



# FirstNet in California Governance and Next Steps

November 20, 2014

This document was prepared by SAIC under contract with Cal OES using funds under award 06-10-S13006 from the National Telecommunications and Information Administration (NTIA), U.S. Department of Commerce (DOC). The statements, findings, conclusions, and recommendations are those of the author(s) and do not necessarily reflect the views of the NTIA, DOC, or FirstNet.

- **Vision**
- **Governance**
- **Next Steps**
- **The Future is Now (LA-RICS progress)**
- **Managing Expectations**



## VISION:

**To provide emergency responders with the first nationwide, high-speed, wireless broadband network dedicated to public safety**

**“FirstNet will be a force multiplier, enabling collaboration to help save more lives, solve more crimes and keep communities safer.”**

Jeffrey D. Johnson, Chief (Ret.)  
Chief Executive Officer — Western Fire Chiefs Association  
FirstNet Board Member

**SAIC**<sup>®</sup>

# FirstNet will Offer Public Safety Users:



## Communication

- Video
- Voice (non-mission critical)
- Messaging
- SMS/Text
- Data (Internet)



## Applications

- CAD, RMS, NLETS
- FirstNet applications (e.g., AVL)
- Syndicated applications
- Currently used Agency applications

## Services

- Records management
- Data storage
- Audio storage
- Database inquiries



## Capabilities

- Network monitoring and status
- Integrated solution and services
- Priority
- Hardened and secure
- Provisioning



# Future Vision: Emergency Medical Response



# FirstNet will enable Public Safety Applications

- Next Generation (NG) 9-1-1 texts, photos, data
- Live one- and two-way video in vehicles or via handhelds
- Large file transfer/download (floor plans, high res photos, heat maps, evacuation plans)
- Dynamic mapping, weather, traffic
- Multimedia Command & Control
- Situational Awareness (incl. asset, vehicle, personnel tracking)
- Remote control of robotic devices
- Database queries
- Field reporting



FirstNet's high speed data network can dramatically improve situational awareness



# Governance

# Governance – Federal Level

- **Federal Communications Commission**
  - 700 MHz public safety spectrum frequency holder
- **National Telecommunications and Information Administration (NTIA)**
  - Part of the Department of Commerce
  - Selected FirstNet Board of Directors

- **First Responder Network Authority (FirstNet)**
  - Managing entity for the public safety spectrum
  - Governing authority for the Nationwide Public Safety Network (NPSBN)



# Governance – State Level

- **State of California Governor’s Office**
  - Per the Act, designates single officer or governmental body to coordinate with FirstNet
  - Makes the Opt-In/Opt-Out decision
- **California First Responder Network Board (CalFRN)**
  - State’s governing body for FirstNet
  - Engages key public safety stakeholders across California
  - Works with Cal OES
- **California Office of Emergency Services (Cal OES)**
  - Designated state point of contact (SPOC) to coordinate with FirstNet
  - Chairs the CalFRN Board
  - Acts as administrator and financial manager

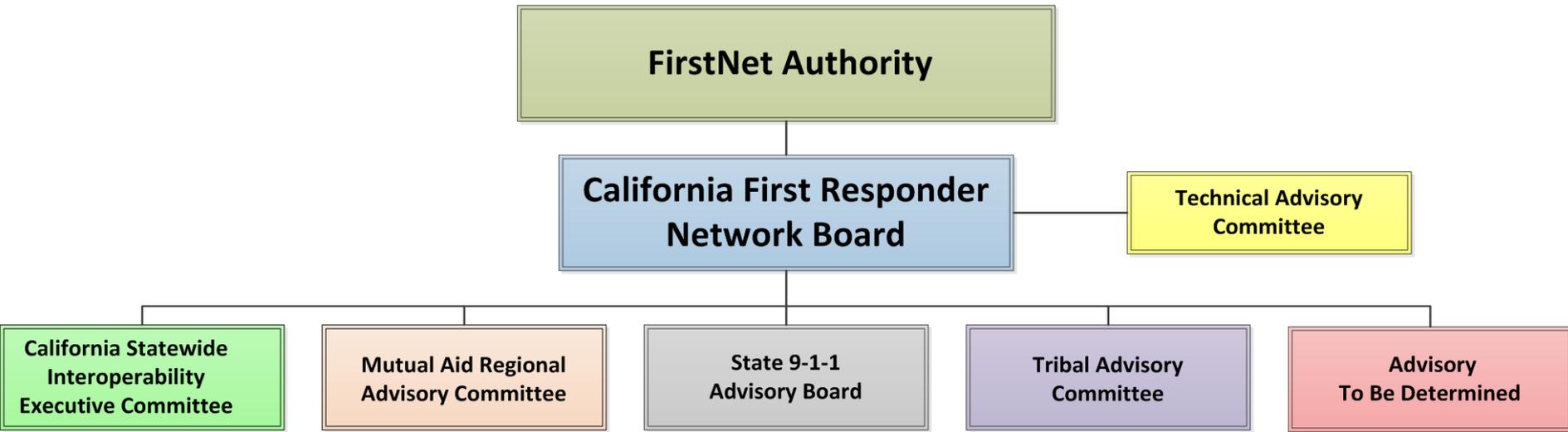


## California First Responder Network

Board includes representatives from:

- Public Safety Communications
- California Governor's Office of Emergency Services
- Department of Technology
- California Department Finance
- California Department of Forestry and Fire Protection
- California Highway Patrol (CHP)
- Emergency Medical Services Authority
- Bay Area Regional Interoperability Communications System (BayRICS)
- Los Angeles Regional Interoperability Communications System (LA-RICS)
- California Police Chiefs Association
- California Fire Chiefs Association
- California State Sheriffs Association
- Tribal, Governor's Office Tribal Advisor

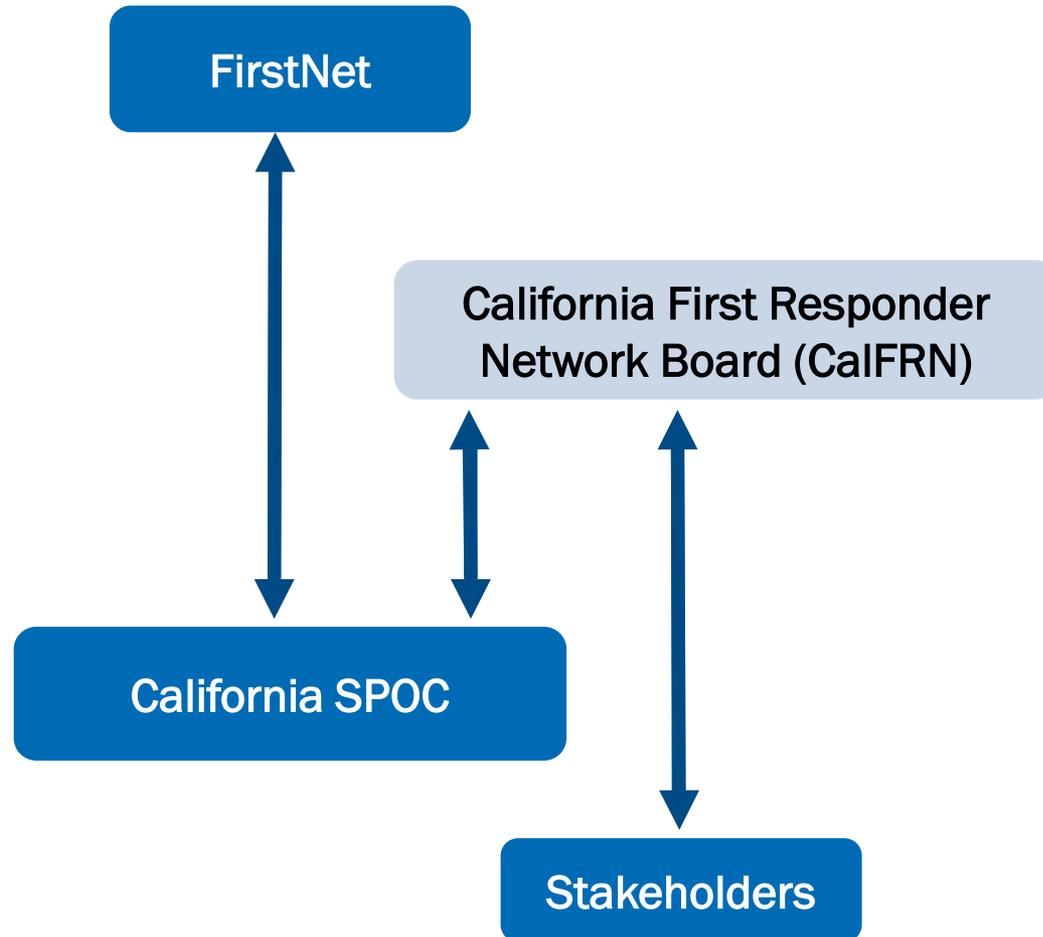
# CalFRN Advisory Committees



Advisory committees add to the Board's operational strength



# Communicating with FirstNet



CalFRN gives a voice to California's public safety community



# Next Steps for California

# Cal OES FirstNet Outreach and Consultation

In addition to establishing CalFRN, recent state level activities include

- Formed Cal OES core team
- Hired public safety broadband consultant
- Held team kick-off/planning workshop
- Developed Education and Outreach Plan
- Developed presentations, flyers, and outreach materials
- Conducting town hall meeting webcasts
- Hosted OEC coverage objectives workshops
- Developing California Roadmap
- Submitting Consultation Checklist

## FirstNet by the Numbers

### VISION

To provide emergency responders with the first nationwide, high-speed, wireless broadband network dedicated to public safety



**THE LAW**  
**2.22.12**  
FirstNet becomes Law  
PL 112-96

**FUNDING**  
**\$7B**

authorized to build the FirstNet Network. Funded by spectrum auctions through 2022. The first auction netted

### GOVERNANCE

FirstNet Board of Directors: **15** members have backgrounds in police, fire, sheriff, emergency medical, city government, and commercial telecommunications. Governor appoints **1** single Point of Contact and governing body to represent the state's interests to FirstNet. **41** member Public Safety Advisory Committee (PSAC) advises FirstNet on public safety intergovernmental matters.

**\$1.6B**

**20MHz** of bandwidth has been dedicated to public safety in the prime **700MHz** frequency range.

### WHO WILL USE FIRSTNET

**5.4 Million** Potential FirstNet public safety users nationwide



**3,800,000**  
Square Miles  
**60,000**  
Public Safety Agencies  
**3,250**  
Counties  
**566**  
Tribes

FirstNet must provide service in all **50** US states, **5** territories, and Washington, DC.

### THE COVERAGE CHALLENGE

FirstNet coverage challenge: geography is divided into 5 categories. Dense urban, urban and suburban are where most people live, but make up only 5% of the US land mass.



### FIRSTNET NETWORK

To meet this challenge, FirstNet is considering a 3-in-1 network architecture using land-based cellular, satellite and deployable systems to provide coverage.



**4G LTE is 10x**  
faster than 3G wireless service

### 2014-2016

Business plan  
Outreach and awareness  
Collect local data and design network  
Develop and award supplier RFP  
Establish network core

### THE ROAD TO FIRSTNET

### HOW MUCH WILL IT COST?

To offer public safety grade services at a cost that's competitive and compelling to users.  
- FirstNet Net

**2016+**  
Governor reviews design offer and opts in or out of FirstNet network deployment  
Integrate Next Generation 9-1-1

**2022**

Last spectrum auction  
Network substantially in operation

### FirstNet in California

For more FirstNet facts visit: [www.firstnet.gov](http://www.firstnet.gov)

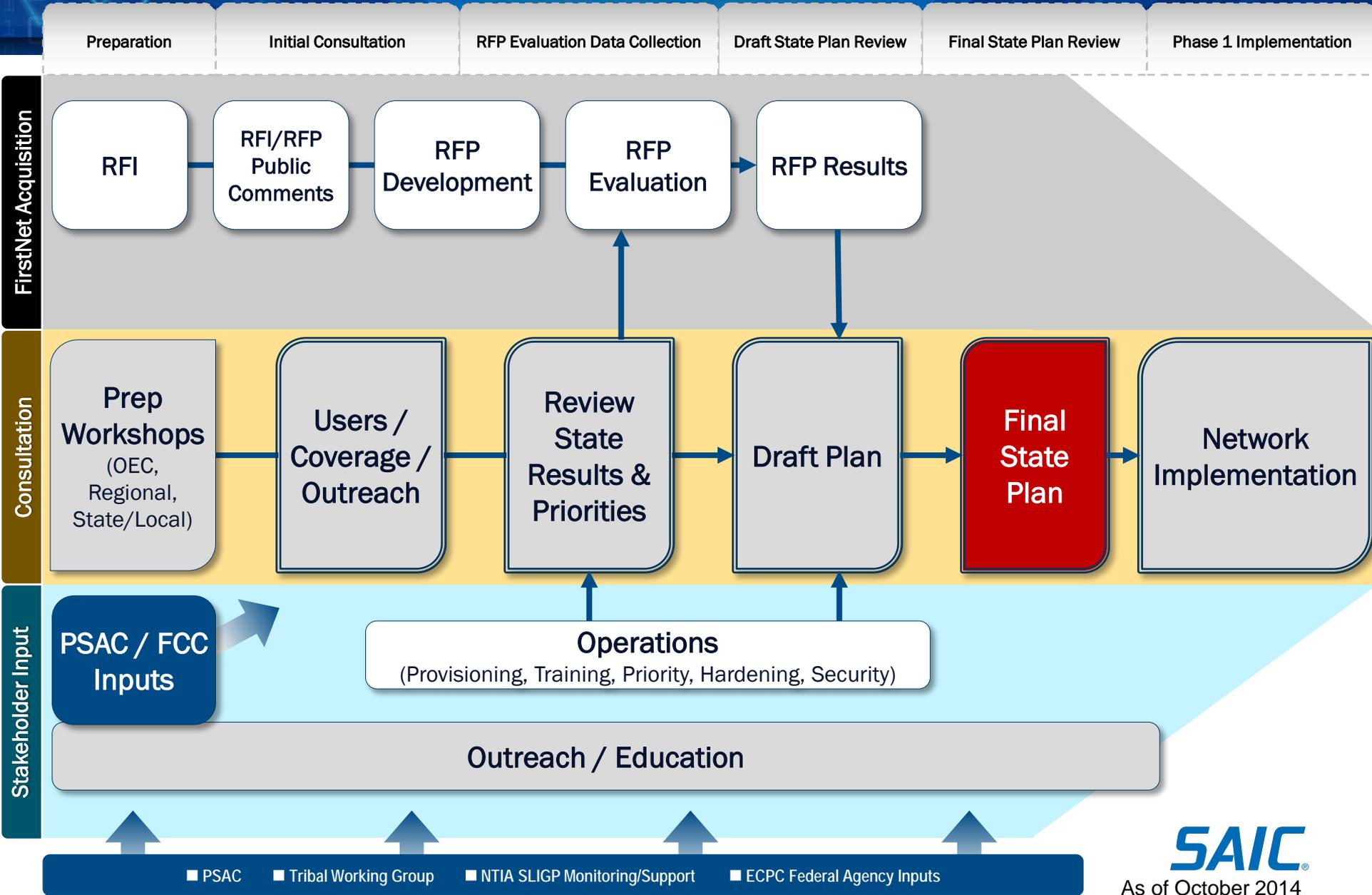
Major Sources:  
Public Law 112-96, "Middle Class Tax Relief and Job Creation Act of 2012"; "FirstNet is found in Title XI of PL 112-96, entitled "Public Safety Communications and Emergency Services Act"; House, L. 2014 March 19, "The First Responder Network and Next-Generation Communications for Public Safety, Issues for Congress"; Congressional Research Service (CRS).

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# Updated Consultation and State Plan Process



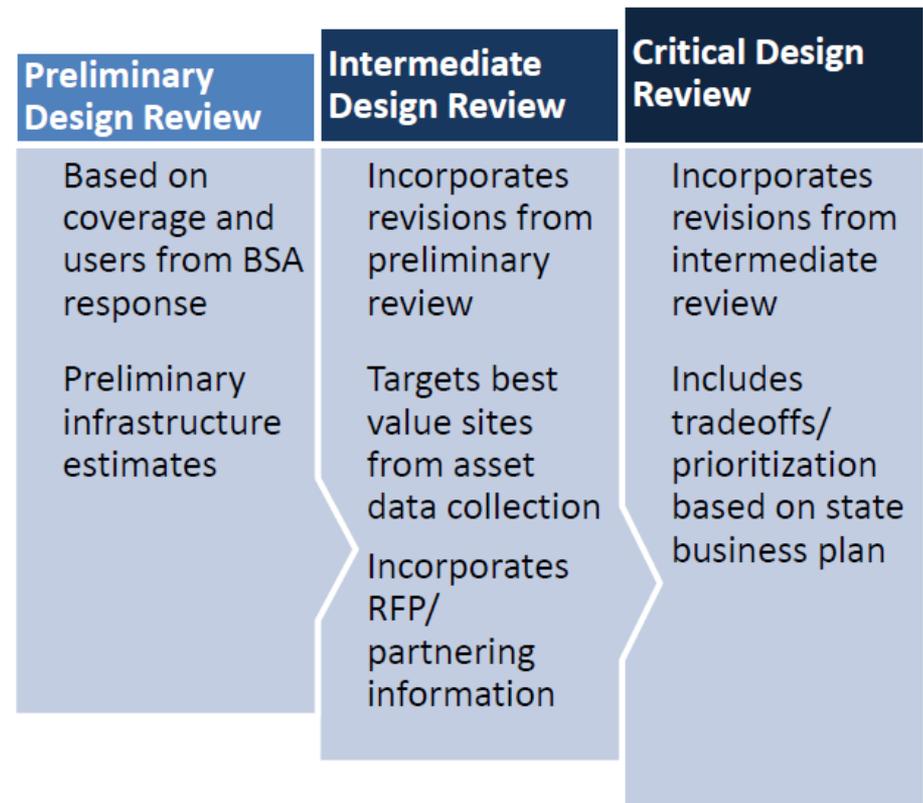
# State Radio Access Network Design Process

## Key Steps

- Multi-phase (preliminary/intermediate/critical design) reviews with state to refine design based on identified priorities
- Incorporate feedback and additional data as it is collected (SLIGP Phase 2/RFP Process)

## Guiding Principles

- Ensure on-going review/refinement process with state
- Jointly develop tradeoffs and priorities



# Adjusting Coverage for Public Safety Needs

## Agencies

- EMS Departments
- Federal
- Military
- Emergency Management
- Law Enforcement
- Fire Departments

## Facilities

- Major State Government Building
- Court Houses
- ▨ Prison Areas
- ▨ Corrections
- ▨ Airport
- + Airports
- Local Emergency Operations Centers
- State Emergency Operation Centers
- Urgent Care Facilities
- Hospitals
- PSAP
- Schools
- ⚓ Ports
- Amtrak Stations
- Air National Guard (ANG) Sites
- ▨ Army National Guard (ARNG) Installat
- Canada and Mexico Border Crossings

## Critical Infrastructure

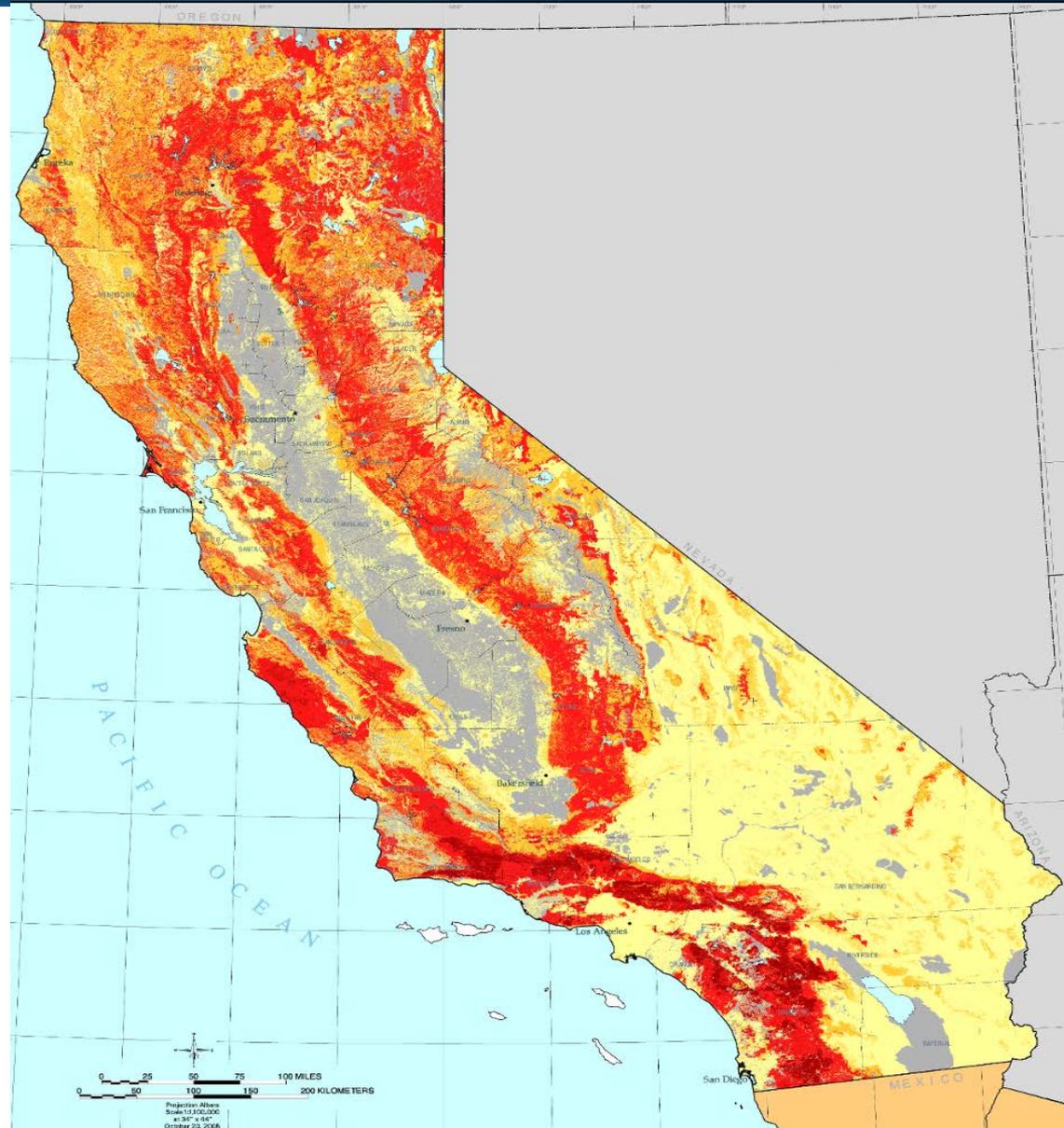
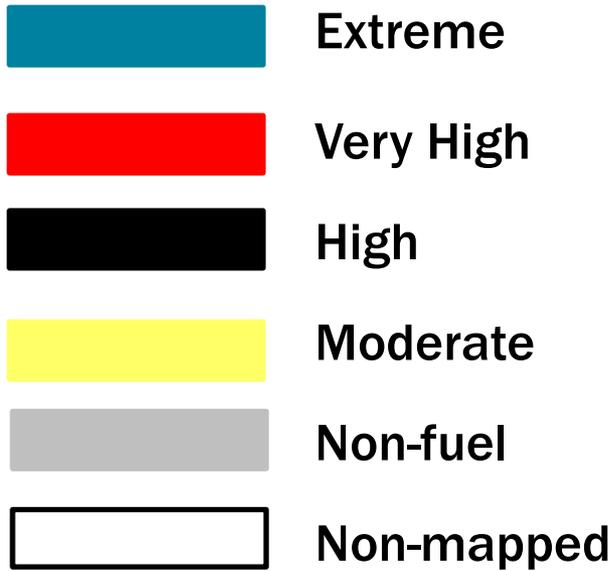
- ◆ Manufacturing
- Hazardous Materials Routes
- ◆ Energy
- ☢ Nuclear Plants
- ◆ Dams
- ◆ Public Venues



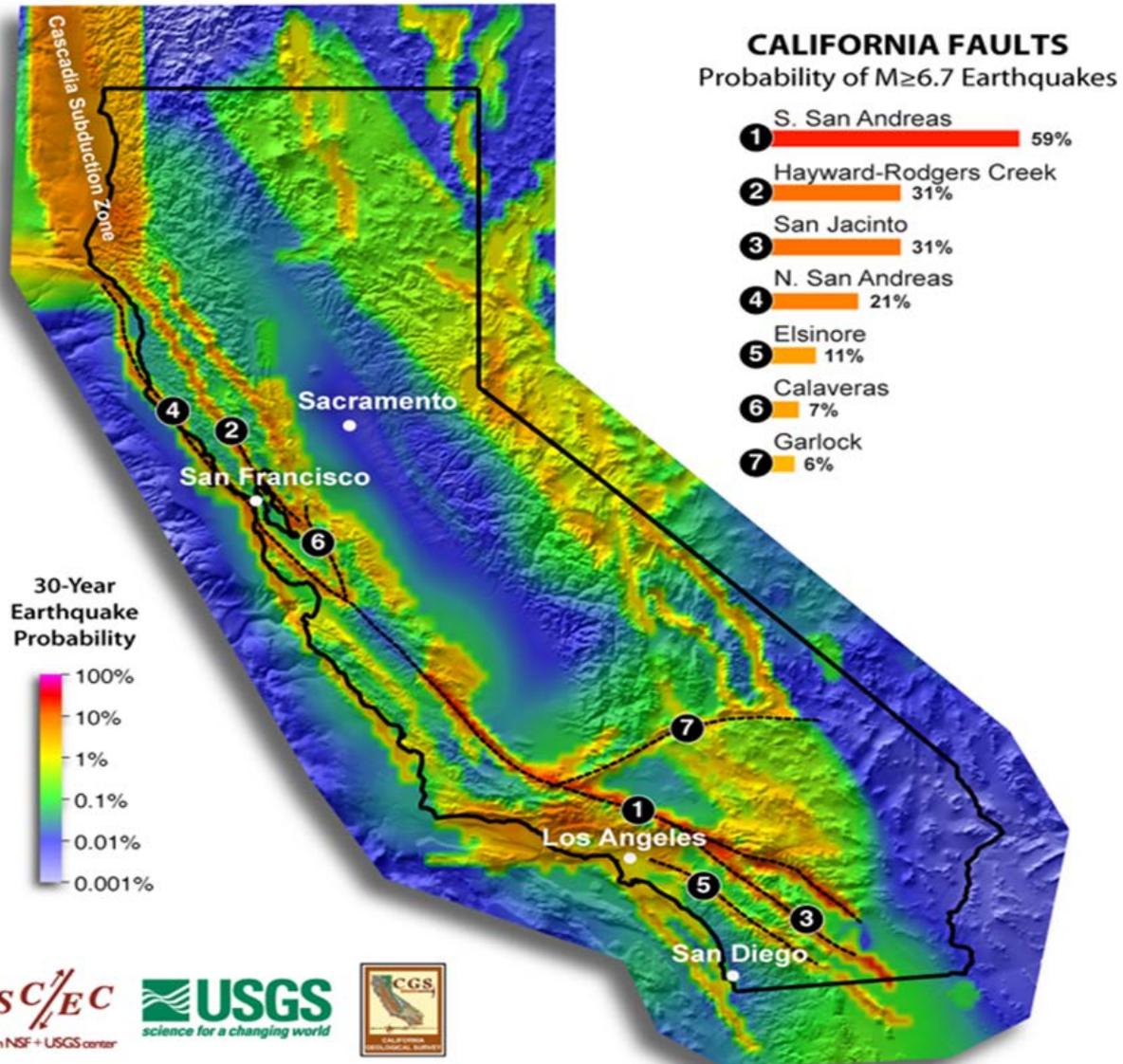
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# California Fire Danger

## Fire Threat Map



# California Earthquake Faults



# The Future is Now

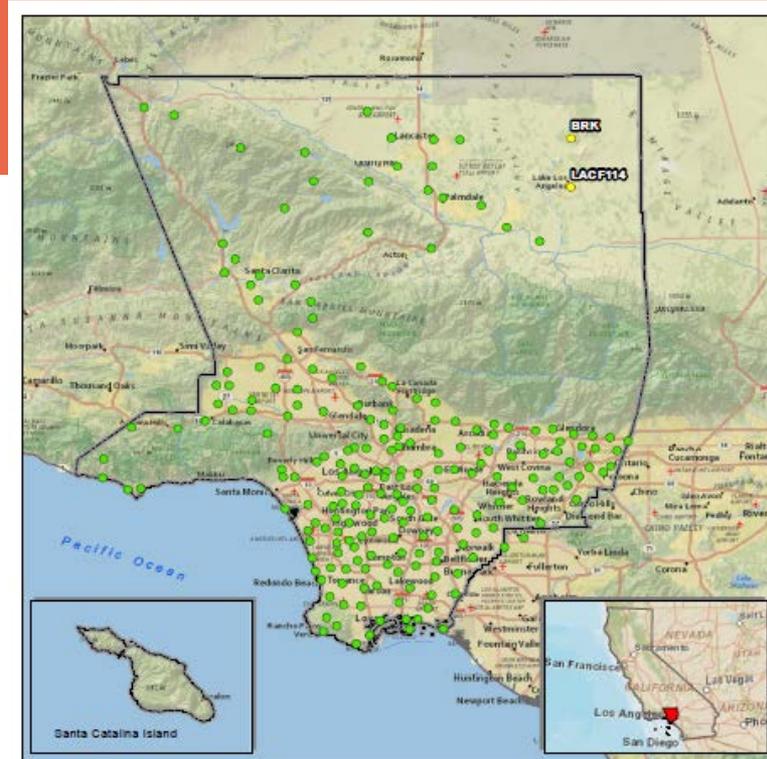
LA-RICS

# Happening Now Public Safety LTE Design & Build – LA County

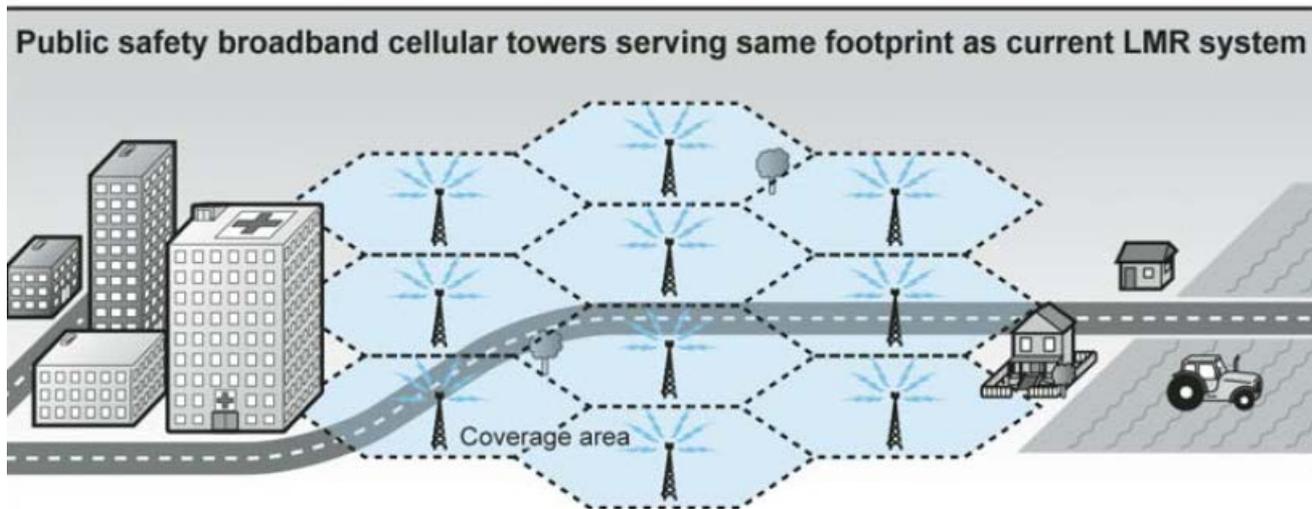
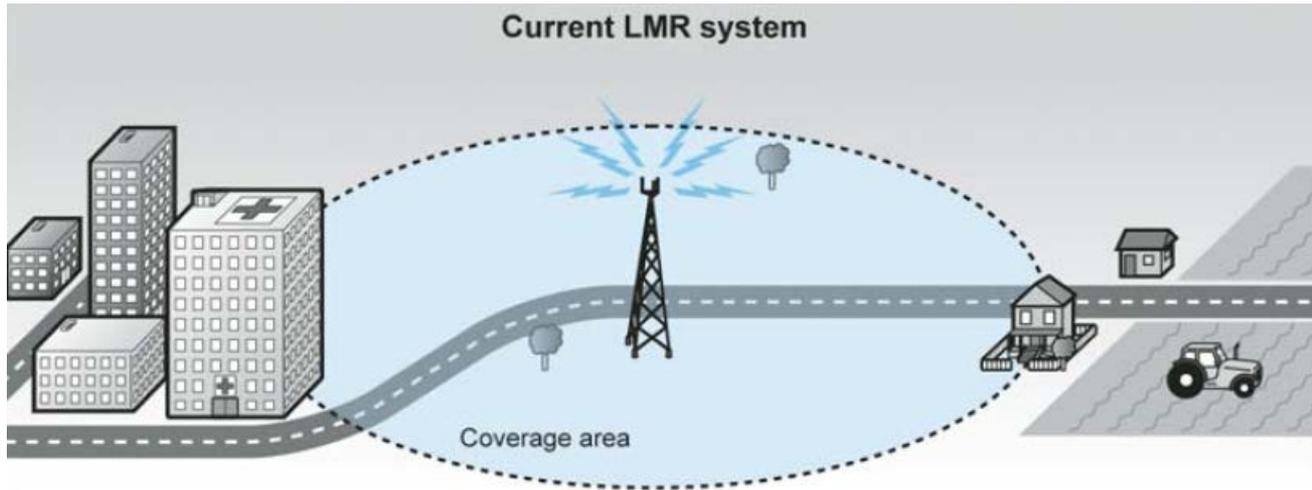
Los Angeles Regional  
Interoperable Communications  
System Joint Powers Authority  
(LA-RICS)



- There are 229 monopole sites identified for the LTE network in all of Los Angeles County
  - All sites meet criteria for CEQA exemption
  - NEPA clearance required for all sites
- 27 monopole sites will have both LMR and LTE



# Land Mobile Radio and LTE Cellular Coverage Differences



## LTE Deployment:

18 Month Program deployed in five Phases:

- Phase 1 – System Design (Mar 2014 – Jun 2014)
- Phase 2 – Site Construction (Jun 2014 – Mar 2015)
- Phase 3 – Supply LTE Equipment (Aug 2014 – Mar 2015)
- Phase 4 – System Implementation (Oct 2014 – Aug 2015)
- Phase 5 – System Maintenance (Aug 2015)

BTOP funds expire in August 2015



# Next Steps for FirstNet

Road to FirstNet

# FirstNet Timeline

## 2014-2016

Roadmap  
Outreach and awareness  
Collect local data and design network  
Develop and award supplier RFP  
Establish network core

## THE ROAD TO FIRSTNET

## 2016+

Governor reviews design offer and opts in or out of FirstNet network deployment  
Integrate Next Generation 9-1-1

## 2022

Last spectrum auction  
**Network substantially in operation**

**SAIC**

## Help us manage expectations

- LTE is not a replacement for LMR technology today
- LMR will continue to provide mission critical voice communications for the foreseeable future
- The LTE *data* network introduces new capabilities to assist the first responder
  - Provides new supplementary data and video services
  - Its true power and value will be realized once useful, interoperable applications are in the hands of users



# Thank You

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