

Emergency Alert System (EAS)

Communications Operations
Orange County, CA

CAUTION!

- **TLAs** ahead!
 - Three-letter acronyms (TLAs)
- Many abbreviations are used in the technical nomenclature of the public warning systems
- Ask questions at any time

History

- Sequence of USA public alert systems
 - None for 175-years
 - CONELRAD
 - EBS
 - EAS & WEA
 - IPAWS

FEMA Vision

- IPAWS
 - Integrated Public Alert & Warning System
 - [IPAWS Web Video](#)
 - 5-min



FEMA

CONELRAD

- CONTROL of ELECTromagnetic RADIation
- 1951-1963
- Turned off TV & FM
- Rotated CD transmissions
 - AM 640 & AM 1240
 - To confuse Soviet bombers
- Civil defense alerts
- No weather info



CONELRAD Key Station Relay

- Air Defense Control Centers (ADCCs)
 - Controlled CONELRAD activation
 - Hardwired to "basic key stations" (AM broadcasters) to control their transmitter
- CONELRAD Rules amended 1957
 - Amateur Radio must monitor key stations
 - Checking at least every 10-minutes
 - Validated amateur radio transmitter was allowed on air

EBS

- Emergency Broadcast System (EBS)
- 1963-1997
- Presidential access to public
- Activated 20,000 times
 - None for national emergency



EAS

- Emergency Alert System (EAS)
- National public warning system
 - Presidential access within 10-minutes



EAS Coordination

- Coordination
 - FEMA
 - Federal Communications Commission (FCC)
 - National Weather Service (NOAA)

EAS Providers to Public

- Broadcasters
- Cable television systems
 - Cox
 - Time Warner
- Wireless cable systems
- Satellite digital audio radio service (SDARS)
 - Sirius XM
- Direct broadcast satellite (DBS)
 - Dish
 - DirecTV



EAS Locally

- The system also may be used by state & local authorities
 - Emergency information
 - AMBER alerts
 - Weather information targeted to specific areas
 - Evacuation orders

PEP

- Primary Entry Point (PEP)
 - Thirty (30) radio stations are National Primary Stations (NPS)
 - Mount Weather Emergency Operations Center
 - FEMA CP
 - Exec Branch Sub



Sources of OC Alert

- LP-1 & LP-2
 - Local Primary source
 - Each area requires two (2) sources
- SR
 - State Relay
- NOAA Weather Radio (NWR)
- Any other broadcast station

SAME Messages

- Specific Area Message Encoding (SAME)
 - SAME Header
 - Originator
 - Event type
 - Weather (flood, wind, winter storm, etc.)
 - Non-weather (Nuclear power, shelter-in-place, civil danger)
 - Administrative (tests)
 - Duration
 - Date/time
 - Attention signal
 - Audio announcement(s)
 - Digital end-of-message marker

WWG21

- NOAA Weather Radio (NWR)
- OC SAME code
 - 006059



OC Monitor Plan

- LP1: KWVE 107.9
 - KFVB 980
 - KFI 640
 - Control One 39.840
 - NWR 162.45
 - CLERS 158.79
- LP2: Control One
 - KWVE 107.9
 - KFVB 980
 - KFI 640
 - NWR 162.45
 - CLERS 158.790

All LP stations & CATV control points must monitor

- KWVE 107.9
- Control One 39.840

OC Residents

- Should have 24/7 EAS monitoring
 - SONGS
 - Flood/tsunami
 - Weather
- For others, too
 - For family at home (especially while you're away)
 - Neighbors & relatives
 - Working office

RMT

- Required Monthly Test (RMT)
 - Third Thursday, odd months, 10:50 AM
 - First Monday, even months, 04:50 AM
- RMT originates from Control One
- All stations must broadcast within 60-minutes

RST

- Required State Test (RST)
 - Annually
 - First Tuesday, April, 10:30 AM
 - Announces statewide ShakeOut drill
 - Must be carried live without delay
 - Monthly
 - Except April
 - First Tuesdays, odd months, 10:25 AM
 - First Tuesdays, even months, 9:50 PM
 - Coordinated with SONGS Fall annual test

To Activate Local EAS...

- Authorized agency
 - OCSD, OCFA, OC HCA, OC DES
 - City Manager, Police Chief, Watch Commander, Fire Chief, Battalion Chief
 - CHP
- Write the warning (max 2-min)
- Contact Control One or LP1
 - Authentication via callback
 - Originators read/record message
- Control One will distribute
 - Via CLETS, CCCS, OA Radio
- LP1 will broadcast

Current All Warnings

- National NWS [Text Warnings](#)
 - 24/7
 - Internet access (weather.gov)

Wireless Emergency Alerts (WEA)

- For cellphones
- Initiated April 2012
- 90-character message with special tones on *capable* devices
 - No registration required
- Started public service advertising June 2013



WEA = CMAS = PLAN

- Same thing
 - Wireless Emergency Alerts (WEA)
 - Commercial Mobile Alert System (CMAS)
 - Personal Localized Alerting Network (PLAN)



WEA Types

- Presidential Alerts
 - Alerts issued by the President or a designee
 - Opt out? NO



WEA Types

- Imminent Threat Alerts
 - Alerts that include severe man-made or natural disasters
 - Hurricanes
 - Earthquakes
 - Chemical leaks
 - Opt out? YES



WEA Types

- AMBER Alerts
 - Meet the U.S. Department of Justice's criteria to help law enforcement search for & locate an abducted child
 - Opt out? YES



Summary Review

- History
 - CONELRAD & EBS
- Current
 - IPAWS
 - EAS
 - WEA
- Monitor
 - KWVE, NWR, KFI
 - IDEC Tango, OC RACES
- Check cellphone carrier for capable devices
- Go-kit and travel ready?

Wrap Up

- Questions
- Answers
- Thank you!