repeaters
  - Satellite communications
  - HF communications
- Amateur radio equipment being installed
- DCS participates with the CFMB Technical Reserve Company in weekly maintenance and quarterly exercises
- MCU A made it to HAMCON at the Torrance Marriott in 2015 & 2017





- When infrastructure fails, we have HF
- CFMB has acquired
  - Harris military manpacks
    - EMP protected
  - Barrett HF base/mobile
  - Experimenting with Rockwell-Collins/AIRINC Urgentlink HF cellular
  - Obtained SHARES license
  - All with Automatic Link Establishment
  - Plan for Sheriff Stations to have HF NVIS antennas
- Operating on STACOM, Urgentlink, SHARES and amateur HF frequencies
- CFMB relies on DCS to operate the HF radios

## HF Initiatives

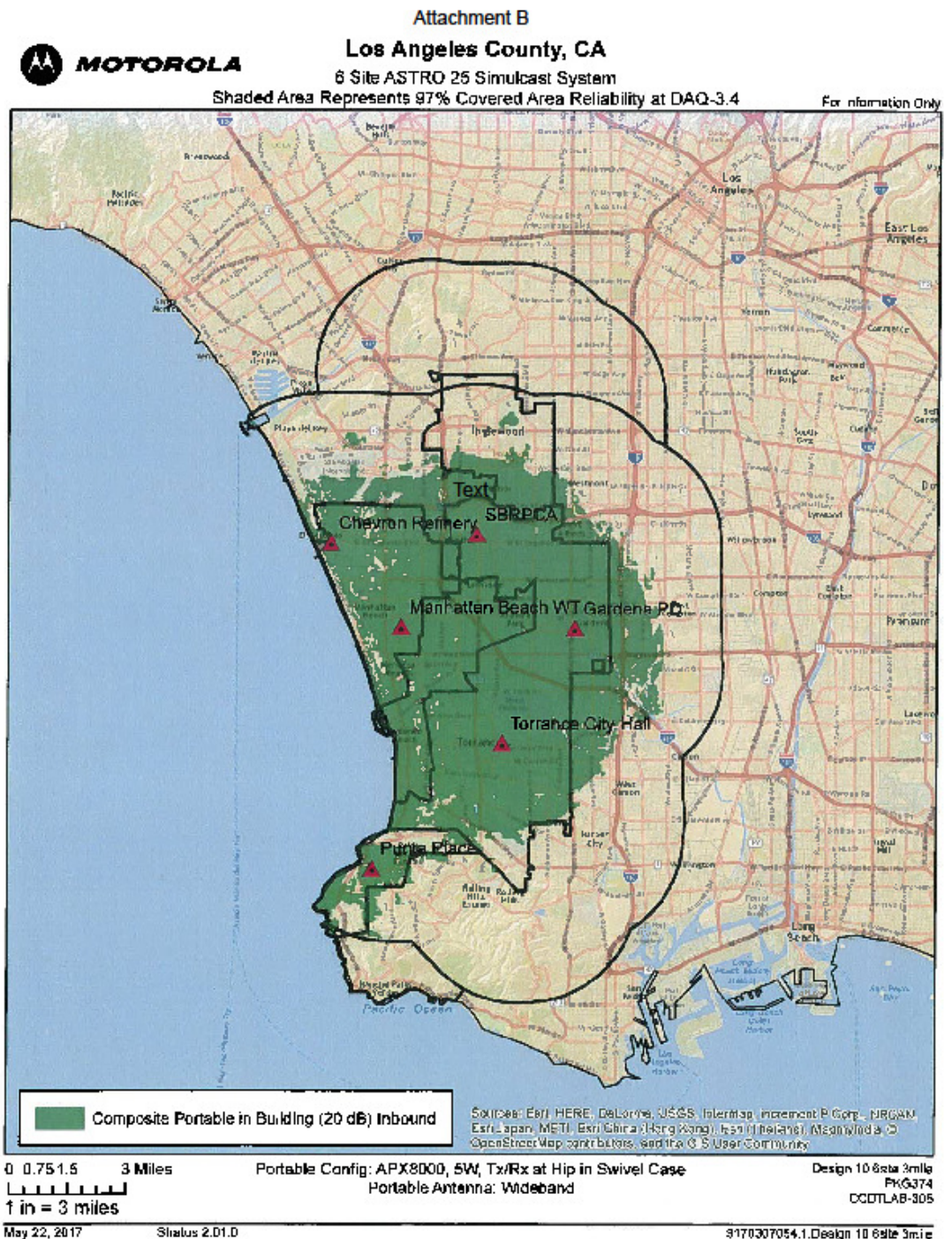






# Interoperable Network of the South Bay

- South Bay Public Safety Agencies will transition to a P25 trunked system
  - Includes SBRCC cities plus Torrance and Redondo
- Part of the ICI System
- Testing has started
- Frequencies at 6 sites
  - 470.0125a
  - 470.0375a
  - 470.8125
  - 482.500c
  - 482.600a
  - 506.500
- PD encryption planned







# It's All About Interoperability

