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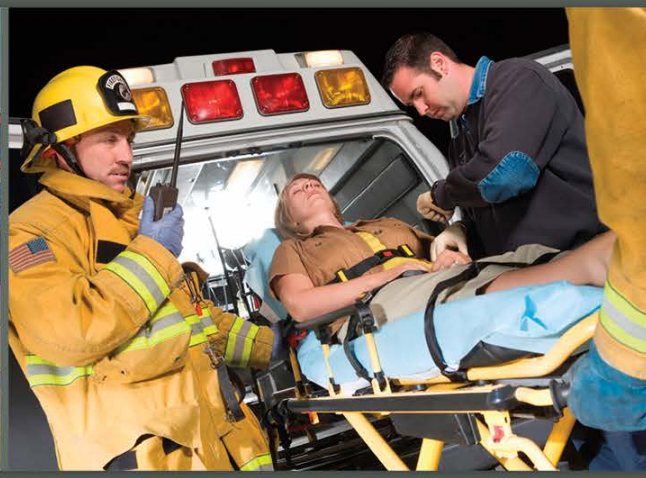
# California First Responders Network

August 13, 2014





"Purpose: To engage in regional and cooperative planning and coordination of government services to establish a wide-area interoperability public safety communications network."

# Need for Interoperability

- Los Angeles County incorporated 10,000,000 residents occupying 4,000+ square miles
- High profile attractions (e.g. Universal Studios, Airports, Harbors) and critical infrastructure at risk
- 81 public safety agencies with
  - 34,000 first responders
  - 17,000 secondary responders
- 40 Separate public safety communications systems
- Multi-jurisdictional responses and lack of communications compromises response effectiveness



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# LA-RICS Project History

- Feb. 2012 Congress passed the Middle Class Tax Relief and Job Creation Initiative of 2012 (H.R. 3630)
- April 2012 NTIA freezes BTOP grant pending FirstNet direction
- April 2012 LA-RICS placed open LMR/LTE procurement on hold to analyze impacts resulting from H.R. 3630
- Aug. 2012 LA-RICS Board of Directors voted to separate the project and issue two RFPs, one for each system
- Sept. 2012 Assembly Bill 1486 (Lara) enacted allowing limited CEQA exemption
- Oct. 2012 New RFP for LMR released
- Jan. 2013 LMR Proposals received
- Aug. 2013 New RFP for LTE released
- Aug. 2013 LMR Contract approved by JPA
- Mar. 2014 LTE Contract approved by JPA



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# PL 112.96 (H.R. 3630)

- In February 2012, Congress passed the Middle Class Tax Relief and Jobs Creation Bill
- NTIA established FirstNet Board to oversee National Public Safety Broadband Network (NPSBN)
- Requires that T-Band spectrum be vacated by 2023, in exchange for D-Block
  - Eleven major metropolitan areas affected:
    - Los Angeles, New York, Houston, Philadelphia, San Francisco, Boston, Chicago, Pittsburg, Washington, DC, Miami, Dallas
- H.R. 3630 provides for funding and spectrum assistance in moving public safety communications off T-Band

# A.B. 1486

- A.B. 1486 (Lara) provides LA-RICS a limited CEQA exemption until 2017
  - Project Site Criteria
    - Located on police, Sheriff or fire station sites
    - Publicly owned transmitter sites
    - Cannot be located in environmentally sensitive areas
      - » Wetlands
      - » Riparian areas
      - » Habitat of significant value
      - » Historical Significance
    - Monopoles shall not exceed 70 feet
    - LMR towers shall not exceed 180 feet
- Does not exempt project sites from NEPA clearance



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# LMR Spectrum Feasibility Study

- P.L. 112.96 (H. R. 3630) introduced considerable risk to a T-Band only deployment
  - Per FCC:  Build at your own risk
- Consideration was given for using existing available spectrum in the 700 MHz spectrum and gradual migration off T-Band
- Hybrid Feasibility Study conducted in May-June 2012
  - Minimum of 90 Channels needed in 700 MHz spectrum
  - Minimum of 160 Channels needed in T-Band spectrum
- Secondary Responders need strong consideration in response to large scale incidents
  - The DTVRS System will be sized to accommodate



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# LMR Project Update

- Two Proposals Received: January 3, 2013
- Contract Negotiations: April – June, 2013
- Contact Award: August, 2013
- Program deployed in five Phases:
  - Phase 1 – System Design (August 2013 – January 2015)
  - Phase 2 – Site Construction (October 2014 – March 2016)
  - Phase 3 – Supply Telecommunications System (February 2015 – November 2015)
  - Phase 4 – System Implementation (November 2015 – October 2017)
  - Phase 5 – System Maintenance (May 2018)



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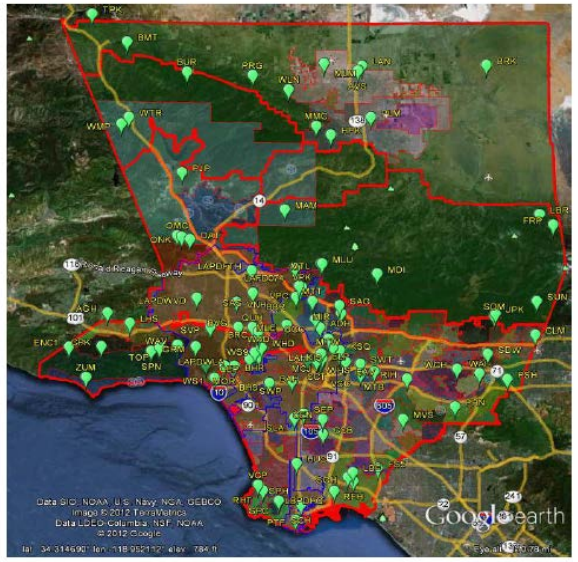
# LMR System Description

- There are 88 LMR sites identified for the LMR network in Los Angeles County
  - 55 lattice tower sites & 33 monopole sites
- CEQA & NEPA clearance required for all sites
- Single P25 controller used for both spectrums
  - Radio-to-radio communication between spectrums not visible to user
- Dual spectrum will allow use of existing equipment and user agency migration over 9 years

LA-RICS: Potential LMR Sites




(* 3 potential communications sites on Santa Catalina Island not shown on map)



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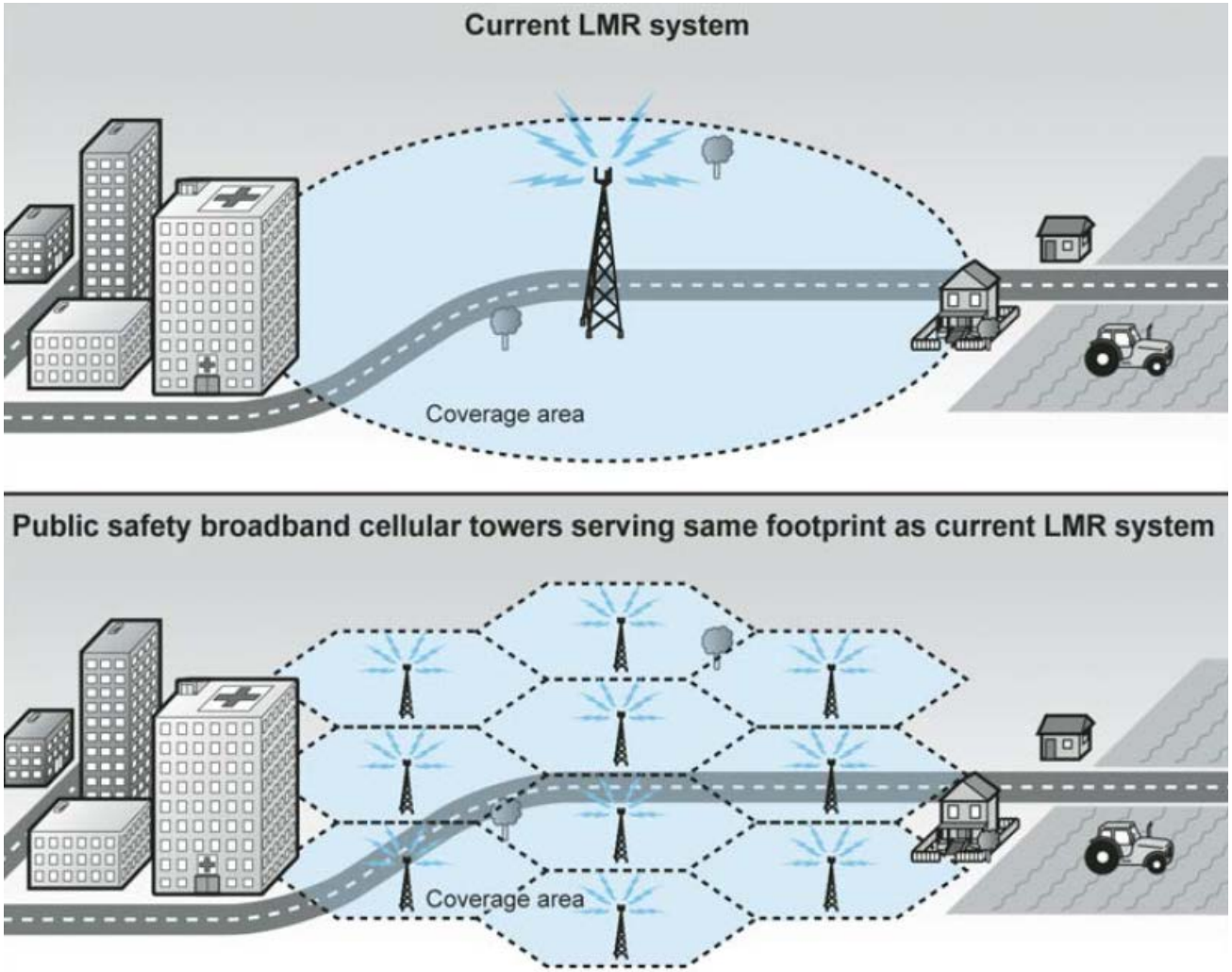
# Land Mobile Radio and LTE Cellular Coverage Differences



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# Broadband (LTE) Issues

- BTOP Grant Awarded to LA-RICS in 2010 - $154.6 million
- With passage of HR 3630, NTIA suspended use of funds for LTE equipment pending direction from FirstNet
- Spectrum Manager Lease Agreement between FirstNet and LA-RICS executed July 1, 2013
- NTIA lifts BTOP suspension
- BTOP funds expire September 30, 2015
- Contact Award: March 2014
  - 18 Month Program
  - Phase 1 – System Design – Jun 2014
  - Phase 2 – Site Construction - Sep 2014 – Jun 2015)
  - Phase 3 – LTE Equipment (Aug 2014 – Mar 2015
  - Phase 4 – Implementation (Oct 2014 – Aug 2015)



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# LA-RICS – Key Learning Conditions

- Leveraging and Managing Partnerships with Utilities and Secondary Responders
  - Identify potential partners (i.e. Utilities) and assets and the potential for integrating them into the PSBN
- Define and Ensure Network Mechanisms to Alert the Network Operator of Congestion Events that will Degrade Quality of Service (QoS) or Invoke Pre-Emption
  - Identify information needed by NOC operators to identify congestion issues
  - Identify Appropriate threshold levels when Users perceive a deterioration of QoS to an Unacceptable Level
  - Identification of Employing varying 3GPP techniques to minimize the perceived QoS Degradation
- Test and Validation of NPSTC Priority and QoS Requirements and Assessment of Priority/QoS Operational Management Alternatives



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# LTE Sites in LA County

- There are 229 monopole sites identified for the LTE network in all of Los Angeles County
  - 228 sites are CEQA exempt
  - NEPA clearance required for all sites
  - Heights will vary from 28’ – 70’ depending on community
  - Stealth and standard monopoles will be deployed
- 27 sites will have both LMR and LTE monopoles




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# LA-RICS Benefits to Public Safety

- Provides interoperable communications and shared data for multi-jurisdictional responses to small and large scale events
- Eliminates localized public safety communications systems and brings responders under a single interoperable system
- Improves responsive effectiveness by eliminating lack of communications across jurisdictional lines
- Supports County Strategic Plan Goal #1 (Operational Effectiveness) to provide the public with services that are both beneficial and responsive



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# LA-RICS Benefits to Public Safety cont.

- LTE provides a secure private data network for public safety using Long-Term Evolution (4G) technology to provide high-speed video and data access to all local first and secondary responders in the region
- LTE will be built to integrate with the nationwide, high-speed, public safety data communications network
- LMR and LTE improve operational efficiency of services by first and secondary responders
- LMR and LTE protect first and secondary responders who service the residents and businesses of their communities

*Topanga Peak – LA-RICS LMR Network*



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# Need More Info?

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