

OEC FirstNet Consultation Prep Workshop Overview

State of California

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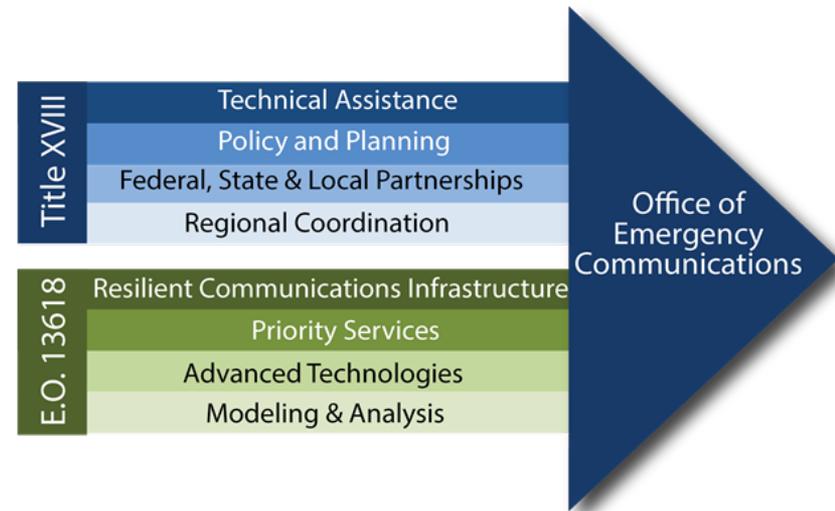
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Office of Emergency Communications (OEC)

Mission: OEC leads the coordination of interoperable emergency communications at the Federal, State, local, and tribal levels and supports national security/emergency preparedness communications.

- **OEC expanded in Nov 2012 to include several National Communications System (NCS) functions.**
- **OEC now includes:**
 - **Architecture and Advanced Technology Branch**
 - **Communications Portfolio Management Branch**
 - **Policy and Planning Branch**
 - **Public Safety and National Security/Emergency Preparedness Partnerships Branch**
 - **Regional Coordination Branch**
 - **Technical Assistance Branch**

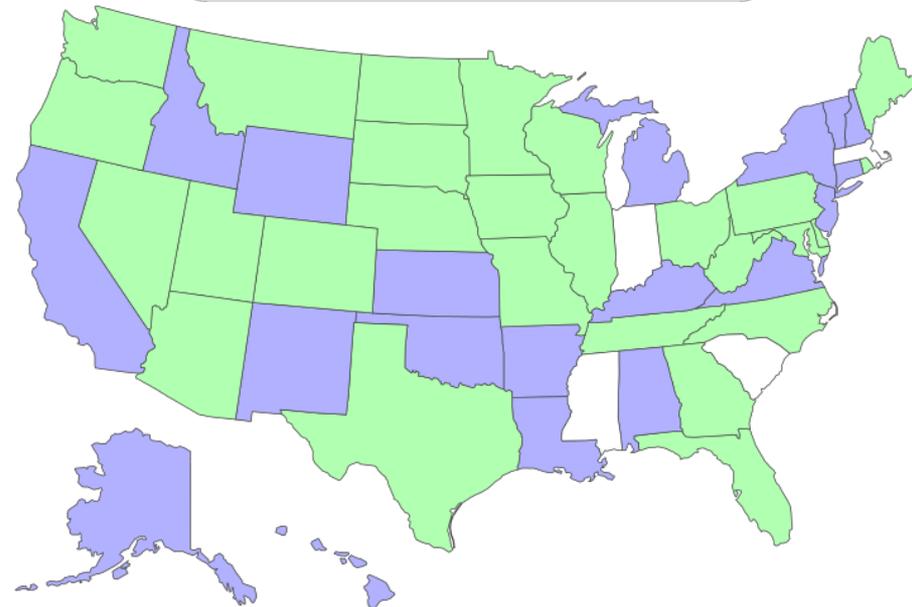


OEC FirstNet Consultation Prep Workshop

- On-Site workshop focuses on preparing States for the consultation process with FirstNet
- Half day meeting is divided into three components:
 1. Broadband 101
 2. Coverage Objectives
 3. Users
- OEC provides various GIS datasets to assist discussion on public safety operational coverage needs
- User Information is compiled from FEMA, Department of Justice, CASM and commercial databases

Legend:

-  **Completed**
-  **Planned / Requested**

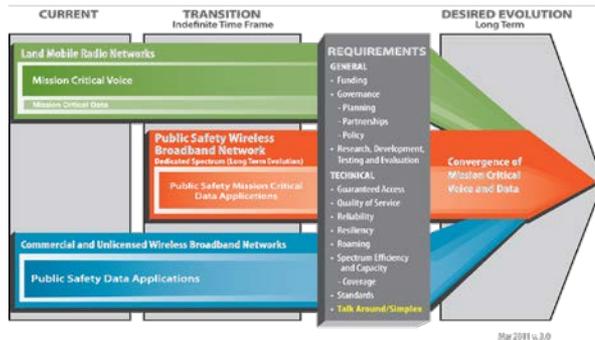
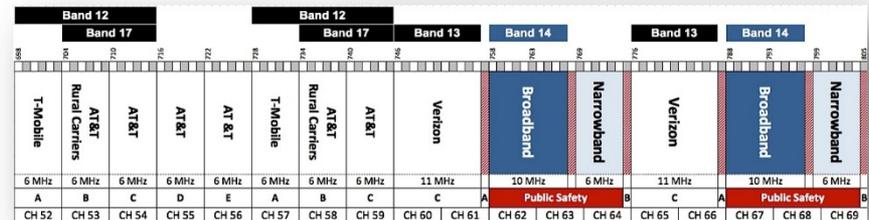
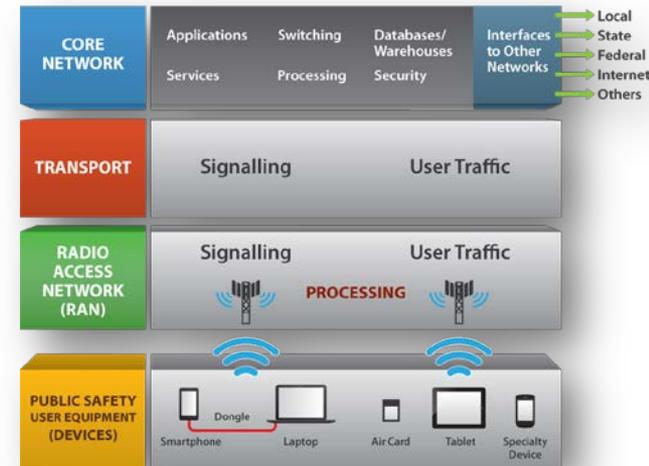


(1) Broadband 101

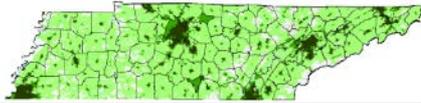
- High level overview of LTE and Public Safety wireless broadband
- FirstNet and SLIGP grant overview
- Information on FirstNet consultation



SLIGP



FirstNet Consultation: Key Design Considerations



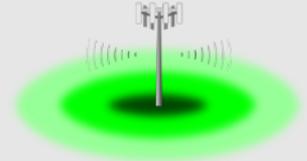
Coverage

- Where is reliable Coverage needed?
- For what level/ device types?
- Using what potential methods?



Capacity

- How many total users / devices?
- What is their operational area?
- What type of applications do they use?

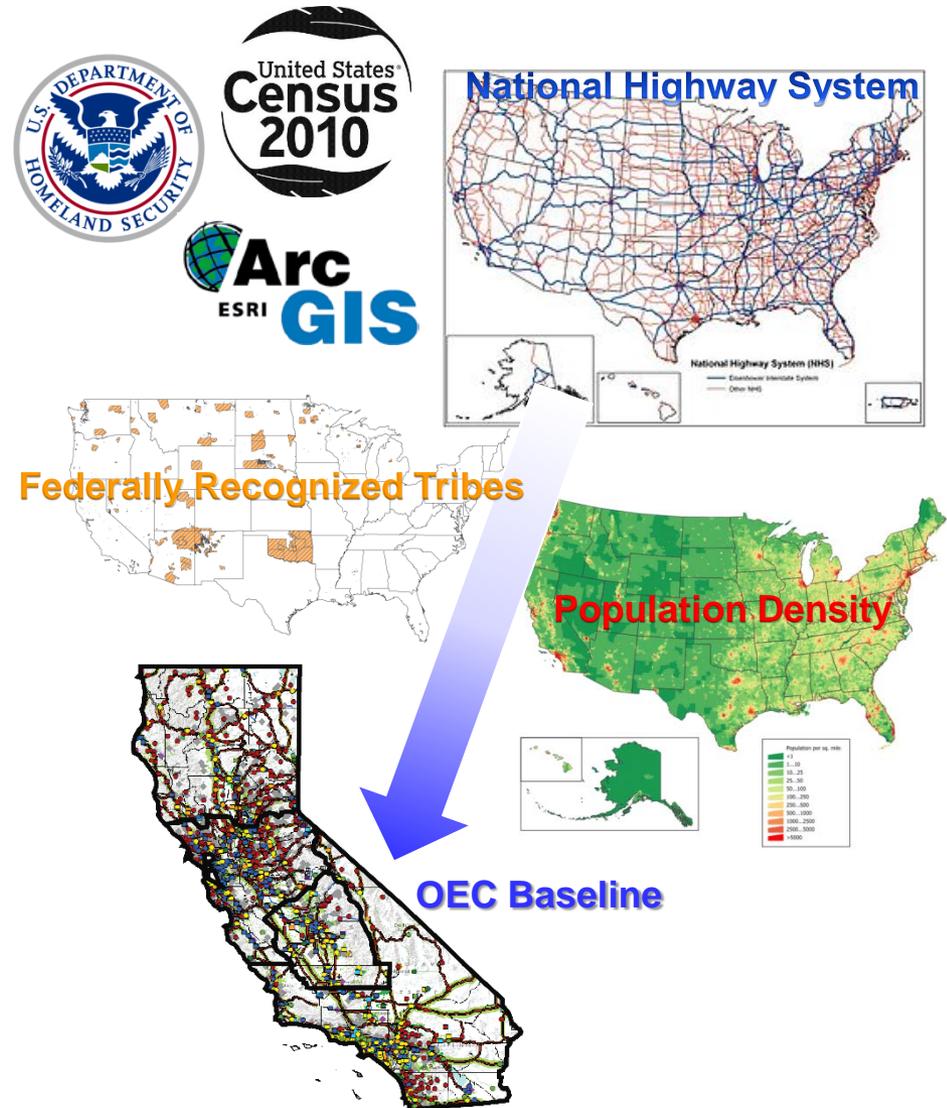


RAN Design

- Estimated number of sites
- Initial cost estimate
- Parameters for asset data collection

(2) Coverable Objectives Introduction

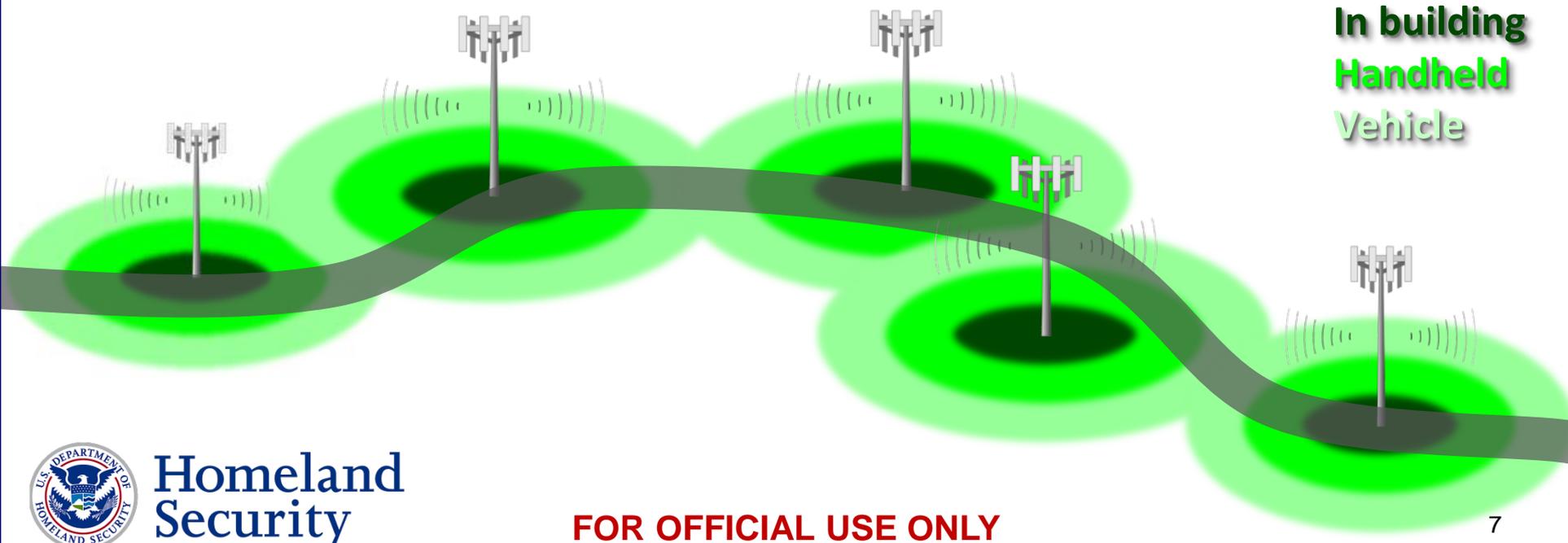
- **Objective:** Help states with a starting point of data that can be considered when establishing coverage objectives for FirstNet
- OEC has gathered a variety of nationwide data from several sources to establish a baseline
- OEC has coordinated our baseline with FirstNet to ensure it's a reasonable starting point
- States/Territories can then tailor it to unique Public Safety operational needs



Coverage Objective vs. Coverage Map

- **Coverage objectives** identify the State's coverage goals
- **Coverage maps** show predicted coverage for the network build out
- Once the towers are selected to satisfy the coverage objectives, the resulting coverage map may yield greater coverage.

Highway example: The coverage objective is to provide mobile coverage on the highway. The resulting coverage will be much greater.



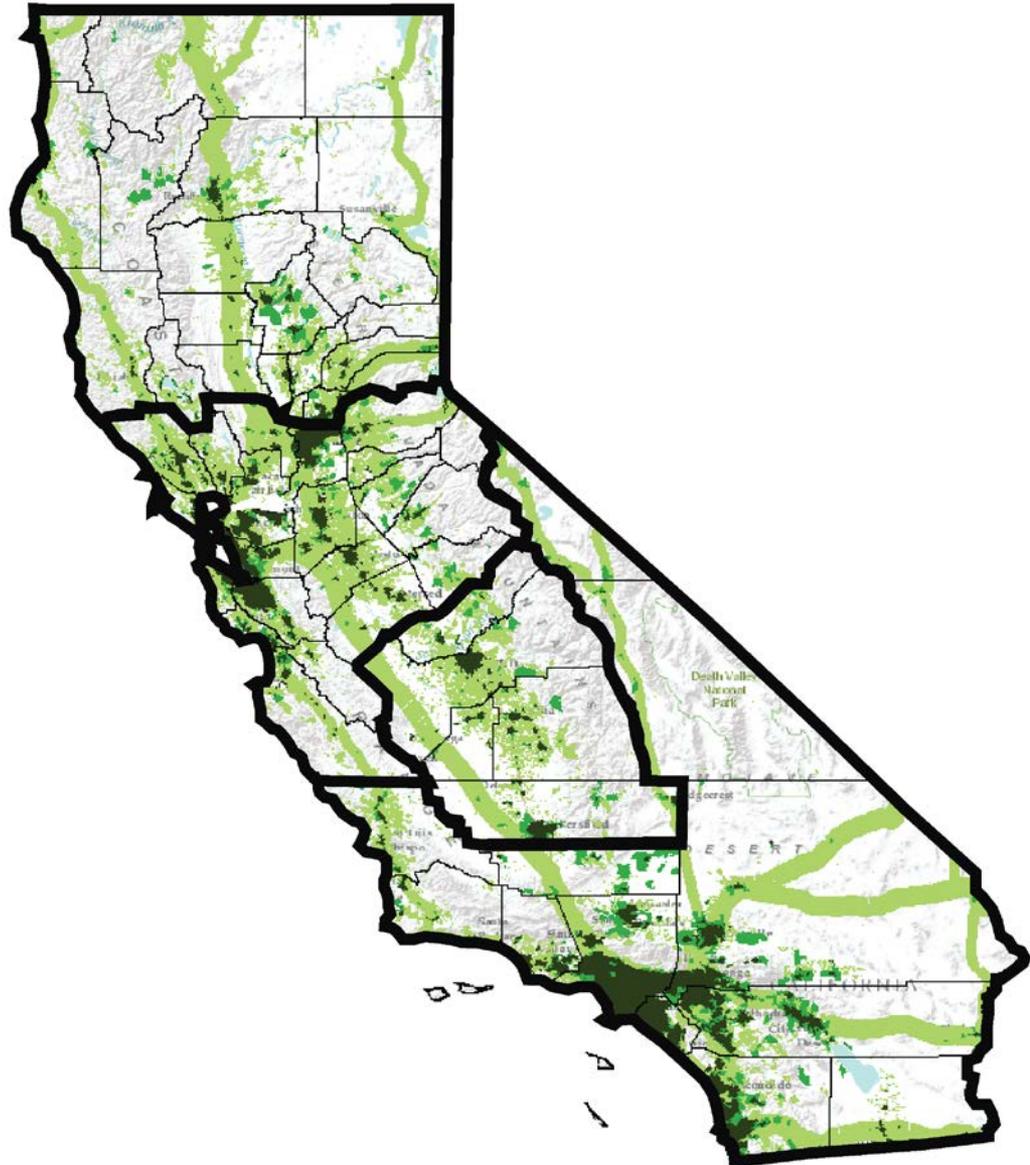
OEC Coverage Baseline

OEC Starting Point

Interstates, major U.S. highways and non-CDP areas with more than 5 people per square mile (using census blocks)

All other areas would use Satellite/ Deployable coverage.

-  **In-Building**
-  **Handheld/Partial In-Building**
-  **Vehicular Modem/ Partial handheld**
-  **Satellite/Deployable**



Adjust the Baseline 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) Installations
- Canada and Mexico Border Crossings

Critical Infrastructure

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



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Example of Coverage Deliverable to FirstNet

Deliverable to FirstNet:
GIS file broken down into
the 4 coverage areas

-  **In-Building**
-  **Handheld/Partial
In-Building**
-  **Vehicular Modem/
Partial handheld**
-  **Satellite/Deployable**



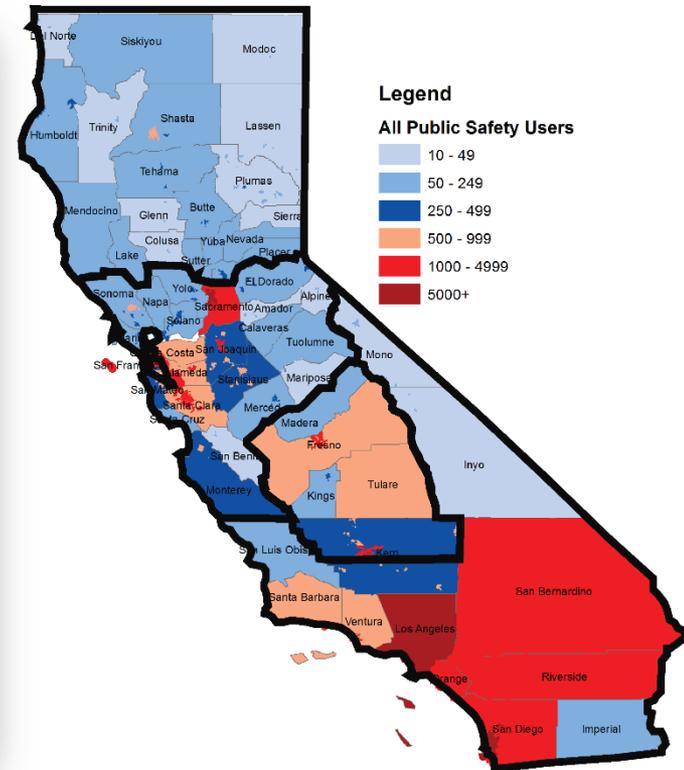
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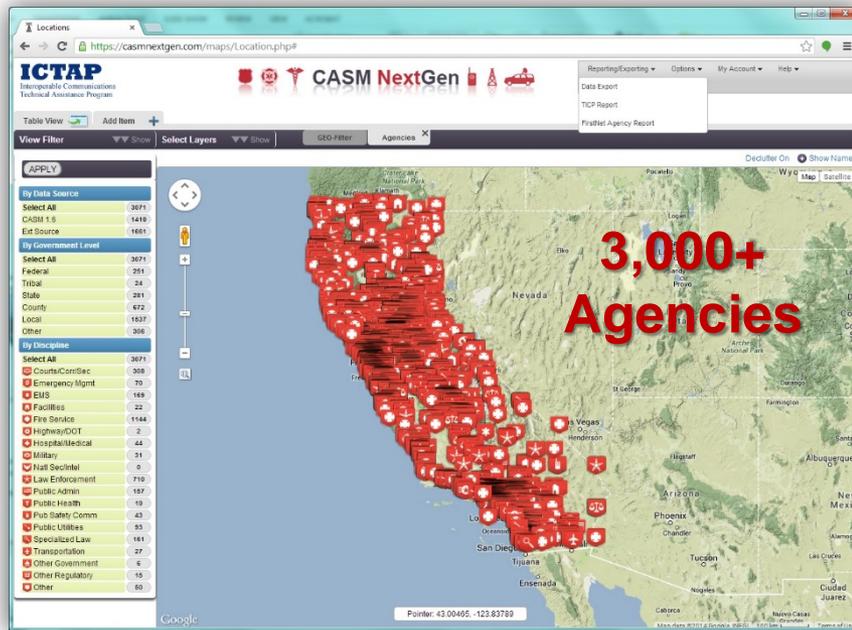
(3) Users: First Responder Population

- Identify potential users, counts and operational areas
- Discuss the importance to the design considerations

Agency Type / Discipline	Agency Count	# of Personnel	# of Devices (non-LMR)
Emergency Medical Services (EMS)	120	29,766	
Fire Services (Career and Volunteer)	835	53,025	
Law Enforcement (Municipal Police, State Police, Highway Patrol, etc.)	400	114,985	
Courts, Corrections and Security	451		
Education Establishments			
Emergency Management	55		
Facilities and Land Management			
Highway and DOT	1		
Hospitals and Medical Facilities			
Military/National Guard	33		
National Security/Intelligence			
Public Administration and Support Services			
Public Health			
Public Safety Communications	358		
Specialized Law Enforcement (Intelligence, Dignitary Protection, etc.)	269		
Transportation Operations (Air, Pipeline, Rail, Sea, Waterway)			
Utilities (Electricity, Gas, Water, Telecom and Sewer)			
Other			
TOTAL			



OEC Tools (www.publicsafetytools.info)



- CASM NextGen: Agency Data including FirstNet Agency Report
 - Name, Discipline, POCs, Personnel Counts, Device Counts, etc.

- Mobile Data Survey Tool (MDST)
 - Gather details on how agencies are using mobile data today
 - Already developed and available for California
 - Built in analysis and reporting
 - Integrated with CASM NextGen

1. **Agency Info:** Name, Discipline, Location, Contact info

2. **Commercial Systems:** Provider, Cost, Devices, Contracts

3. **Private Systems:** Provider, Cost, Radios

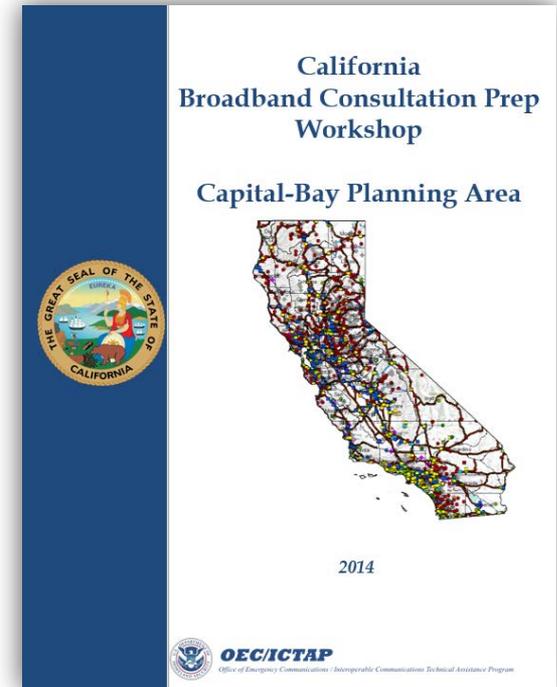
4. **Wireless Services:** Barriers, Personal Use, Coverage

5. **NPSBN Info:** Awareness, Applications, Potential Assets, MOAs

6. **LMR:** Radio counts, cost, end of life

Workshop Summary

- **(1) Broadband 101**
 - High level overview of LTE and NPSBN
 - FirstNet and SLIGP grant overview
 - FirstNet consultation information
- **(2) Coverage Objectives**
 - Start identifying required coverage levels to prepare for FirstNet consultation
 - OEC provides all materials electronically including map GIS data for continued use
- **(3) Users**
 - States can start identifying potential users to prepare for FirstNet Consultation
- County worksheets included to break down information
- OEC tools available for voluntary use
 - CASM Next Generation (NextGen)
 - Mobile Data Survey Tool (MDST)





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