



***Cal* OES**

GOVERNOR'S OFFICE
OF EMERGENCY SERVICES

A large, faint, light-colored silhouette of a bear walking to the right is centered in the background of the slide. A large, light-colored five-pointed star is positioned to the left of the bear's head.

**CA 9-1-1 Branch Updates
Cal NENA 2018**



Briefing Overview

- Mission and Overview
- What's New in the 9-1-1 Branch?
- Connecting the Technology
- 2017 Statistics
- 9-1-1 Branch Update
 - Business Management Division
 - Technology Division
- Text to 9-1-1
- Next Gen 9-1-1



What's New in CA 9-1-1 Branch?

Effective: February 2018

California 9-1-1 Emergency Communications Branch

Mail and Delivery Address:
 Public Safety Communications
 CA 9-1-1 Branch
 601 Sequoia Pacific Blvd. MS-911
 Sacramento, CA 95811-0231

Office Contact Information:
 Main Line: (916) 657-9369
 Fax: (916) 657-9882
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 www.caloes.ca.gov/911

Six new 9-1-1 Staff
 Five new Broadband Services Staff

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Colusa	San Mateo
Contra Costa	Santa Clara
Del Norte	Santa Cruz
Humboldt	Shasta
Lake	Siskiyou
Marin	Solano
Mendocino	Sonoma
Monterey	Trinity
Napa	

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Mono	Santa Barbara
Orange	Ventura

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Fresno	Tribal Nations
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Calaveras	Sacramento
Glen	Sierra
Kings	Sutter
Lassen	Tehama
Madera	Tulare
Mariposa	Tuolumne
Modoc	Yolo
Nevada	Yuba
Placer	

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07-Contra Costa	41-San Mateo
27-Monterey	43-Santa Clara
33-Riverside	44-Santa Cruz
35-San Benito	48-Solano
36-San Bernardino	

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17-Lake	28-Napa
19-Los Angeles	49-Sonoma

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03-Amador	40-San Luis Obispo
05-Calaveras	42-Santa Barbara
09-El Dorado	46-Sierra
13-Imperial	50-Stanlaus
29-Nevada	55-Tuolumne
31-Placer	56-Ventura
34-Sacramento	57-Yolo
37-San Diego	97-Cal-Fire (statewide)

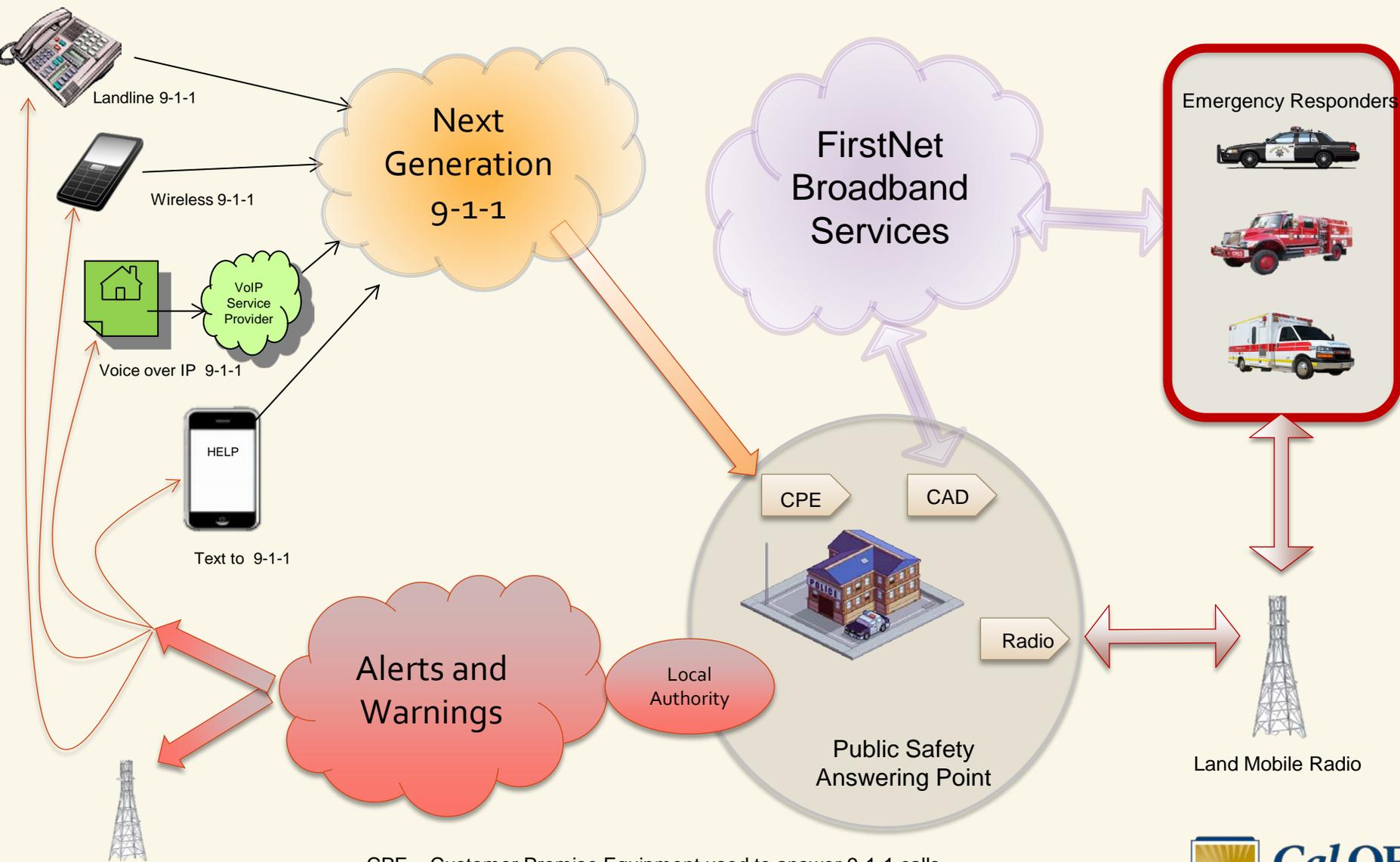
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06-Colusa	26-Mono
10-Fresno	30-Orange
11-Glen	32-Plumas
14-Inyo	45-Shasta
15-Kern	47-Siskiyou
16-Kings	51-Sutter
18-Lassen	52-Tehama
20-Madera	53-Trinity
22-Mariposa	54-Tulare
24-Merced	58-Yuba

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Connecting the Technology



Broadcast Message

Slide 5

CPE – Customer Premise Equipment used to answer 9-1-1 calls
 CAD – Computer Aided Dispatch used to dispatch emergency responders
 LMR – Land Mobile Radio used for mission critical voice communications



2017 Statistics

2017 California 9-1-1 Call Statistics

Total 9-1-1 Calls 28,129,927

- **80% Wireless**
- **15% Wireline**
- **4% Voice over IP**
- **1% Other to include Telematics**
- **~ 18,200 Text Messages**



Program Management Division

Updates and Overview

Presented by

Alicia Fuller

9-1-1 Advisory & Compliance Unit



Program Management Division

- Statewide PSAP advisement and support
- Procurement of 9-1-1 systems and services using CPE Contract Agreements, CMAS, CALNET, and tariff
- PSAP call volume standards and network integrity to assist PSAPs in maintaining call answering standards
- Fiscal and Operational Review (FOR) Process
- 9-1-1 Operations Manual
- Budget and SETNA fund reporting
- Contract and Procurement oversight
- Invoice and reimbursement validation and reconciliation



Key PSAP Funding

- Foreign Language Emergency Interpretation Services (Chapter VII)
- 9-1-1 Annual Training Allotment (Chapter III) - \$3,000 per fiscal year
- 9-1-1 CPE Systems, Network Services, GIS Allotment, and Incremental Items (Chapter III)



Foreign Language Contract

- PSAPs will continue to have two Direct Funded Options (9-1-1 calls only)
 - ❖ Direct Funded Option 1: CA 9-1-1 State Contract
 - ❖ Direct Funded Option 2: CA Multiple Award Schedule (CMAS) – Purchase Order required

- PSAPs also have an option to utilize reimbursement for 9-1-1 foreign language interpretation services



Foreign Language Contract

- Direct Fund Option 1 : CA 9-1-1 State Contract
 - ❖ Per Minute Interpretation State Rate: \$0.58
 - ❖ Statewide Contractor: **Voiance (a CyraCom Intl. Co.)**
 - ❖ Voiance will contact PSAPs choosing option 1 with further instructions
 - No action required by the PSAP
 - Dedicated state account team
 - ❖ CA 9-1-1 State Contract Benefits
 - CA 9-1-1 Branch contract administration and oversight
 - Monthly performance reports are required
 - Service issues can be submitted online
 - Consolidated billing and reporting



Foreign Language Contract

- Direct Fund Option 2 : CA Multiple Award Schedule (CMAS)
 - ❖ PSAP chooses CMAS vendor
 - ❖ Purchase Order (PO) required
 - ❖ PSAP determines contract term and SLAs
 - ❖ Per minute rate cannot exceed state rate of \$0.58
- Reimbursement Option
 - ❖ PSAPs may procure/pay their own 9-1-1 interpretation services
 - ❖ Per minute rate cannot exceed state rate of \$0.58
 - ❖ Requires submission of Reimbursement Claim Form TDe-290 (minimum quarterly submission)
- PSAPs may have more than one service provider
- Questions - contact Lori Toy at (916) 657-9183 or Lori.Toy@caloes.ca.gov



Training Allotment

- Available to PSAPs and 9-1-1 County Coordinators
- Annual Training Allotment (ATA) of \$3,000 is available each fiscal year (Jul-Jun)
- Unspent ATA balance cannot be rolled over or applied to the next fiscal year
- Training must be pre-approved by CA 9-1-1 Branch
- State Travel Rates must be followed
- Training must be specific to 9-1-1 and take place within California
- Funding is received by following the Reimbursement Claim process



Reimbursement Claim Process

Travel reimbursement and activity related claims must be submitted no later than 90 days (Sept 30) after the close of the State's fiscal year end (June 30)

- Annual Training Allotment (ATA) claims
- 9-1-1 County Coordinator/PSAP Manager claims
Reimbursement Claim Forms
- Reimbursement Claim, TDe-290 (Rev. 07/2014)
- Reimbursement Claim Support Document,
TDe-290A (Rev. 07/2014)
- Other required supporting documentation (receipts)
- Forms are available on our website



CA 9-1-1 Branch PSAP Advisors

Theresa Fryer

- Bay Area
- Riverside & San Bernardino

Curt Guillot

- Sacramento & Sierra Nevada
- Central Coast/ Tri-Counties
- San Diego & Imperial
- Cal Fire Statewide

Pavel Kioroglo

- North Coast
- Los Angeles

Yvonne Winn

- Northern CA
- Central Valley
- Orange

Alicia Fuller

- CHP Statewide



Role of 9-1-1 PSAP Advisor

- State liaison for PSAP managers and communications personnel
- Primary point of contact for 9-1-1 equipment or service related questions
- Responsibilities are split geographically by county (See Directory for current county assignments)
- Travel to public safety agencies throughout CA to:
 - ❖ Perform Fiscal and Operational Reviews (FOR)
 - Goal is to visit each PSAP every 3-5 years
 - Contact your Advisor to request a FOR
 - ❖ Attend and present at PSAP Manager meetings



Help with CPE Replacements and CPE Contracts

- Advise PSAP managers on the usage of:
 - ❖ State contracts available to purchase 9-1-1 system and equipment
 - ❖ CA 9-1-1 Branch funding policy
- Provide general information on contracted vendors
- Facilitate fiscal approval for purchases
- Answer questions and address issues throughout the replacement process including:
 - ❖ Vendor selection, installation, and acceptance of CPE system
 - ❖ Contract terms and maintenance support
- First point of contact to escalate contract compliance issues between PSAP and contractor vendors



9-1-1 Operations Manual Updates

- Host-Remote Funding Model & Agreement Form
 - Network Configuration
- Updated System Acceptance Forms (TDe-284/284a)
- Incremental Equipment/Services
 - 25% of total funding fixed allotment for certain items
 - Furniture and chairs are no longer eligible items for new funding allotments
 - PMP/ENP certified profession consulting services
 - Public safety AVL to support 9-1-1 call answering
- Text-to-9-1-1 Deployment Schedule
- Text-to-9-1-1 Integration



Contract Updates

- CPE Contract Agreements
 - ❖ 9 contractors available
 - ❖ www.caloes.ca.gov/911
- Foreign Language Emergency Interpretation Services
- Text-to-9-1-1
 - ❖ Contract extension in process



Technology Division

Updates and Overview

Presented by

Ryan Sunahara

Technology Division Chief



Technology Division - Roles

Chereise Bartlett

- Text to 9-1-1
- Procurement
- Emerging Tech

Donna Peña

- VoIP/GIS
- NG Vehicle Emer Data
- Regulations/CPUC

Andrew Mattson

- NG 9-1-1 Project Management
- PSAP Regionalization
- County Coordinator Task Force

Jim Thompson

- Wireless Coordinator
- Wireless Technical Routing Analysis Project (WTRAP)



Text-to-911

Deployed Counties/PSAPS	Count
Alameda County (Partial)	2
Butte County	7
Contra Costa County (Partial)	3
Imperial County (partial)	3
Los Angeles County	75
Monterey County (Monterey EC for entire county)	4
Riverside County (partial)	5
San Bernardino County (2 CHPs)	15
San Luis Obispo County	7
San Mateo County (Partial)	9
Santa Clara County (partial	2
Santa Cruz/San Benito (Partial)	1
CHP Statewide	25
Total	158

Selected TCC	Count
Alameda (Partial)	3
Contra Costa County (Partial)	8
Imperial	1
Kern County	12
Lake County	1
Mendocino County	3
Merced	8
Riverside County (partial)	2
Sacramento (partial)	5
San Francisco	1
San Joaquin (Partial)	2
San Mateo County	3
Santa Clara County	3
Santa Cruz County	1
Shasta County	1
Sutter County (partial)	1
Tehama Coutny (partial)	1
Toulemne County	1
Ventura (partial)	1
Yolo	3
Total	61



9-1-1 Outage Reporting

- Staff on call 24/7/365
- Interface with carriers and providers
- 911 Branch may contact PSAP for more info
- What to do for TDOS or DDOS
 - Contact Telecom Vendor
 - Cal OES State Threat Assessment Center (STAC)
 - <https://calstas.org/default.aspx?menuitemid=179>



Wireless Technical Routing Analysis Project (WTRAP)

WTRAP Status for Calendar year 2017

Quarter	Total Reviewed	Total Reroute	PSAP to CHP	PSAP to PSAP	CHP to PSAP	CHP to CHP	Routing % Change
Q1	90,762	10,117	1,680	1,003	7,149	275	11.15%
Q2	142,306	15,591	2,417	2,415	10,372	385	10.96%
Q3	69,378	5,088	941	597	3,399	152	7.33%
Q4	28,136	4,415	535	384	3,428	68	15.69%
Grand Total	330,582	35,211	5,573	4,399	24,348	880	11.28%

Next step is to work with Wireless carriers to complete the reroutes

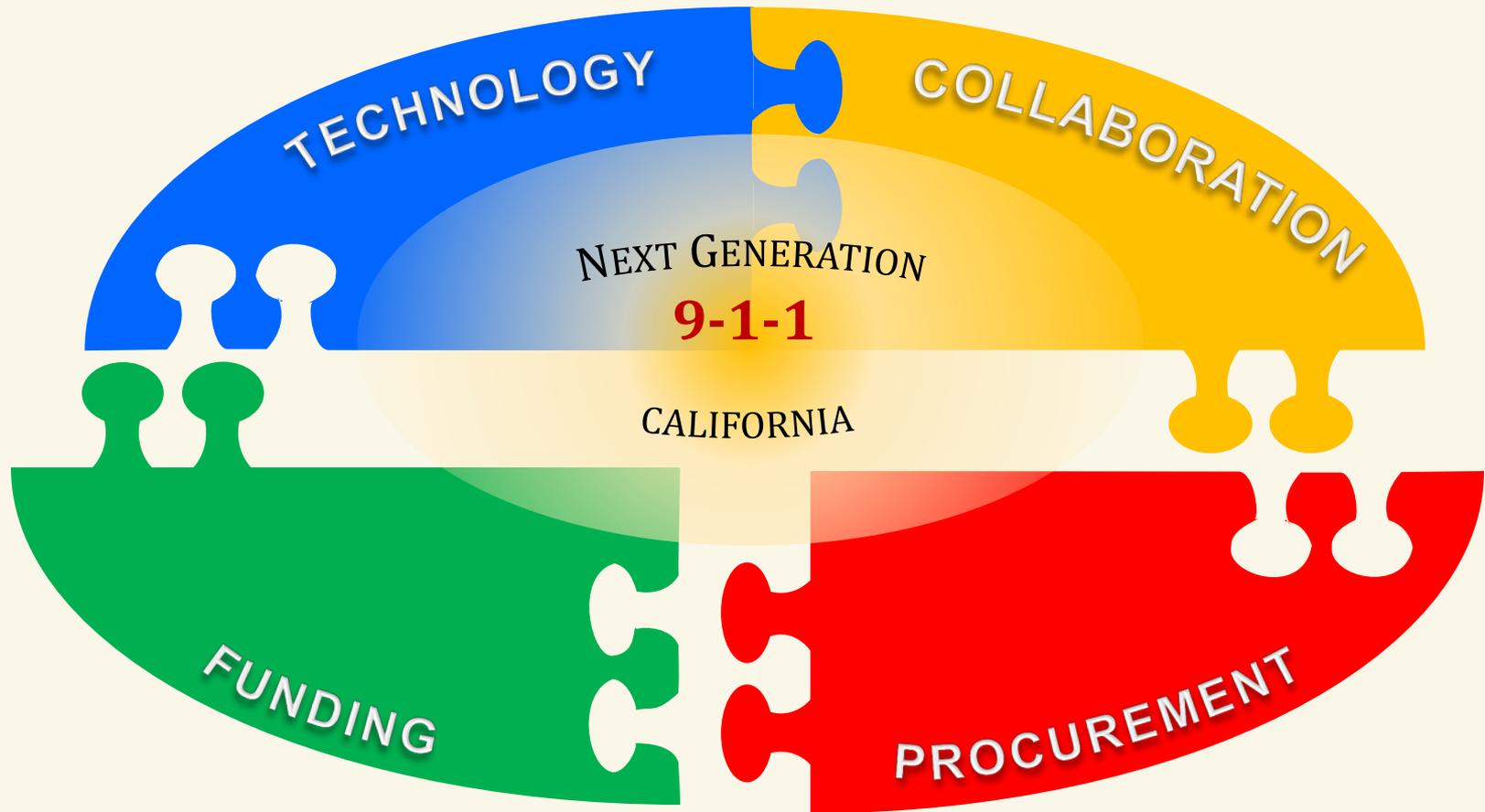


WTRAP Program for 2018

- Plan is to review only the new cell sectors added since 2017 analysis was completed
 - To prevent repetitive analysis of the same sectors since the 2017 updates are still being implemented
- By Jan 2019, all sectors should have a full year of new data and be ready for re-evaluation in accordance with the WTRAP instructions.



Next Gen 9-1-1 in California

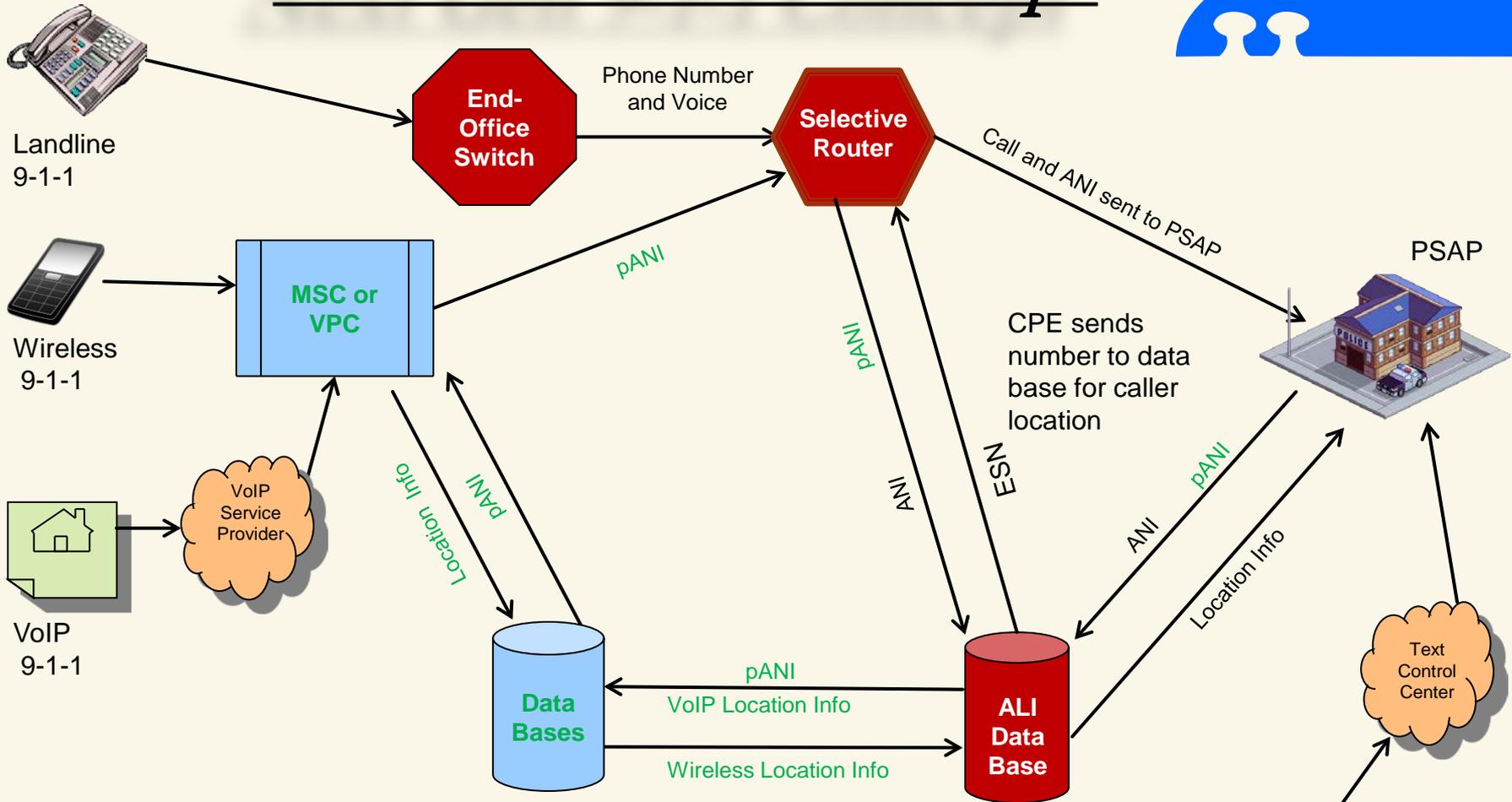




Why Next Gen 9-1-1?

- Faster call delivery
- Increased routing accuracy and redundancy
- Increased efficiency
- Increased routing => call overflow and backup
- Updated Geographic Information System (GIS)
- Prepared for Wireless Location Data
- Prepared for newer technologies

Next Gen 9-1-1 Concept

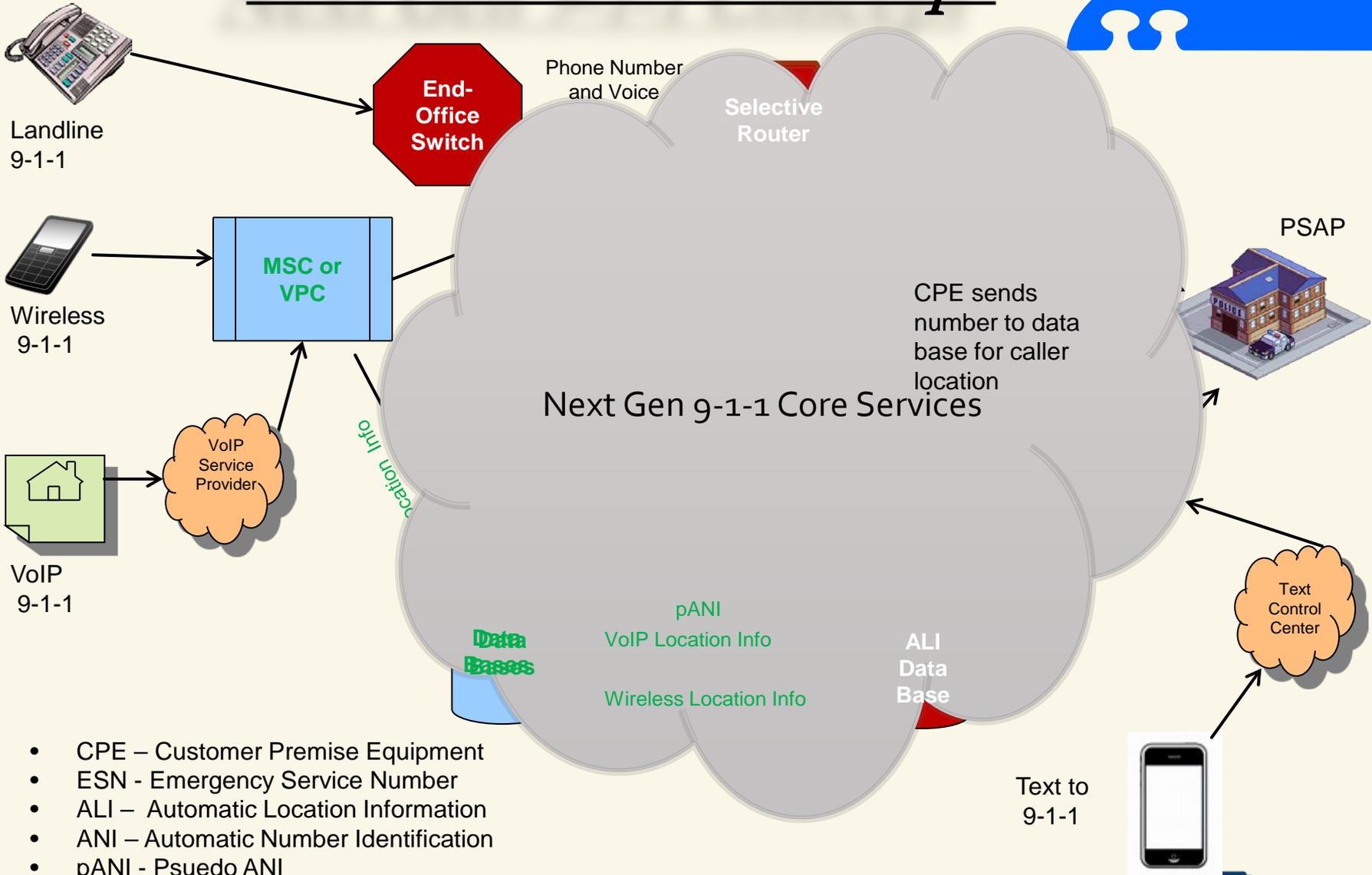


- CPE – Customer Premise Equipment
- ESN - Emergency Service Number
- ALI – Automatic Location Information
- ANI – Automatic Number Identification
- pANI - Psuedo ANI
- VoIP – Voice over IP
- MSC – Mobile Switching Center
- VPC – VoIP Positioning Center

Text to 9-1-1



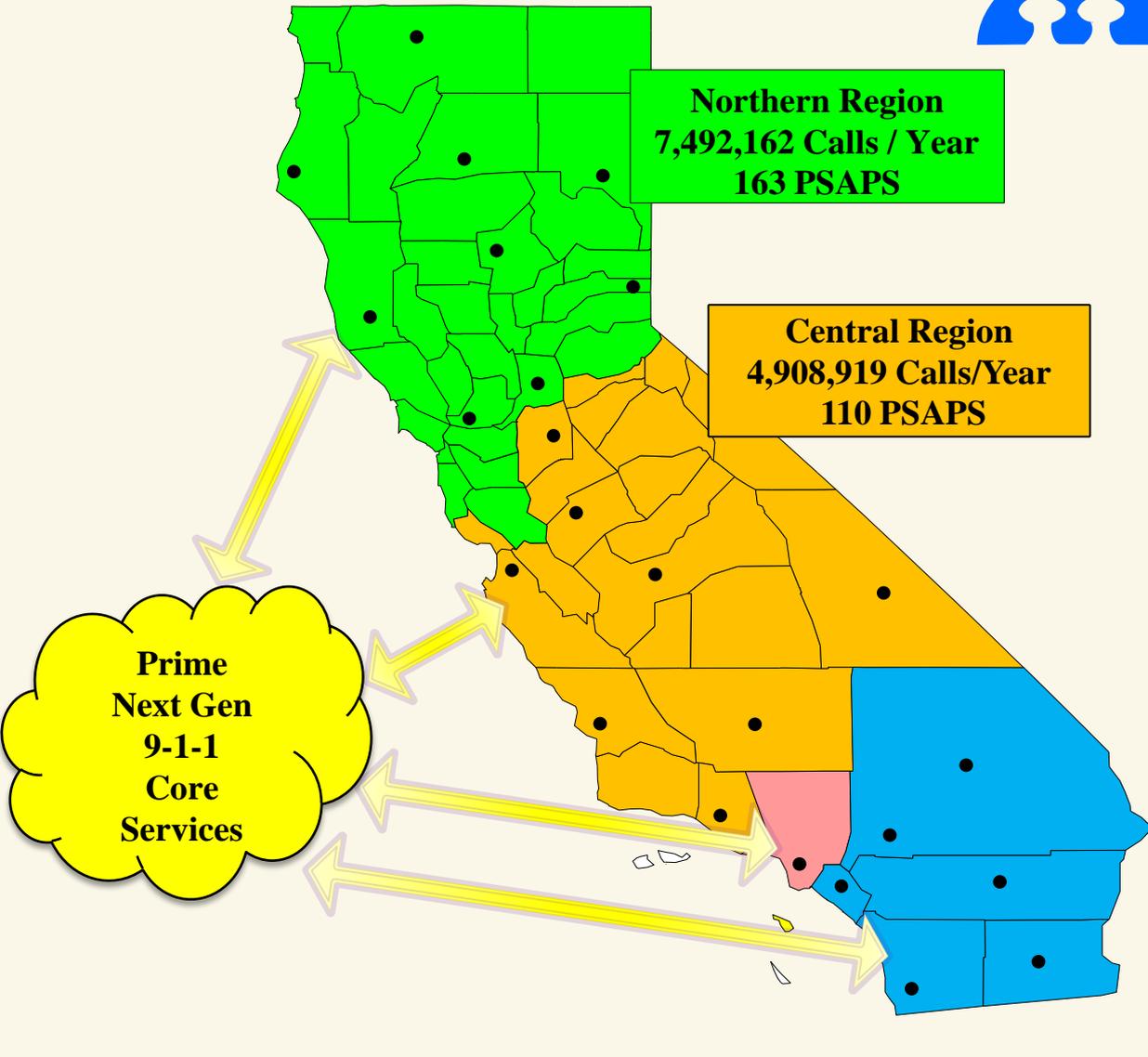
Next Gen 9-1-1 Concept



- CPE – Customer Premise Equipment
- ESN - Emergency Service Number
- ALI – Automatic Location Information
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- pANI - Psuedo ANI
- VoIP – Voice over IP
- MSC – Mobile Switching Center
- VPC – VoIP Positioning Center



Next Gen 911 ESInet Statewide Regional Map



Northern Region
7,492,162 Calls / Year
163 PSAPS

Central Region
4,908,919 Calls/Year
110 PSAPS

Los Angeles Region
8,514,105 Calls/Year
79 PSAPS

Southern Region
6,929,512 Calls/Year
89 PSAPS

Map Depicts:
-58 Counties
-24 CHP Communications Centers (■)
-4 Defined ESInet Regions plus Prime

All four identified regions shall have the capability to interconnect to all other regions.



What will it cost?



Year	Legacy 9-1-1 Costs	NG9-1-1 Costs	Estimated Total
FY 2017-18	\$104,446,000	\$10,000,000	\$114,446,000
FY 2018-19	\$103,123,384	\$25,000,000	\$128,123,384
FY 2019-20	\$94,441,114	\$44,000,000	\$138,441,114
FY 2020-21	\$75,010,114	\$66,000,000	\$141,010,114
FY 2021-22	\$64,110,114	\$88,000,000	\$152,110,114
FY 2022-23	\$59,641,114	\$97,020,000	\$156,661,114



Updated Funding Plan



- Submitted Budget Change Proposal as part of Governor's FY 2018 Budget
 - Stop gap to provided necessary funding
 - Ensures 9-1-1 Branch has long term sustainability
- Submitted trailer bill language to change SETNA funding model
 - Removes technology specific language and reliance on Intrastate voice revenue
 - Proposes surcharge for all subscriptions that can access 9-1-1



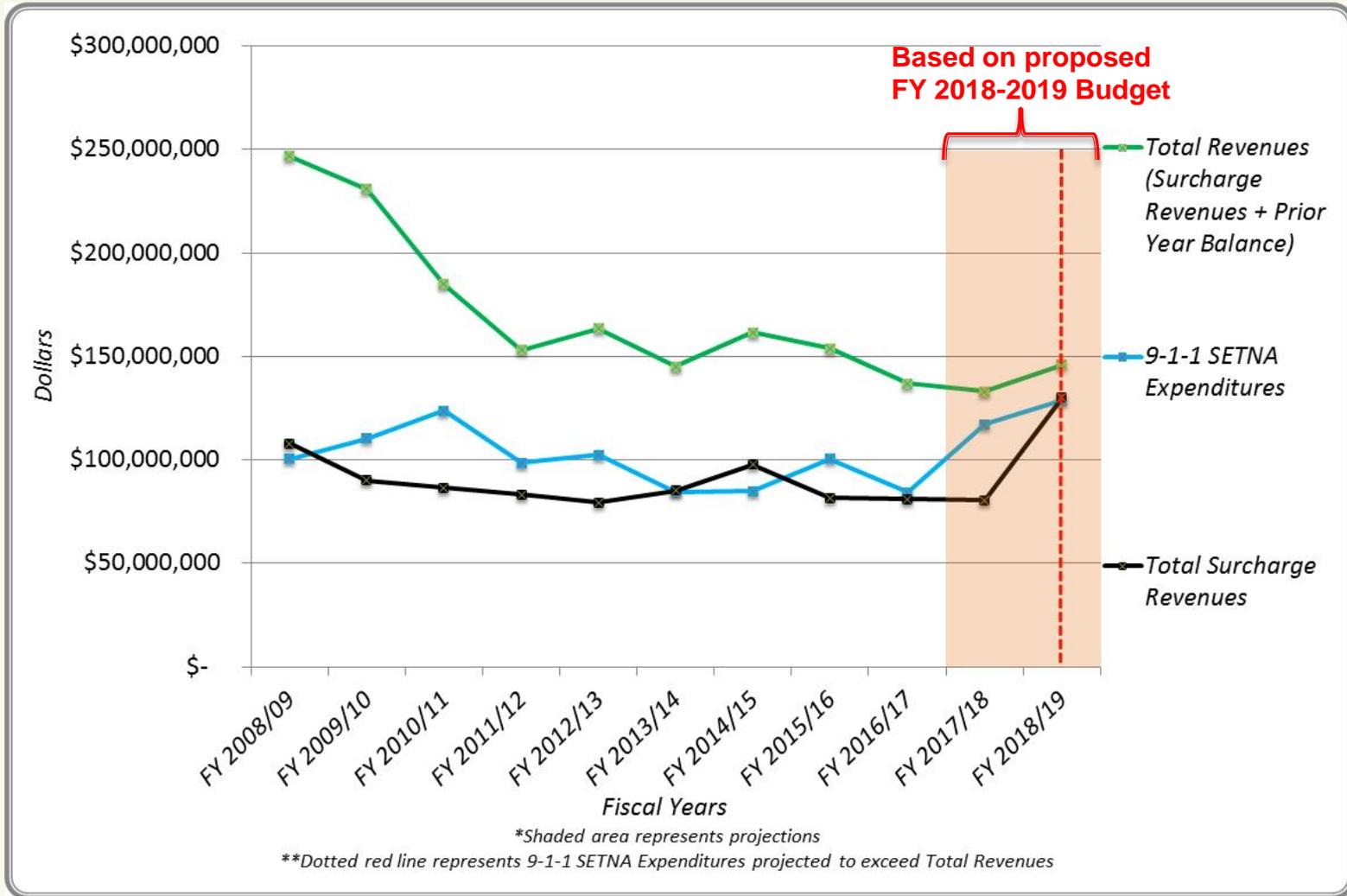
How will Funding affect PSAP



- If Governor's Budget approved
 - Provides funding needed to sustain 9-1-1 today
 - Provides funding needed to build out Next Gen 9-1-1
 - Provides stable funding model needed for planning
- What can you do to help?
 - Contact 9-1-1 Branch if you have questions
 - Invite your representatives into your PSAP
 - Reach out to associations and organizations for support



Updated SETNA Graph





Procurement Plan



- Existing 9-1-1 system is procured through Tariff
- Nov 2017 CPUC guidance:
 - All 9-1-1 services must have a Tariff
- Four major areas that Cal OES has defined
 - Transitional Services – Legacy to Next Gen 9-1-1
 - Next Generation 9-1-1 Core Services
 - NG 9-1-1 Trunk Services
 - 9-1-1 Call Aggregation Services
- Working through additional details



Procurement Plan (Cont.)



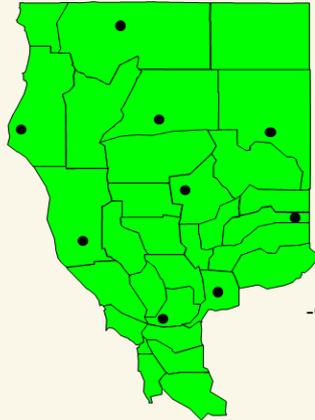
- What we know today:
 - All providers must have a CPCN – Start now!
 - All NG 9-1-1 services must have an established tariff
 - Pricing should be at or near cost
 - Tariff Guidance document has been published
 - Feedback is expected on the tariff guidance document and if possible by March 12, 2018
 - Tariff submission timeline determined by feedback
 - Cal OES will use a fair competitive process to select vendor(s) for each region in order to provide a resilient, redundant, fault tolerant 9-1-1 network



Procurement Plan (Cont.)



Next Gen 911 NG Core Services

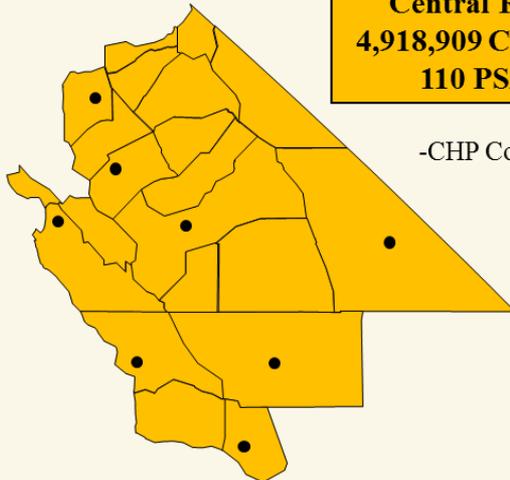


Northern Region
7,492,162 Calls / Year
163 PSAPS

-CHP Communications Centers (■)

	Northern Region	Central Region
Number of PSAPs:	163	110
Total Population:	10,749,128	6,518,467
2017 Total Region Call Volume:	7,492,162	4,918,909
Average Busy Hour Volume: ⁽¹⁾	1,278	864
2017 Busiest hour: ⁽²⁾	13,805	8,087
Regional Monthly Volume (Average): ⁽³⁾	616,403	410,171
Regional Monthly Volume (Single Busiest Month): ⁽⁴⁾	713,406	487,606
Average Call Duration (Seconds): ⁽⁵⁾	99.81	108.75

Next Gen 911 NG Core Services



Central Region
4,918,909 Calls/Year
110 PSAPS

-CHP Communications Centers (■)



Procurement Plan (Cont.)



Next Gen 911 NG Core Services

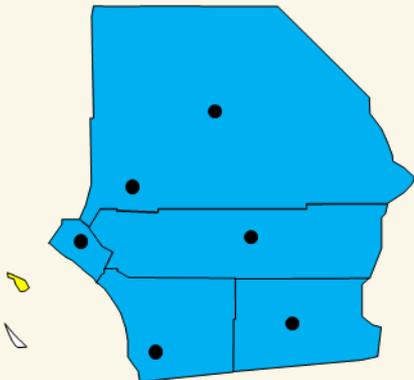


Los Angeles Region
8,514,105 Calls/Year
79 PSAPS

-CHP Communications Centers (■)

	Los Angeles Region	Southern Region
Number of PSAPs:	79	89
Total Population:	9,951,690	10,780,593
2017 Total Region Call Volume:	8,514,105	6,929,512
Average Busy Hour Volume: ⁽¹⁾	1,413	1,196
2017 Busiest hour: ⁽²⁾	7,830	7,014
Regional Monthly Volume (Average): ⁽³⁾	715,298	577,713
Regional Monthly Volume (Single Busiest Month): ⁽⁴⁾	995,212	643,892
Average Call Duration (Seconds): ⁽⁵⁾	96.08	97.10

Next Gen 911 NG Core Services



Southern Region
6,929,512 Calls/Year
89 PSAPS

-CHP Communications Centers (■)



Deployment Timeline



- Prime ESInet – **Sept** 2018 – **Sept** 2020
- Northern ESInet – **Oct** 2018 – **Oct** 2020
- LA County – **Nov** 2018 – **Nov** 2020
- Southern ESInet – Jan 2019 – Jan 2021
- Central ESInet – Mar 2019 – Mar 2021
- All selective routers decommissioned - 2022



Legislative & Regulatory Support

- NG 9-1-1 Act – Federal Legislation
- Text to 9-1-1 Standards
- Text from 9-1-1 Standards
- Cellular network hardening requirements
 - Redundant Power and Backhaul (Data Connections)



Location Accuracy

- We have heard your voice – This is needed now
- On average most PSAPs see about 50% of calls arrive with location in 2-3 seconds
- What are the manufactures doing?
- What is Cal OES doing?
- What is the FCC doing?

Date	X/Y Benchmark
2017	40% of all wireless 911 calls
2018	50% of all wireless 911 calls
2020	70% of all wireless 911 calls
2021	80% of all wireless 911 calls



Emerging Technologies

- Cloud Based Services
- Real Time Text
- Data Applications over Priority Broadband



Questions
