

California Public Safety Broadband Statewide Planning



FirstNet in California

PROCESS ROADMAP



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Table of Contents

1. EXECUTIVE SUMMARY	1
2. Background.....	3
2.1. The Act.....	3
2.2. FirstNet Board and Managing Organization	3
2.3. Early Builders.....	5
2.4. California First Responder Network Board of Directors	6
2.4.1. CalFRN Advisory Committees	6
2.5. State and Local Implementation Grant Program (SLIGP)	7
2.6. California Broadband Consultant.....	7
2.7. Education and Outreach Plan	8
2.7.1. Town Halls	8
2.7.2. Conferences and Events	8
2.7.3. First Responder Outreach List.....	9
2.8. FirstNet Consultation and Design Process	9
3. State Broadband Activities	9
3.1. Town Halls	10
3.2. Conferences and Events	10
3.3. Consultation Prep Workshop	11
3.4. FirstNet in California Survey	12
3.5. State Consultation Readiness Checklist	12
4. Next Steps.....	13
4.1. Conduct Additional Town Halls	14
4.2. Submit State Consultation Readiness Checklist.....	14
4.3. Schedule State Consultation Meeting with FirstNet	14
4.4. Tribal Advisory Committee and Technical Advisory Committee Meeting	14
4.5. Barriers, Challenges and Opportunities	14
Appendix A – FirstNet in California Roadmap	15
Appendix B – Barriers, Challenges and Opportunities.....	21
Appendix C - List of Acronyms.....	28

1. EXECUTIVE SUMMARY

The Nationwide Public Safety Broadband Network (NPSBN), or FirstNet Network, will be the first ever nationwide high speed broadband data communications network dedicated to public safety. Realizing the FirstNet vision in California will require a concerted effort and close coordination on the part of FirstNet, state, local, regional, and tribal public safety stakeholders.

This document has been developed as a tool for stakeholders to better understand FirstNet and to identify necessary actions for each step of the consultation and design process.

Background

The Act. Title VI of the Middle Class Tax Relief and Job Creation Act of 2012 (PL112-96) includes provisions to fund and govern the NPSBN, reallocate the 700 MHz D Block spectrum to public safety, and authorize the Federal Communications Commission (FCC) to conduct incentive auctions to raise \$7 billion for building and managing the new network.

Governance. The Act establishes the First Responder Network Authority (FirstNet), within the National Telecommunications and Information Administration (NTIA) to oversee network planning, construction, and operation. Each state is required to designate a single governing body or point of contact to interface with FirstNet. In California, the California First Responder Network (CalFRN) is the governing body, while Karen Wong, Governor's Office of Emergency Services, (Cal OES) Public Safety Communications (PSC) Assistant Director, is the Governor-delegated FirstNet Single Point of Contact (SPOC).

SLIGP. The Act authorizes NTIA to provide funds through the State and Local Implementation Grant Program (SLIGP) to prepare states for the planning and deployment of the FirstNet network. Conducted in two phases over three years, Phase 1 will focus on education, outreach, and governance, while Phase 2 will focus on infrastructure, coverage and user data collection. California was awarded a \$5.6 million grant in August 2013.

Education and Outreach. Cal OES awarded Science Applications International Corporation (SAIC) a contract to support planning and execution of an education and outreach program to raise awareness for first responders and the public safety community throughout California. SAIC worked with the FirstNet in California project team to create a multi-tiered approach that includes presentations at town halls and conference events, development of a stakeholder outreach list, and multimedia materials such as infographics.

Consultation and Design Process. FirstNet is required by statute to consult with states in the design of the FirstNet Network. FirstNet released a 46-step consultation and design process as an iterative approach which begins with an initial state consultation, includes several network design review meetings, and completes with the presentation of a final design for the Governor's opt-in or opt-out decision. If opting out, the state will need to present its own plan for approval within 180 days.

Current State Broadband Activities

Education and Outreach. Cal OES is coordinating and executing town halls and presenting at conference events per the education and outreach plan. As of December 2014, five successful town halls have been completed in Lakeport, Bakersfield, Fairfield, Santa Ana, and Sacramento. Likewise, FirstNet in California presentations have been conducted for the San Bernardino County Operational Area Coordinating Council (OACC), Northern California Association of Public-Safety Communications Officials (NAPCO), California 9-1-1 Advisory Board, California Communications Association (CalCom) Annual Conference, APCO Emerging Technology Forum, and rural consortiums.

State Consultation Preparation. The Department of Homeland Security, (DHS) Office of Emergency Communications, (OEC) conducted two Consultation Prep Workshops, one in Rancho Cordova on August 26, 2014, and the second in Diamond Bar on October 1, 2014, to help California public safety stakeholders understand FirstNet, the consultation process, and to consider network design requirements in terms of users (number of devices) and coverage needs. Additionally, Cal OES issued a FirstNet in California survey in July 2014 to collect information about current broadband data users, devices, use cases, and priorities. This information will help the data collection requirements in SLIGP Phase 2 and inform California's Readiness Checklist submittal to FirstNet, which is required prior to scheduling the state's Initial Consultation.

Next Steps

Education and Outreach. Cal OES is continuing to schedule town hall events, with a new audience interaction format. The focus of upcoming town halls will be on collecting requirements and data related to service priority and pre-emption during events and disasters, and on the devices designed to meet public safety requirements and provide a rich set of applications and services to enhance public safety personnel's ability to do their jobs. Additionally, future conference events will be considered for outreach opportunities to gain more information on integration with NG9-1-1 and dispatch centers, coverage outside of urban areas in rural, less populated areas and how existing coverage holes/gaps will be closed.

State Consultation Preparation. California plans to submit its Consultation Readiness Checklist in January 2015 and coordinate with FirstNet for the initial consultation meeting in the second quarter of 2015.

FirstNet in California Roadmap

The road to FirstNet in California will be effectively managed by performing the necessary actions associated with the Consultation and Design process defined by FirstNet and documented in **Appendix A – FirstNet in California Roadmap**. California will remain agile and responsive in identifying and updating necessary actions in this process. Future versions of this roadmap may extend into network deployment and operations as new information becomes available.

Barriers, Challenges and Opportunities

California is the country's most populous state, third largest in size and with the world's eighth largest economy. **Appendix B – Barriers, Challenges and Opportunities** summarizes the barriers, challenges, and opportunities as we move forward towards FirstNet in California.

2. BACKGROUND

The road to FirstNet in California will be an iterative and involving process that will require effective communication and thoughtful engagement between FirstNet and public safety stakeholders within the state, local, regional, and tribal communities. This section describes the FirstNet legislation, followed by FirstNet governance at the national and California state levels. It also provides information regarding early builders of regional public safety broadband, the State and Local Implementation Grant Program (SLIGP), California's Education and Outreach efforts, and the FirstNet Consultation and Design Process.

This FirstNet in California Process Roadmap has been developed as a tool for stakeholders to better understand FirstNet and to identify necessary actions for each step of the consultation and design process.

2.1. THE ACT

On February 22, 2012, President Obama signed into law the Middle Class Tax Relief and Job Creation Act of 2012. Title VI of Public Law 112-96, entitled "Public Safety Communications and Electromagnetic Spectrum Auctions," included provisions to fund and govern the Nationwide Public Safety Broadband Network (NPSBN), reallocate the 700 MHz D Block spectrum to public safety, and authorize the Federal Communications Commission (FCC) to conduct incentive auctions to raise \$7 billion for building and managing the new network. The Act directed that Long Term Evolution (LTE) 4G wireless broadband technology be used to ensure interoperability. The Act also established within the Department of Commerce's National Telecommunications and Information Administration (NTIA) the First Responder Network Authority (FirstNet) to oversee network planning, construction, and operation.¹

2.2. FIRSTNET BOARD AND MANAGING ORGANIZATION

FirstNet is charged to build, deploy, and operate the NPSBN, or the FirstNet Network. The FirstNet Board of Directors oversees the FirstNet managing organization, which is responsible for constructing and operating the FirstNet Network and is the managing entity for the public safety spectrum, the license for which was granted to FirstNet by the FCC on November 15, 2012 for an initial term of ten years.² The FirstNet Board comprises 15 members including the

¹ Public Law 112-96, "Middle Class Tax Relief and Job Creation Act of 2012." FirstNet is found in Title VI of PL112-96, entitled "Public Safety Communications and Electromagnetic Spectrum Auctions."

www.gpo.gov/fdsys/pkg/PLAW-112publ96/pdf/PLAW-112publ96.pdf

² Press release: <http://www.ntia.doc.gov/press-release/2012/firstnet-praises-fcc-granting-spectrum-license>

Secretary of Homeland Security, the Attorney General, and the Director of the Office of Management and Budget (OMB) as permanent members. The 12 additional members are appointed by the Secretary and have public safety, technical, network, or financial expertise. The first board was announced on August 20, 2012 and held its first meeting on September 25, 2012. **Table 2-1** lists FirstNet Board members as of January 2015.

Table 2-1 FirstNet Board of Directors

FirstNet Board of Directors
<ul style="list-style-type: none"> • Susan Swenson, Chairwoman, former President and CEO of Sage North America and Cellular One; former President and COO of Leap Wireless • Jeff Johnson, Vice Chairman, Fire Chief (retired), former President, International Association of Fire Chiefs • Barry Boniface, former Chairman and executive at Barclays Capital and Lehman Brothers • Tim Bryan, CEO of National Rural Telecommunications Cooperative (NRTC) • Chris Burbank, Chief, Salt Lake City Police Department • James Douglas, Former Governor, Vermont • Kevin McGinnis, Program Manager, National Association of State EMS Officers (NASEMSO) • Ed Reynolds, retired, former president of BellSouth Mobility and AT&T executive • Teri Takai, Government information technology expert; former State CIO of MI and CA • Annise Parker, Mayor, City of Houston • Frank Plastina, President, Arc & Company, former CEO of Tekelec • Richard Stanek, Sheriff, Hennepin County, Minnesota • Suzanne Spaulding, Designee, Secretary of Homeland Security (Ex Officio) • Ron Davis, Designee, Attorney General of the United States (Ex Officio) • Brian Deese, Designee, Director of the Office of Management and Budget (Ex Officio)

The FirstNet managing organization is responsible for the planning, deployment, and operation of the NPSBN. This includes development of Request for Proposals (RFPs), roaming agreements, and determination of network infrastructure and grant funding. FirstNet acts as an independent authority within the Department of Commerce and at this writing has a staff of over 100 employees, contractors, and detailees from other government agencies. See **Figure 2-1** (double click diagram to launch) for a state outreach-centric view of the FirstNet organization. While FirstNet is the national governing authority, it is required by statute to consult with state, local, regional, and tribal jurisdictions in areas of management, standards, certified equipment list, RFPs, commercial infrastructure, contracts, cyber-security, public safety answering points, rural deployment, and prohibition of the provision of consumer services.³ A critical milestone for FirstNet is to provide sufficient information to states to enable objective decision making to opt in or out of the NPSBN.

³ OEC (2012, April 17). *Statewide Communication Plan Interoperability Plan (SCIP) Implementation Workshop, Oregon*.

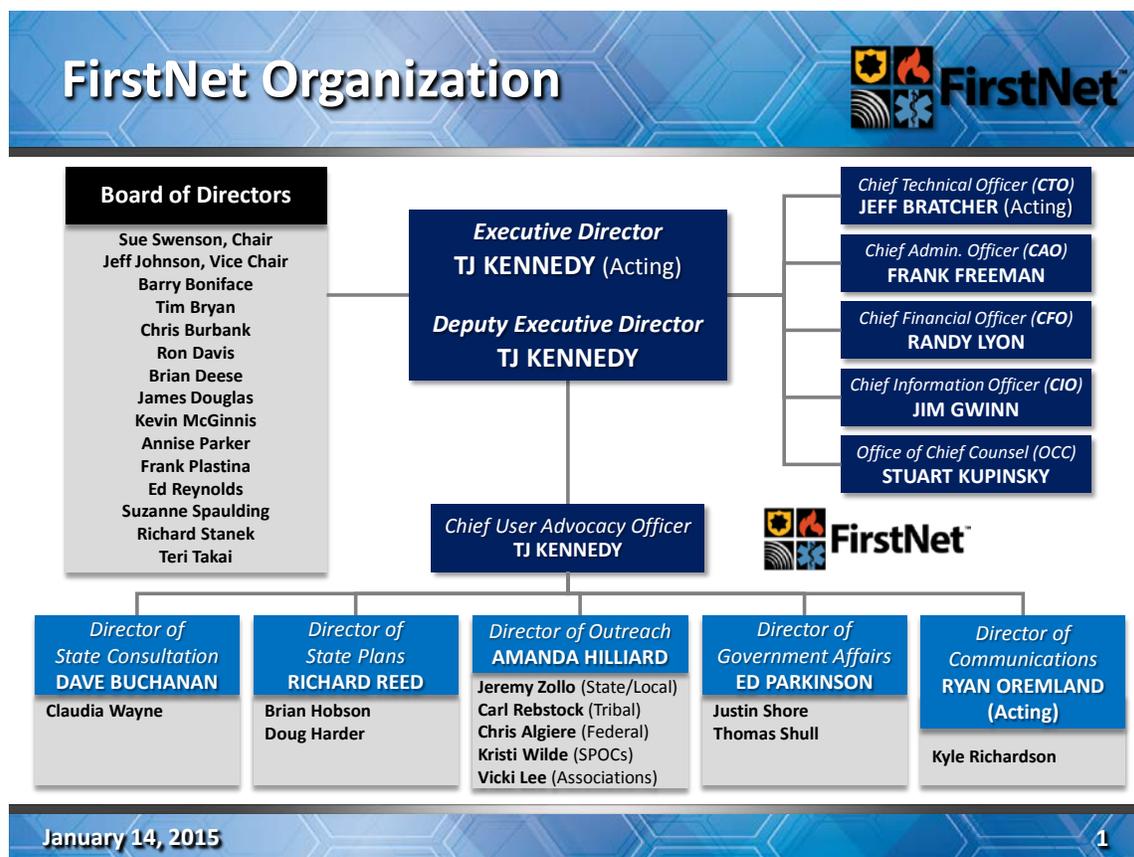


Figure 2-1 FirstNet Organization⁴

2.3. EARLY BUILDERS

In 2010, the Los Angeles Regional Interoperable Communications Systems Authority (LA-RICS) was one of seven recipients of NTIA’s Broadband Technology Opportunities Program (BTOP) grant award for early builders of regional public safety broadband networks. When the Act passed and designated FirstNet as the nation’s single public safety wireless license holder, LA-RICS was able to successfully negotiate an agreement to lease spectrum from FirstNet to continue development of the LA-RICS broadband network that will eventually integrate with the NPSBN.

The LA-RICS network will be composed of 231 sites throughout Los Angeles County and will utilize Long Term Evolution (LTE) technology, as mandated for the NPSBN. LA-RICS awarded the contract for network design in March 2014, with construction planned for completion by August 2015. When complete, the LA-RICS network will be the largest public safety broadband network in the United States until the nationwide FirstNet Network is substantially deployed.⁵

⁴ FirstNet (2015, January)

⁵ Jackson, Donny (2014, March 6). LA-RICS inks deal with Motorola Solutions for public-safety LTE network. <http://urgentcomm.com/motorola-solutions/la-rics-inks-deal-motorola-solutions-public-safety-lte-network>

2.4. CALIFORNIA FIRST RESPONDER NETWORK BOARD OF DIRECTORS

The California First Responder Network (CalFRN) Board of Directors consists of 12 multi-disciplinary members representing a cross-section of public safety, state, local, and tribal expertise at the executive leadership level, as shown in **Table 2-2**. The CalFRN Board serves as California's coordinating body to negotiate with FirstNet. The Board will oversee California's plan to establish, formalize and institutionalize a process to support the statewide public safety broadband network. The Board provides a liaison for local governments, law enforcement, fire, emergency management, tribal entities. Responsibilities of the Board include coordination, recommendations and solutions regarding policy, training and compliance. The Board provides direction to the CalFRN advisory committees leveraging their expertise for recommendations on a variety of CalFRN activities.

Table 2-2 CalFRN Board of Directors

Agencies Making up the CalFRN Board of Directors
<ul style="list-style-type: none"> • California Governor's Office of Emergency Services, Public Safety Communications and State Single Point of Contact to the FirstNet Board • California Department of Technology, Broadband and Digital Literacy Office • California Department of Forestry and Fire Protection, Fire Protection Operations • California Highway Patrol, Information Management Division • Emergency Medical Services Authority, Disaster Medical Services Division • Bay Area Regional Interoperability Communications System • Los Angeles Regional Interoperability Communications System • California Police Chiefs Association • California Fire Chiefs Association • California State Sheriff's Association • California Governor's Office Tribal Advisor • California Department of Transportation

2.4.1. CALFRN ADVISORY COMMITTEES

The CalFRN Board operates at two levels, (1) directors and (2) advisory committees. Advisory committees are established as warranted and currently include:

- California Statewide Interoperability Executive Committee (CalSIEC)
- Mutual Aid Regional Advisory Committee (MARAC)
- State 9-1-1 Advisory Board
- Technical Advisory Committee
- Tribal Advisory Committee

The advisory committee structure is intended to add depth and definition to the CalFRN Board to better equip the Board to engage with FirstNet at the national level. The committees further facilitate local input and participation. **Figure 2-2** illustrates this tiered arrangement.

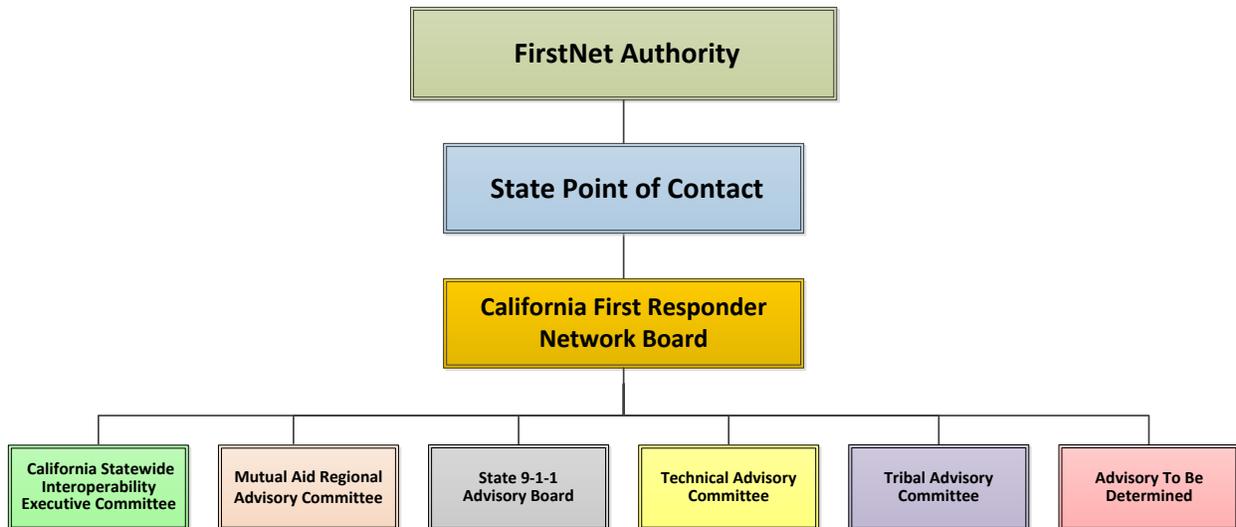


Figure 2-2 CalFRN Board has a Two-Level Operating Structure

2.5. STATE AND LOCAL IMPLEMENTATION GRANT PROGRAM (SLIGP)

The Act authorizes NTIA to provide \$135 million (reduced to \$118.15 million due to sequestration) shared across all 50 states, 5 territories and Washington, D.C. to conduct FirstNet preparations through the State and Local Implementation Grant Program (SLIGP). This grant requires a 20 percent match by the state unless waived by NTIA. California was awarded \$5.6 million of the SLIGP grant on August 19, 2013.⁶

The grant can be used to create or expand governance structure, ensure local and tribal consultation, plan education and outreach, and determine and manage staffing. It can also be used to develop standard Memorandums of Understanding (MOUs) to facilitate use of existing assets. All grant efforts will be conducted in two phases over a three-year period with the funding split evenly between the two phases. Phase 1 began in late 2013 to plan and provide education, outreach, and governance. Phase 2 is anticipated to start by 2016 only after NTIA approves Phase 1 activities, and focuses on infrastructure, coverage and user data collection for FirstNet to use in network design.

2.6. CALIFORNIA BROADBAND CONSULTANT

After the CalFRN Board of Directors was established as the governing body for FirstNet in California, Cal OES issued a Request for Offer (RFO) in December 2013 for a broadband consultant to provide technical input, advise on FirstNet legislative affairs, and plan and execute an Education and Outreach Plan as required by Phase 1 of the NTIA, SLIGP grant.

Cal OES awarded the California FirstNet Planning Support contract in February 2014 to Science Applications International Corporation (SAIC).

⁶ Press Release: NTIA Awards Four Additional SLIGP Grants to Assist FirstNet Planning (2014, August 19) <http://www.ntia.doc.gov/press-release/2013/ntia-awards-four-additional-sligp-grants-assist-firstnet-planning>

2.7. EDUCATION AND OUTREACH PLAN

In June 2014, Cal OES released the *California Public Safety Broadband Education and Outreach Plan* as a blueprint for executing a program to create awareness in California’s public safety community regarding FirstNet and the NPSBN, and to prepare them for the FirstNet in California.

California’s plan for executing public safety broadband outreach, as required by SLIGP, consists of three conceptual phases—Planning (with Refresh), Execution of outreach waves, and Close/Transition to Operations. To assure the freshest material and point of view is presented during outreach, the planning and execution cycles will be repeated, creating multiple delivery streams (e.g., distinct outreach campaign “waves”).

Figure 2-3 illustrates this wave approach.

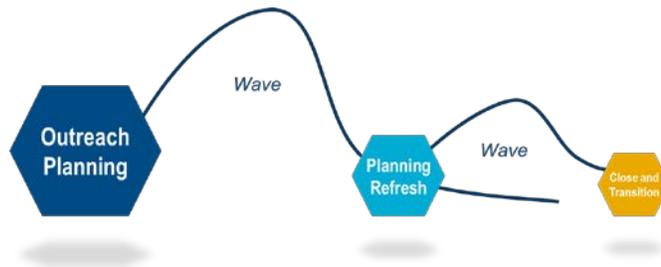


Figure 2-3 California’s Wave Approach to Outreach

Each wave consists of a multi-tiered outreach campaign, designed to result in a clear, consistent, and persistent message to California’s first responders. Major components of the Education and Outreach Plan include town halls, conferences and events, and a First Responder Outreach List, as described in the following sections.

2.7.1. TOWN HALLS

Town hall meetings are scheduled events to bring the FirstNet message to the public safety community with the latest information regarding NPSBN, FirstNet, and the initiative’s progress in California. The meetings are composed of a series of 15-40 minute presentations from speakers representing perspectives from the federal, state, tribal and local levels. Speakers also include public safety broadband application providers, and early builders such as LA-RICS. Venues are selected to ensure California’s public safety communities, from rural regions to metropolitan areas, are reached and represented. Town halls offer both in-person attendance and online webcast viewing to encourage the highest level of participation from first responders and public safety officials.

2.7.2. CONFERENCES AND EVENTS

Presenting at conferences and other recurring public safety events, e.g., APCO, is another method for outreach. Similar to the town halls, speakers will present the outreach content at the conference events, but it may be streamlined based on the allotted speaking time. The subset of presentation topics will be selected to reflect those with the most relevant information to the particular audience. This, along with being integrated with other important public safety topics, increases the relevancy and credibility of the public safety broadband outreach message.

2.7.3. FIRST RESPONDER OUTREACH LIST

Cal OES has developed the First Responder Outreach List to effectively plan, coordinate, and promote FirstNet outreach town halls and conference event presentations. The list, continuously maintained, contains critical planning information regarding stakeholder groups, including public safety stakeholder organizations and associations, their conferences and events, and distribution lists, methods, and owner and administrators for communicating to their constituents. Equipped with this information, the FirstNet in California project team can more effectively communicate information to stakeholders. Further, this information is part of the Requested Discussion Topics in the FirstNet Initial Consultation Package.

2.8. FIRSTNET CONSULTATION AND DESIGN PROCESS

FirstNet is required by statute to consult with states in the design of the FirstNet Network. For our part, the state Governor’s office is required to designate a single governmental body to interface with FirstNet and ultimately make the decision to opt in or opt out on FirstNet’s proposed network design. If opting out, the state will be required to present its own network design plan for approval. In California, the CalFRN Board of Directors is the governing body, and Karen Wong, Assistant Director with Cal OES, PSC, is the Governor-delegated FirstNet Single Point of Contact (SPOC).

In March 2014, FirstNet unveiled a formal design process for involving states in its network design activities. Underlying this process is an iterative design approach, beginning with FirstNet’s baseline state analysis (BSA) of users and coverage for states’ review and feedback. **Figure 2-4** illustrates the series of increasingly detailed design reviews in the design process.

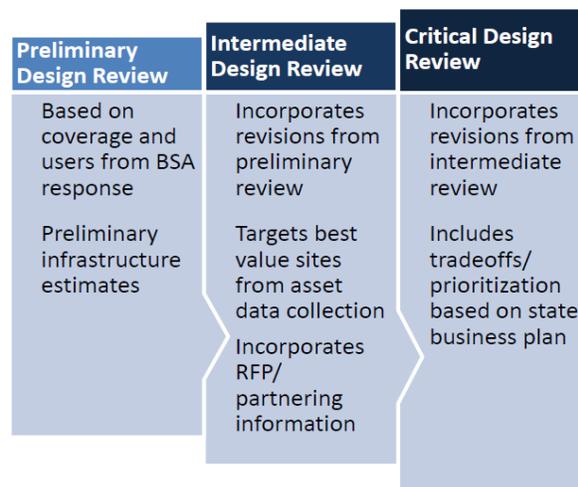


Figure 2-4 FirstNet Network Iterative Design Process

The consultation process funnels state level requirements into the design steps by incorporating state consultation meetings to review the designs, beginning with an initial consultation and ending with the presentation of the final state network design to the Governor for an opt-in or opt-out decision. These consultation steps are depicted in the center process lane of **Figure 0-1** located in **Appendix A – FirstNet in California Roadmap**, where we identify necessary actions through each step of the Consultation process.

3. STATE BROADBAND ACTIVITIES

California’s FirstNet planning and preparation activities are in full swing on two major tracks, (1) performing education and outreach as required by SLIGP Phase 1, and (2) preparing for

California's state consultation with FirstNet. Current state broadband activities delivering education and outreach via town hall and conference presentations, conducting consultation preparation workshops and surveys, and preparing the consultation readiness checklist are described in the following sections.

3.1. TOWN HALLS

Cal OES hosted five successful town hall meetings through November, 2014:

- July 16, Lakeport
- August 13, Bakersfield,
- September 24, Fairfield
- September 30, Santa Ana
- November 20, Sacramento

Each meeting had FirstNet representatives on hand to speak about the initiative at the national level. In addition to FirstNet in California progress, speaker presentations offered a range of public safety perspectives, such as tribal, local first responders, application solution providers, and early builders. All town halls were well attended, usually over 50 people in person and similar participation online via webcast. The Sacramento Town Hall had 200 attendees in person and online. Communication with attendees indicated healthy engagement and interest from attendees. Town halls will continue in 2015, starting with Humboldt County on January 28.

3.2. CONFERENCES AND EVENTS

In keeping with the goal of bringing the FirstNet message to public safety stakeholders where they already gather, Cal OES leveraged public safety events in 2014 to conduct FirstNet outreach presentations at the following venues:

- August 7, the San Bernardino County Operational Area Coordinating Council (OACC) meeting in Rancho Cucamonga, where approximately 30 attendees representing emergency management, utilities, the US Marine Corps, and the Red Cross were present
- August 14, the Northern California APCO (NAPCO) meeting in Vacaville, where the engaged audience asked many follow-up questions
- August 21, the 9-1-1 Advisory Board Meeting in Sacramento
- November 4, the California Communications Association (CalCom) conference in Sonoma
- November 5, the APCO Emerging Technology Forum in San Francisco

These events proved to be natural opportunities to reach out to public safety stakeholders about FirstNet. Additional FirstNet awareness presentations at conference events are being scheduled, such as the APCO Western Regional conference and events with APCO's Southern California chapter, the California Public-Safety Radio Association (CPRA).

3.3. CONSULTATION PREP WORKSHOP

Two Workshops were held in California, one in Sacramento and one in Diamond Bar. There were 188 participants from various disciplines including fire, law enforcement, emergency medical and emergency first responders from counties and cities. Discussion topics had a common theme toward collecting user (device) data and determining coverage needs, including:

- Recommendation on how to collect data and how a department GIS can provide useful data
- Leverage regional bodies for the information, not just City level
- Better definition for “eligible user” to provide clearer distinction on whether ‘user’ or ‘device’ data is required
- Additional benefits of other uses of the data collected beyond the FirstNet consultation
- Whether utilities should be secondary users
- Incident tracking and crime statistics
- Computer Aided Dispatch (CAD) data to inform and correlate user information and explore crowd sourced social media coverage tools to determine where users are, and not only rely on census data
- Prioritize coverage needs so California can be ready to respond to FirstNet’s baseline design
- Consider starting with gaps with current commercial coverage, since commercial coverage areas will likely be addressed through public-private partnerships in leveraging infrastructure
- Plan for California specific as well as federal regulatory requirements, such as the California Environment Quality Act (CEQA)
- How LTE will work in dense forests
- Compatibility with Information Public Address System
- When agencies should be involved with FirstNet along with timeframes of the build out of the network
- Opt-In/Opt-out was discussed as a state level decision, but each agency will ultimately have the choice to purchase service or not
- Follow-on questions centered on types of devices being available and coverage requirements for an LMR system
- Data collection from PSAPs cannot separate fire from police; the FirstNet Network is being built for all public safety agencies
- Timeframe of the State Consultation Process and how many meetings will be held in California

3.4. FIRSTNET IN CALIFORNIA SURVEY

As part of the ongoing consultation preparation activities, Cal OES distributed an online survey⁷ in July 2014 to the California public safety community to collect information about current public safety wireless usage as an aid in planning network requirements for FirstNet in California. The survey will remain open until shortly after the Humboldt Town Hall in January 2015. The survey seeks to understand the number of users of wireless data for public safety, amount and types of devices, use cases for mobile data in public safety today, coverage needs, service priorities, available infrastructure for possible use with the FirstNet Network, as well as awareness and expectations of FirstNet. Results will be analyzed by our staff and submitted to our CalFRN Board for review.

3.5. STATE CONSULTATION READINESS CHECKLIST

On April 30, 2014, FirstNet released an initial consultation package⁸ to all 50 states, 5 territories, and Washington, DC. In addition to proposed initial consultation meeting agenda and discussion topics, the package included a Readiness Checklist of information for states to submit in order to schedule their state consultation meeting with FirstNet. **Table 3-1** identifies the current status of California's checklist package. The completed package will be submitted in January 2015.

Table 3-1 California's Consultation Readiness Checklist

Description	Rationale	Request	Status
Governance Body: Provide a current membership list, organizational chart, and any other information available on your governance body.	This information will help FirstNet better understand the representative composition of the governance body and how it makes decisions or reaches consensus.	Membership list, minutes from previous meetings, organizational chart, charter (if it exists), legislation or executive orders pertinent to the governance body (if they exist), narrative of decision making authority, and any other relevant information.	Complete. CalFRN established and SPOC appointed.
Attendees: In addition to the SPOC, who else does your state propose attend the initial consultation meeting?	This information will be used to understand which local, regional and tribal representation will be involved, as well as to prepare materials for attendees.	List of proposed attendees including, name, title, agency, and discipline.	There are over 600 attendees wanting to participate

⁷ Cal OES FirstNet in California Survey: https://www.surveymonkey.com/s/FirstNet_in_California

⁸ FirstNet Initial Consultation Package (2014, April 30):

[http://www.firstnet.gov/sites/default/files/Single%20Point%20of%20Contact%20\(SPOC\)%20Initial%20Consultation%20Package_04302014.pdf](http://www.firstnet.gov/sites/default/files/Single%20Point%20of%20Contact%20(SPOC)%20Initial%20Consultation%20Package_04302014.pdf)

Description	Rationale	Request	Status
Scheduling: Provide a list of available dates (after July 1, 2014) and locations for the initial consultation meeting.	FirstNet's goal is to schedule these meetings between July 1 and November 30, 2014 for all 56 states and territories. Currently FirstNet is planning on sending 5-7 representatives for 1 to 2 days.	List of at least three proposed dates, locations and venues along with any other information that could drive scheduling choices.	Complete. The State will be requesting three second quarter 2015 consultation meetings.
Wireless Contract Vehicles: Provide any existing contract vehicles/terms and available usage information for wireless voice and data services used by your state and/or metropolitan areas, where permitted.	This information will be used to assist FirstNet with business planning efforts, providing an understanding of the services and pricing plans currently provided to state and local public safety that choose to leverage the state contract.	Copy of contract vehicles and any available usage information (e.g., data and voice usage, number of users/agencies, costs, types of services, etc.), where permitted.	Complete. Contract information assembled.
Outreach Plan: Provide your detailed method and plan for education, outreach, and training to multi-discipline, public safety, and other government users.	FirstNet will review this information prior to the meeting to be prepared to discuss how to best support your state's outreach efforts. The state and FirstNet will align vision and strategy for outreach to ensure goals are complementary.	Copies of state outreach strategy, or synopsis of state's current broadband outreach methods/plan, and copies of any materials that have been used by state for outreach.	Complete. Education and Outreach Plan released; outreach in process.
Barriers: Describe any specific legal (e.g., existing laws or regulations) or non-legal issues that could impede your ability to participate fully in the consultation process.	This information will provide FirstNet the opportunity to plan the remainder of the consultation process in a manner that addresses any unique issues or concerns in your state.	Narrative of any legal or non-legal issues.	Complete. Barriers, challenges, and opportunities included in the Checklist package are also shown in Appendix B of this document.

4. NEXT STEPS

As FirstNet progresses, California will continue its education and outreach program to improve awareness, provide updates, manage expectations, engage stakeholders, and build support for FirstNet development and deployment in California. At the same time, CalFRN will work closely with the public safety stakeholder community to coordinate with FirstNet in navigating the design and consultation process to ensure California's public safety user and network coverage needs are properly considered and addressed in the network design.

The following sections describe next steps for California, while **Appendix A – FirstNet in California Roadmap** provides a roadmap for FirstNet in California.

4.1. CONDUCT ADDITIONAL TOWN HALLS

Additional town halls are planned with an emphasis on more interactive engagement with attendees. The first town hall of 2015 will be in Humboldt County on January 28, highlighting inter-state collaboration and offering in-person engagement with stakeholder communities in the northwest region of California. An additional Town Hall is scheduled for early March with our Federal partners.

4.2. SUBMIT STATE CONSULTATION READINESS CHECKLIST

In January 2015, California plans to submit its Consultation Readiness Checklist to FirstNet. Status of the information collection is shown in **Table 3-1**.

4.3. SCHEDULE STATE CONSULTATION MEETING WITH FIRSTNET

Upon receiving and reviewing California's consultation readiness package, FirstNet will schedule the initial state consultation meeting for California. Due to California's large size and public safety community, the State is requesting that a series of three consultation meetings be held the second quarter of 2015. The expectation is that all three meetings would be held the same week and at different venues across the state to allow the largest possible number of stakeholders to attend.

4.4. TRIBAL ADVISORY COMMITTEE AND TECHNICAL ADVISORY COMMITTEE MEETING

To better equip CalFRN in its engagement with FirstNet, Tribal and Technical Advisory Committee Meetings will be scheduled.

4.5. BARRIERS, CHALLENGES AND OPPORTUNITIES

As we move forward towards FirstNet in California, it's important to recognize the barriers and challenges unique to California in the implementation of FirstNet, as well as the opportunities that it will bring. **Appendix B – Barriers, Challenges and Opportunities** summarizes some of the barriers, challenges and opportunities that will be considered as California progresses on the road to FirstNet.

APPENDIX A – FIRSTNET IN CALIFORNIA ROADMAP

Table 0-1 identifies the major steps of the state consultation process that California will take as it engages with FirstNet, ending with the final state plan presented to the Governor for an opt-in or opt-out decision. Future versions of this process roadmap may extend into network deployment and operations as new information becomes available from FirstNet.

FirstNet released the Consultation, Outreach & State Plan Process in March 2014, per **Figure 0-1** FirstNet will Consult with California using a 46-Step Process (double click diagram to launch) FirstNet will consult with California using this 46-step process (double click diagram to launch), resulting in an actionable roadmap for California, as documented in the table. The consultation and design process, reflecting FirstNet’s 900+ activity project schedule, continues to evolve, so close coordination with FirstNet will be required by California to plan actions and stakeholder engagement in the process. For example, FirstNet is now considering completing the RFP process before requesting detailed asset information from the states. That way FirstNet can be more specific about what asset data they request and states will have less information to collect. This would essentially eliminate the activities associated with the center Stakeholder Asset Evaluation column in **Figure 0-1** FirstNet will Consult with California using a 46-Step Process (double click diagram to launch), moving this activity to later in the process; a significant change. Additionally, while there will continue to be an iterative design process with multiple state consultation meetings, the number of interactions will vary from state to state and from the specific ones identified in the diagram.

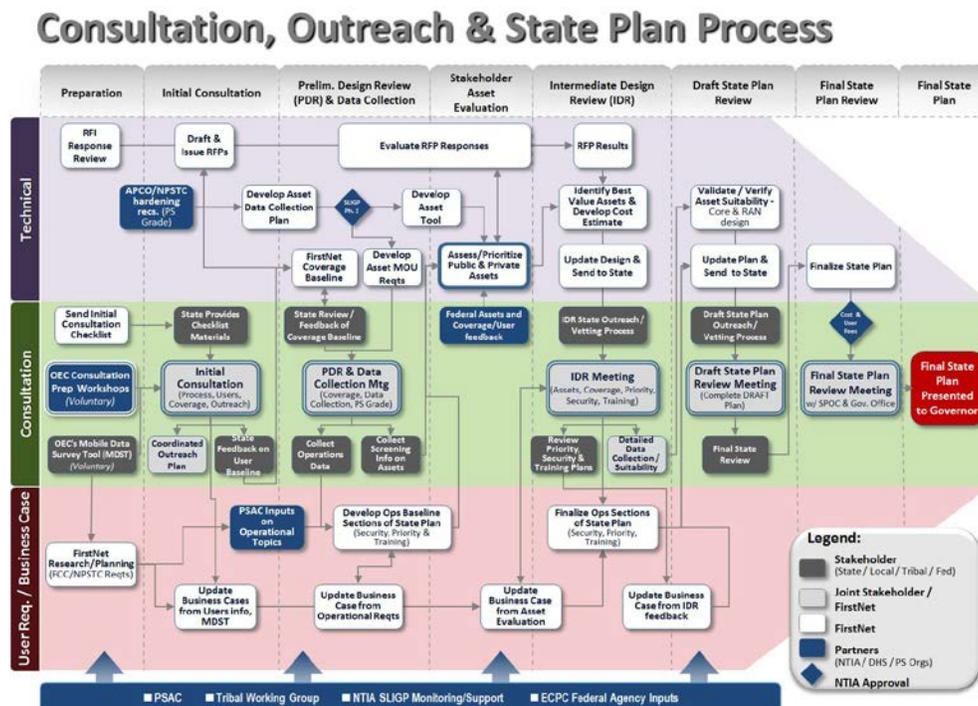


Figure 0-1 FirstNet will Consult with California using a 46-Step Process⁹ (double click diagram to launch)

In October 2014, FirstNet released a simplified version of the above process diagram for purposes of education and outreach, as shown in **Figure 0-2** below. This view represents a higher-level abstraction of the 46-step process for easier understanding and discussion with stakeholders during outreach events, yet retains the underlying detailed project plan and schedule as its foundation.

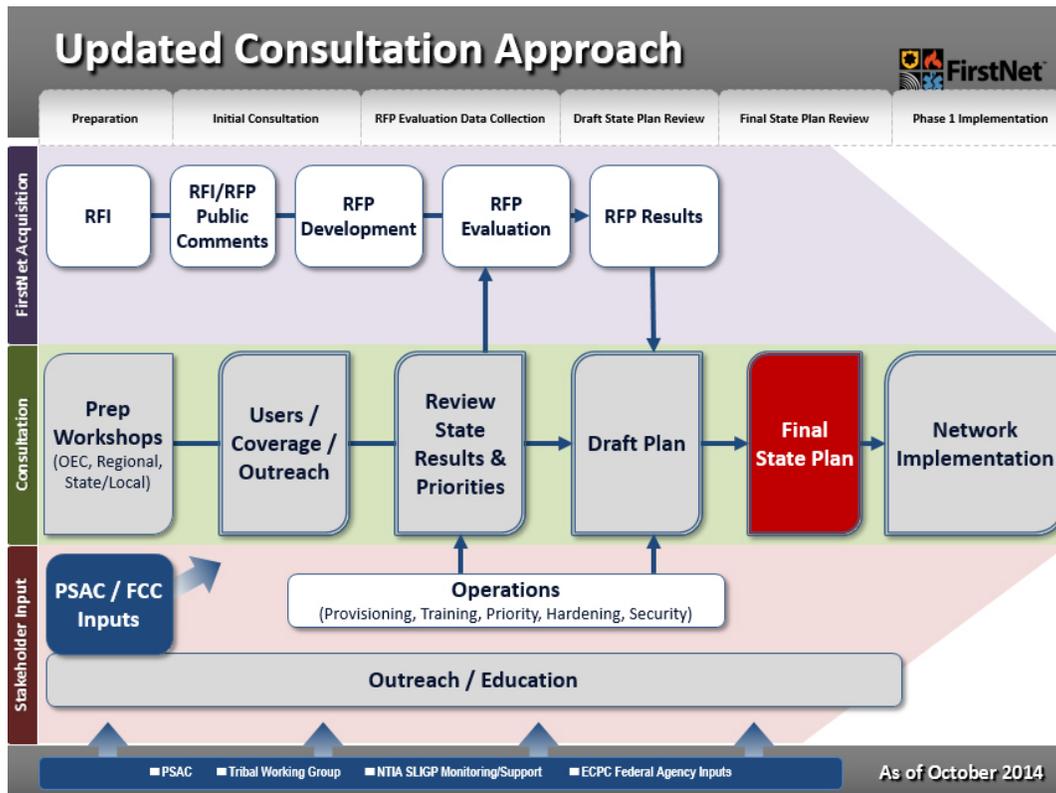


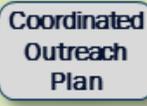
Figure 0-2 FirstNet released a Simplified Version of the Consultation Approach for use during Outreach¹⁰

The road to FirstNet in California will require proactive planning and coordination with FirstNet. Through this rapidly evolving process, California will remain agile and responsive, identifying and updating actions as necessary.

⁹ FirstNet Update as of July 2014: <http://www.firstnet.gov/sites/default/files/firstnet-update-as-of-july-2014.pptx>

¹⁰ FirstNet (2014, October 1). *Single Point of Contact (SPOC) Quarterly Webinar*. Retrieved from <http://www.firstnet.gov/resources#Presentations>.

Table 0-1 FirstNet in California Roadmap

No.	Phase	Consultation Process Step	Actions	Status
1	Preparation		<p>Schedule and conduct OEC Broadband Prep Workshops</p> <p>The workshops will prepare California stakeholders for the upcoming FirstNet design Consultations.</p>	Conducted a Northern California workshop in Rancho Cordova on 8/26/14 and a Southern California workshop in Diamond Bar on 10/01/14.
2			<p>Develop survey instrument and conduct <i>FirstNet in California</i> Survey</p> <p>The collected user, device, and use information will be used to inform the FirstNet iterative design process for California.</p>	Survey instrument approved by CalFRN/SPOC on 7/31/14. Survey distributed to stakeholders 8/1/14. How-To survey input training conducted 8/5/14.
3	Initial Consultation		<p>Assemble, analyze, and submit Readiness Checklist materials to FirstNet</p> <p>Information includes governance process, existing wireless contracts, outreach plan, and barriers to participation.</p>	Materials have been assembled. Governance and outreach plans complete. Plan to submit materials in January 2015.
4			<p>Schedule and conduct Initial Consultation Meeting with FirstNet</p> <p>Activity dependent on submitting Readiness Checklist and FirstNet availability. Planning for 2-3 consultation meetings in different locations across state.</p>	Est. Second Quarter of 2015.
5			<p>Develop Education and Outreach Plan</p> <p>Coordinate activities with FirstNet Outreach team</p> <p>An Education and Outreach plan is required as NTIA SLIGP Phase 1 gate to Phase 2. Separately, FirstNet is hiring local federal outreach staff, including in California, who will assist CA efforts.</p>	California Education and Outreach Plan completed 6/30/14. Completed Stakeholders List. Outreach is now being executed. As of Dec 2014, conducted five town halls and presented at four conferences. Developed outreach materials, including flyers, invitations, <i>FirstNet in California</i> infographic, and presentations.

No.	Phase	Consultation Process Step	Actions	Status
6	Preliminary Design Review (PDR) & Data Collection	State Feedback on User Baseline	<p>Develop process for communicating and vetting User Baseline with California stakeholders</p> <p>Communicate FirstNet User Baseline information to stakeholders</p> <p>Stakeholders review User Baseline assumptions provided by FirstNet for their domain or area</p> <p>Compile feedback and results of review process</p> <p>Assumes receipt of User Baseline information from FirstNet during Initial Consultation. May require some bottoms-up development.</p>	Est. 1H2015
7		State Review / Feedback of Coverage Baseline	<p>Receive California Coverage Baseline from FirstNet and distribute to stakeholders for review</p> <p>Receive, compile, and summarize stakeholder coverage baseline feedback and submit to FirstNet</p> <p>Must receive baseline information from FirstNet to perform task.</p>	Est. 2015
8		PDR & Data Collection Mtg (Coverage, Data Collection, PS Grade)	<p>Schedule and conduct PDR & Data Collection Meeting with FirstNet</p> <p>Must receive baseline information from FirstNet to perform task. Expect to receive SLIGP Phase 2 data collection instructions and input tool from FirstNet at this meeting.</p>	TBD
9		Collect Operations Data	<p>Solicit, compile, and input Operations Data from stakeholders into FirstNet data collection tool</p> <p>Must receive SLIGP Phase 2 data collection instructions and input tool from FirstNet to perform task.</p>	TBD
10		Collect Screening Info on Assets	<p>Solicit, compile, and input Asset information from stakeholders into FirstNet data collection tool</p> <p>Must receive SLIGP Phase 2 data collection instructions and input tool from FirstNet to perform task.</p>	TBD

No.	Phase	Consultation Process Step	Actions	Status
11	Intermediate Design Review (IDR)	IDR State Outreach / Vetting Process	<p>Develop process for communicating (outreach) and vetting Intermediate Design with California stakeholders</p> <p>Communicate (outreach) Intermediate Design to stakeholders</p> <p>Stakeholders vet Intermediate Design</p> <p>Compile feedback and results of vetting process</p> <p>Results will be used as state input during IDR Meeting. Dependent upon receipt of Intermediate Design from FirstNet.</p>	TBD
12		IDR Meeting (Assets, Coverage, Priority, Security, Training)	<p>Schedule and conduct IDR Meeting with FirstNet</p> <p>Must receive Intermediate Design from FirstNet to perform task.</p>	TBD
13		Review Priority, Security & Training Plans	<p>Develop process for reviewing Priority, Security and Training Plans with California stakeholders</p> <p>Communicate Plans to stakeholders</p> <p>Stakeholders review Plans</p> <p>Compile feedback and results of stakeholder review</p> <p>Dependent upon receipt of Priority, Security, and Training Plans from FirstNet.</p>	TBD
14		Detailed Data Collection / Suitability	<p>Solicit, compile, and input Detailed Asset Suitability information from stakeholders into FirstNet data collection tool</p> <p>Must receive SLIGP Phase 2 data collection instructions and input tool from FirstNet to perform task.</p>	TBD

No.	Phase	Consultation Process Step	Actions	Status
15	Draft State Plan Review		<p>Develop process for communicating (outreach) and vetting Draft State Plan with California stakeholders</p> <p>Communicate (outreach) Draft Plan to stakeholders</p> <p>Stakeholders vet Draft State Plan</p> <p>Compile feedback and results of vetting process</p> <p>Results will be used as state input during Draft State Plan Review Meeting. Dependent upon receipt of Draft State Plan from FirstNet.</p>	TBD
16			<p>Schedule and conduct Draft State Plan Review Meeting with FirstNet</p> <p>Dependent upon receipt of Draft State Plan from FirstNet.</p>	TBD
17			<p>Perform final review of the Complete Draft Plan</p> <p>Submit final feedback to FirstNet</p> <p>Dependent upon receipt of Draft State Plan from FirstNet.</p>	Est. 2016+
18	Final State Plan Review		<p>Schedule and conduct Final State Plan Review Meeting with FirstNet</p> <p>Must receive Final State Plan, including cost and user fee information, from FirstNet to perform task.</p>	Est. 2016+
19	Final State Plan		<p>SPOC develops and delivers opt-in or opt-out recommendation to Governor</p> <p>Governor makes opt-in or opt-out decision</p> <p>SPOC uses input from CalFRN board and information from Final State Plan Review meeting to develop recommendation.</p>	Est. 2016+

APPENDIX B – BARRIERS, CHALLENGES AND OPPORTUNITIES

FIRSTNET IN CALIFORNIA BARRIERS

California's government jurisdictional structure consists of **58** counties, **482** municipalities, and **3,400** special districts. California has approximately thirty-eight million residents and is the world's eighth largest economy.

California is vulnerable to a catastrophic disaster within the lifetime of most residents. No community is fully immune. Though wildfires and floods are the most common disasters, earthquakes hold the greatest potential for large scale destruction. A major disaster would pose significant challenges for restoring people's lives, restarting economic engines, repairing infrastructure, and creating sustainable redevelopment.

California's challenges when engaging with local jurisdictions include: explaining the unknowns (local control, estimated cost of network, network users), obtaining buy-in when the details of the Nationwide Public Safety Broadband Network are still being finalized; California has to negotiate with the counties, vendors, and private home owners on the usage of towers and infrastructure and create Memorandum of Understandings (MOUs) - a blanket agreement might not be acceptable to all current infrastructure owners; as required by the statute, the challenge factors pay special attention to tribal, rural areas and regions, which are currently underserved by commercial broadband deployments.

California is one of 14 states that is home to more than 100,000 American Indian and Alaska Native residents. There are currently 109 federally recognized Native American tribes in California.

California's size, complexity, and economic productivity make it preeminently a state of superlatives. The characteristics of the state offer several key considerations that must be addressed when building communications interoperability. The geography and topography as well as the number of citizens and landmarks that must be protected all contribute to the complexity of the situation when planning and building communications systems.

The State of California is bordered by Oregon, Nevada and Arizona in the United States and Baja California in Mexico. California covers 158,869 square miles, an area comparable to the combined areas of the following states:

- Pennsylvania (46,058 miles²)
- New York ((53,989 miles²)
- Vermont (9,615 miles²)
- New Hampshire (9,283 miles²)
- Connecticut (5,544 miles²)
- Massachusetts (9,241 miles)
- Rhode Island (1,231 miles²)
- New Jersey (8,215 miles²)

- Delaware (2,396 miles²)
- Maryland (12,297 miles²)
- Washington, D.C. (68 miles²)

A metro area contains a core urban area of 50,000 or more population, and a micro area contains an urban core of at least 10,000 (but less than 50,000) population. Each metro or micro area consists of one or more counties and includes the counties containing the core urban area, as well as any adjacent counties that have a high degree of social and economic integration (as measured by commuting to work) with the urban core.

Environmental CEQA: A Summary of the California Environmental Quality Act

(California Public Resources Code, Sections 21000 - 21178, and Title 14 CCR, Section 753, and Chapter 3, Sections 15000 - 15387)

The California Environmental Quality Act (CEQA) is California's broadest environmental law. CEQA helps to guide the State during issuance of permits and approval of projects. Courts have interpreted CEQA to afford the fullest protection of the environment within the reasonable scope of the statutes. CEQA applies to all discretionary projects proposed to be conducted or approved by a California public agency, including private projects requiring discretionary government approval.

The purpose of CEQA is to:

- Disclose to the public the significant environmental effects of a proposed discretionary project, through the preparation of an Initial Study (IS), Negative Declaration (ND), or Environmental Impact Report (EIR).
- Prevent or minimize damage to the environment through development of project alternatives, mitigation measures, and mitigation monitoring.
- Disclose to the public the agency decision making process utilized to approve discretionary projects through findings and statements of overriding consideration.
- Enhance public participation in the environmental review process through scoping meetings, public notice, public review, hearings, and the judicial process.
- Improve interagency coordination through early consultations, scoping meetings, notices of preparation, and State Clearinghouse review.

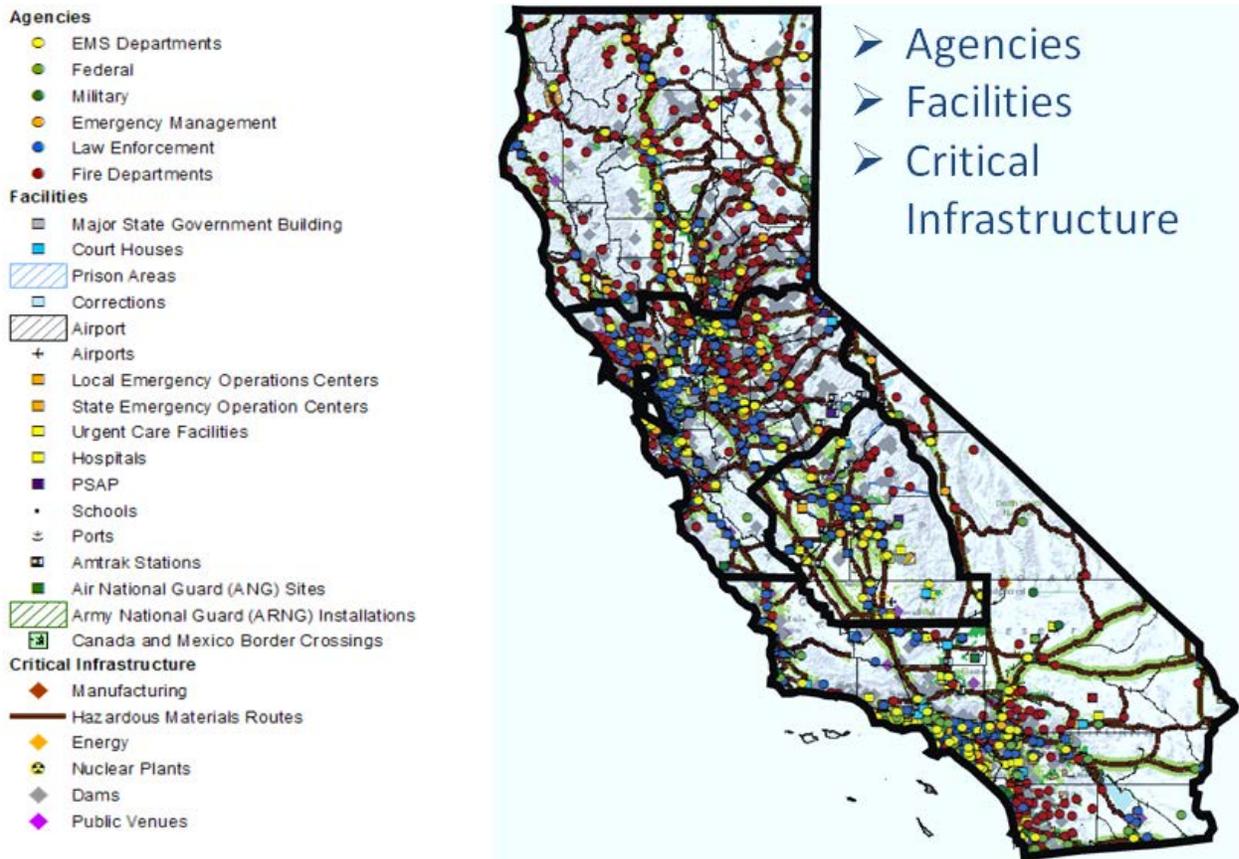
National Environmental Policy Act

The National Environmental Policy Act (NEPA) requires federal agencies to integrate environmental values into their decision making processes by considering the environmental impacts of their proposed actions and reasonable alternatives to those actions.

To meet NEPA requirements federal agencies prepare a detailed statement known as an **Environmental Impact Statement (EIS)**. The Environmental Protection Agency (EPA) reviews and comments on EISs prepared by other federal agencies, maintains a national filing system for all EISs, and assures that its own actions comply with NEPA.

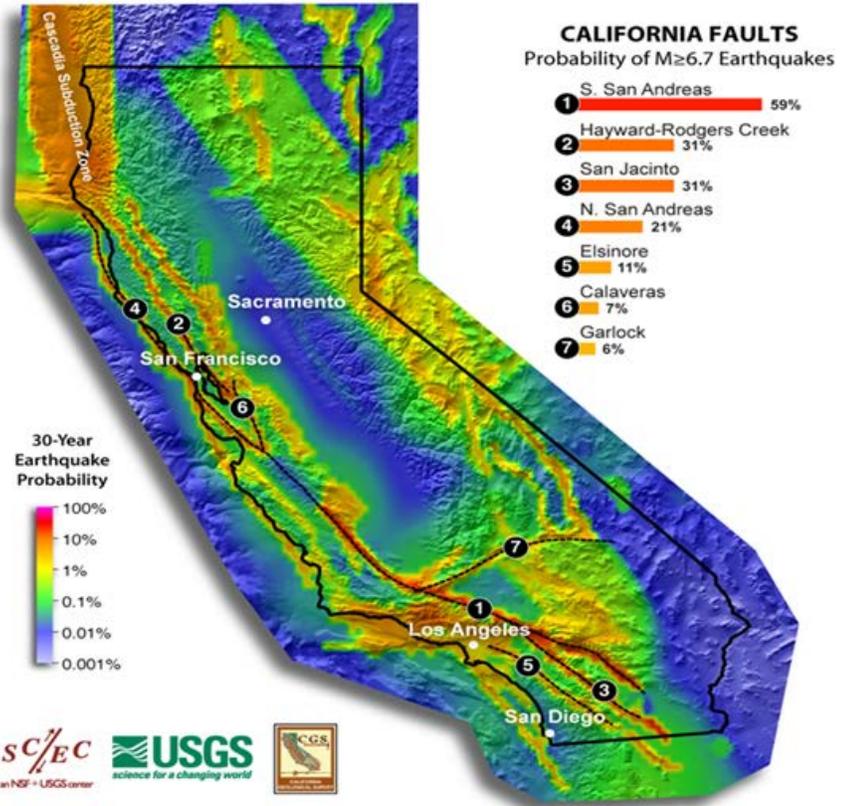
Public Safety Agencies, Facilities and Critical Infrastructure Map

Map provided by Department of Homeland Security – Office of Emergency Communications



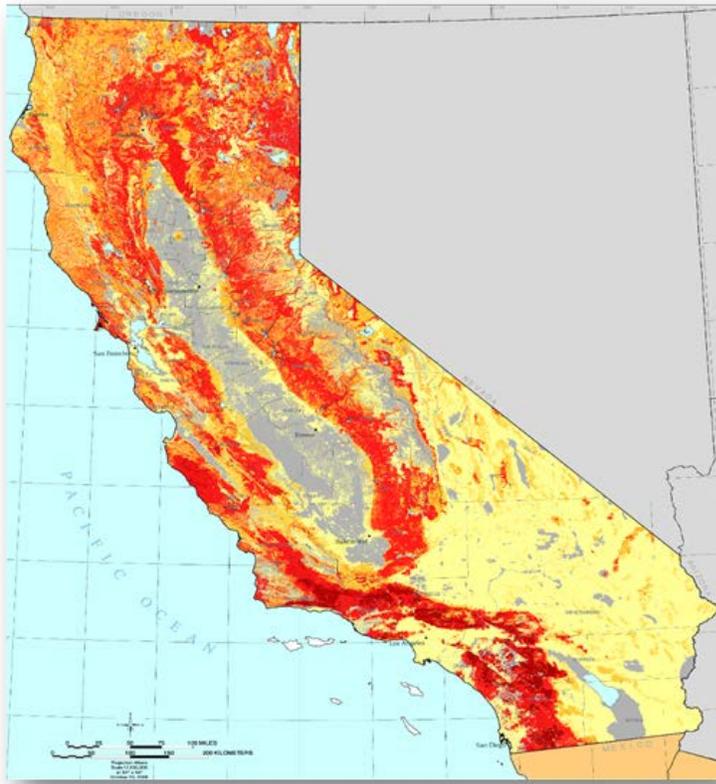
California Fault Line Map

California Fault Map



California Fire Danger Map

California Fire Danger Map



FIRE THREAT

-  **Extreme**
-  **Very High**
-  **High**
-  **Moderate**
-  **Non-fuel**
-  **Non-mapped**

FIRSTNET IN CALIFORNIA CHALLENGES AND OPPORTUNITIES – MOVING FORWARD

The completion of the multi-stepped state consultation process and Governor’s opt-in/opt-out decision marks not the end but rather the beginning of California’s Road to FirstNet. Future challenges and opportunities that California and FirstNet will need to address together include:

- Process and funding for Cyber Security assessment, remediation, and certification of California’s local, regional, and state public safety data networks prior to connecting to the FirstNet backbone. These Internet Protocol (IP) based networks range from small municipal data networks used by local police departments to California’s portion of the extensive networks supporting law enforcement and criminal records database access.
- Process, initial and ongoing funding of backhaul from these same California public safety networks to the FirstNet core gateways.
- Integration of Next Generation 9-1-1 with the FirstNet Network, including the process and funding for Cyber Security assessment, remediation, and certification of local and third party data networks prior to connecting with the FirstNet Network.
- Process and funding for connecting California public safety local and regional P25 and other Land Mobile Radio (LMR) networks via gateways, including the Cyber Security hardening and monitoring of IP based network elements.
- Developing policy and procedures for determining priority (including preemption) of California public safety entity users as well as non-public safety secondary users of the network.
- Determining policy, procedures, responsibilities, and governance for local control of California’s portion of the NPSBN. This includes traffic monitoring, network management, routine and incident situational awareness (location services), and reporting, as well as user provisioning aspects such as determining California public safety user eligibility for FirstNet device types and service features.
- Process and compensation for local public safety network infrastructure asset use by FirstNet and Cal OES and CalFRN’s role in the process.
- Process and funding for California’s (or a third party on California’s behalf) verification of FirstNet Network performance for compliance with Service Level Agreement (SLA) benchmarks. This may range from network traffic monitoring during an incident or ongoing operations to performing drive tests to verify wireless coverage and throughput.
- Process, representation of, and responsibilities of FirstNet and California public safety entities for storing, staging, and deploying cached FirstNet User Equipment (UE), ranging from handheld devices to deployables (e.g., cell on wheels). Issues include determining geographic location (local, regional, national), ownership during storage, in-service procedures, and payment terms.
- Policy and process that foster “grassroots” mobile app development by the local public safety community solving local public safety problems. This process must securely vet

apps before making them available on the FirstNet Network but must do so without stifling local innovation.

- Policy and process on data ownership. This process must identify the owner of the data and determine authorization and approval procedures for data access, e.g., public record requests.

The above bullet items represent just a portion of the many challenges and opportunities that must be addressed to offer a robust, high speed wireless data network to our first responders. California looks forward to working with FirstNet to create viable solutions for these and other issues, now and in the future.

APPENDIX C - LIST OF ACRONYMS

1H2015	First Half of 2015
4G	Fourth Generation
APCO	Association of Public-Safety Communications Officials
BSA	Baseline State Analysis
BTOP	Broadband Technology Opportunities Program
CalCom	California Communications Association
CalFRN	California First Responder Network
CALNENA	California National Emergency Number Association
Cal OES	California Governor's Office of Emergency Services
CalSIEC	California Statewide Interoperability Executive Committee
CCR	California Code of Regulations
CEO	Chief Executive Officer
CEQA	California Environmental Quality Act
CIO	Chief Information Officer
CPRA	California Public-Safety Radio Association
DC	District of Columbia
DHS	Department of Homeland Security
DOC	Department of Commerce
DOD	Department of Defense
ECPC	Emergency Communications Preparedness Center
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EMS	Emergency Medical Services
EPA	Environmental Protection Agency
FCC	Federal Communications Commission
FirstNet	First Responder Network Authority
IDR	Intermediate Design Review
IP	Internet Protocol
IS	Initial Study
LA-RICS	Los Angeles Regional Interoperable Communications System Authority
LMR	Land Mobile Radio

LTE	Long Term Evolution
MARAC	Mutual Aid Regional Advisory Committee
MDST	Mobile Data Survey Tool
MHz	Megahertz
MOU	Memorandum of Agreement
NAPCO	Northern California Association of Public-Safety Communications Officials
NASEMSO	National Association of State EMS Officers
ND	Negative Declaration
NEPA	National Environmental Policy Act
NG9-1-1	Next Generation 9-1-1
NPSBN	National Public Safety Broadband Network
NPSTC	National Public Safety Telecommunications Council
NRTC	National Rural Telecommunications Cooperative
NTIA	National Telecommunications and Information Administration
OACC	Operational Area Coordinating Council
OEC	Office of Emergency Communications
OES	Office of Emergency Services
OMB	Office of Management and Budget
P25	Project 25
PDR	Preliminary Design Review
PL112-96	Public Law 112-96
PS	Public Safety
PSAC	Public Safety Advisory Committee
PSAP	Public Safety Answering Point
PSBB	Public Safety Broadband
RAN	Radio Access Network
RFI	Request for Information
RFO	Request for Offer
RFP	Request for Proposal
SAIC	Science Applications International Corporation
SLA	Service Level Agreement
SLIGP	State and Local Implementation Grant Program
SPOC	Single Point of Contact

TBD To Be Determined

UC University of California

UE User Equipment

US United States