Cal OES
GOVERNOR'S OFFICE
OF EMERGENCY SERVICES

Public Safety Communications

CRIS Roadmap 2026-27

Public Safety Communications

California Radio Interoperable System
Statewide P25 Radio Network

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1. Executive Summary

The California Governor's Office of Emergency Services (Cal OES) Public Safety Communications (PSC) is executing a major expansion and modernization of the California Radio Interoperable System (CRIS), growing the statewide Program 25 (P25) network from 77 operational sites today to 120 sites by the end of 2027 and 130 sites by 2028. This effort will significantly improve statewide coverage, address critical communications gaps, and enhance network resilience through the deployment of alternative backhaul solutions that leverage Long-Term Evolution (LTE) wireless broadband and satellite connectivity while maintaining compatibility with the California Public Safety Microwave Network (CAPSNET). At the same time, PSC is advancing interoperability by establishing Inter-RF Subsystem Interface (ISSI) connections with regional P25 systems, beginning with Los Angeles Regional Interoperable Communications System Authority (LA-RICS), enabling seamless roaming and communications across agency boundaries without the need for patches or temporary workarounds.

Beyond infrastructure expansion, CRIS is evolving into a modern, multi-platform communications ecosystem that extends secure public safety communications beyond traditional land mobile radio (LMR) coverage. New capabilities include Motorola Smart Connect, which automatically transitions users between LMR and broadband networks; Critical Connect, a cloud-based interoperability platform that rapidly connects partner agencies; WAVE PTX, which enables secure CRIS access from smartphones, LTE devices, and web applications; and Command Central AXS, a next-generation dispatch console that streamlines operations and supports advanced P25 services. Together, these investments will provide California's public safety agencies with greater coverage, interoperability, situational awareness, and operational flexibility, creating a more resilient statewide communications platform for both day-to-day operations and large-scale emergencies.

2. CRIS Roadmap Overview

Over the next two years, PSC will significantly expand CRIS statewide P25 radio network, growing from 77 operational sites today to a planned 120 sites by the end of 2027, and an additional 10 sites in 2028 for a total of 130 sites. This roadmap captures new infrastructure as well as new technology and capabilities valued by key customers, including broadband-capable radios, cloud-based interoperability tools, next-generation dispatch consoles, and resilient alternative backhaul solutions. Each initiative is sequenced to build on the one before it, so that agencies experience continuous improvement in coverage, reliability, and capability rather than a series of disconnected upgrades.

The table below illustrates a multi-year roadmap for CRIS, showing planned network expansion and feature deployments from the first half of calendar year 2026 (1H 2026) through the second half of calendar year 2027 (2H 2027).

	1H 2026	2H 2026	1H 2027	2H 2027
Coverage (Sites)	77 Sites on air +8 planned, 85 Sites	+12 planned, 97 Sites	+12 Planned, 109 Sites	+11 Planned, 120 of 130 Total sites
Capacity Upgrade		2 sites (SoCal)	5 sites (SoCal, Bay Area)	6 sites (Bay Area)
Backhaul	MW (1 site) Nevada County	• MW – 3 sites, Nevada • Alt Backhaul (LTE/Starlink)	MW – 2 sites, Mono	MW – 1 site, SBC
CRIS Features	Smart Connect LTE Roaming	• Mapping/Location Services • Wave PTX • Smart Connect via Satellite • Critical Connect	Other Broadband	Sunsetting FDMA
ISSI	LA-RICS	Planning with other systems	Implement other systems	FirstNet investigation
Core Native Consoles	Testing Beta deployment	General release	Small Agency Enabling	

* Coverage enhancements subject to several challenges; PSC's current plan should be considered estimates.

3. Site Build Plan

CRIS coverage expansion is the foundation of this roadmap. PSC currently has 77 sites on air. The agency plans to add 43 sites across 2026 and 2027, plus 10 more sites after 2027. These new sites span all California regions, from the Northern Cascades to San Diego County. PSC will prioritize areas with high public safety demand and known coverage gaps. Each build schedule accounts for real-world constraints like site access, equipment lead times, and backhaul availability.

The tables below illustrate the planned site deployments and locations.

77	+43	120	+10	130
Existing Sites	New Sites 2026-27	Total Through 2027	Sites Beyond 2027	Total Planned

Build Schedule

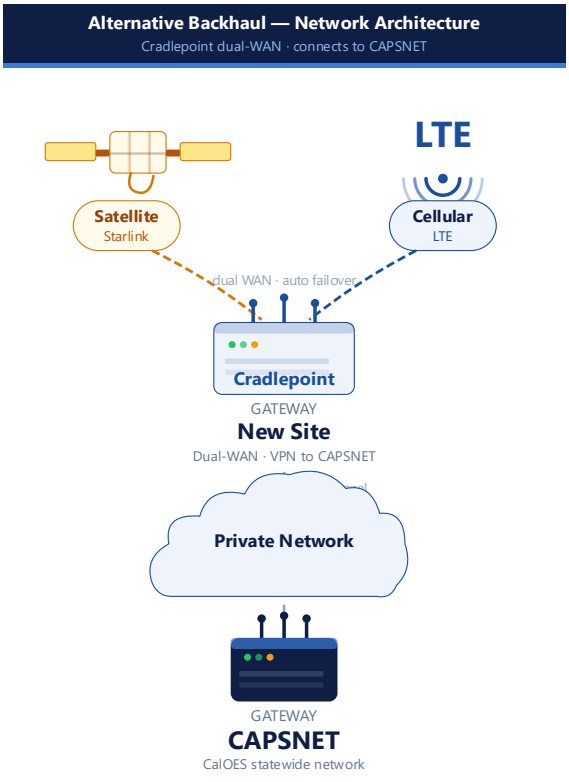
- 1H 2026 — 8 sites
- 2H 2026 — 12 sites
- 1H 2027 — 12 sites
- 2H 2027 — 11 sites

Site Locations

#	1H 2026	2H 2026	1H 2027	2H 2027
1	OREGON PEAK	MT. ROSE	LIKELY MTN	SOLEDAD MTN
2	PLUTO MTN.	NORTH SAC AO	BALDWIN HILLS	BLACK MTN. LASSEN CO
3	FLASH II	COALINGA	LUKENS MT	RUBY BLUFF
4	IRON MINE	ANTELOPE MOUNTAIN	HAMAKER MTN. SISKI	SCOUT PEAK
5	GOLD RUN (PLACER)	COLEVILLE ANTELOPE	SMUGGLERS CAVE	BECKWOURTH MTN
6	THERMOLANDS	BLOOMER MTN. VHF	HOUGH MTN	BIG HILL L.O.
7	SIGNAL PEAK	PEAVINE RIDGE	EAST BRISTOL	RED HILL
8	ZION MTN	SUNOL RIDGE	PISE MTN	COTTONWOOD
9		BOUCHER HILL L.O.	SAN MIGUEL MT	PLATTE MTN BUTTE
10		SHAFFER MTN	ANTELOPE PEAK	UNION HILL
11		LA HABRA	BLACK MTN. HENDRIX	LEEK SPRINGS (solar)
12		COLBY MTN	SLATER BUTTE	

4. Alternative Backhaul (Transport)

Traditional CAPSNET microwave backhaul remains the preferred long-term transport for CRIS sites, but installation timelines can be extensive for microwave infrastructure. To avoid delaying critical coverage expansion, PSC is deploying an alternative backhaul strategy using the Cradlepoint networking platform with dual-WAN (Wide Area Network) routers that combine LTE cellular and Starlink satellite connectivity. This approach allows a new site to go live rapidly months or even years ahead of its permanent microwave link, with no changes required to the CAPSNET core. When the microwave link is eventually commissioned, the site transitions seamlessly. This solution also provides ongoing resilience. If one uplink fails, the other takes over automatically, ensuring uninterrupted service for agencies in the field. The diagram below illustrates this solution. This approach has been lab tested (1H 2026) with production environment testing slated for 2H 2026. Following successful testing the live deployment will be implemented in 1H 2027.



Alternative Backhaul Key Benefits

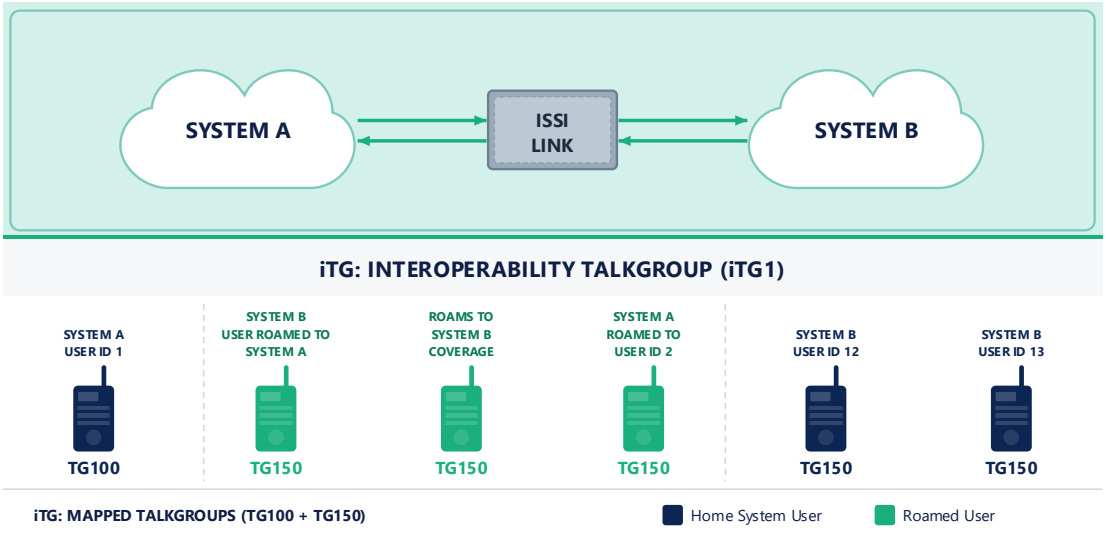
Rapid deployment	Significantly faster than traditional Microwave
Alternative	Provides transport where MW or leased circuits are unavailable
Enhanced Resiliency	Utilizes dual cellular carriers and satellite redundancy
Flexibility	Supports remote, concentrator and hub-and-spoke architectures
Seamless Integration	Interfaces directly with existing MPLS infrastructure
Security & Control	Centralized assess and secure encrypted connection to CAPSNET

5. Motorola ISSI — Connects Disparate P25 Systems

One of the most consequential interoperability steps in this roadmap is establishing Inter-RF Subsystem Interface (ISSI) links between CRIS and other regional P25 systems. ISSI eliminates the need for patch connections or separate talkgroups during multi-agency incidents; a subscriber on Los Angeles Regional Interoperable Communications System (LA-RICS) or another linked system can roam onto CRIS seamlessly, and vice versa, with their encryption, talkgroup assignments, and radio identity traveling with them. CRIS currently holds one ISSI license and a second is planned to be acquired in a 2026 procurement. The 2026 priority is completing the LA-RICS integration, assess production environment performance, followed by assessment and planning with additional regional systems through 2027. First Responder Network (FirstNet) interoperability is also on the horizon as a longer-term initiative.

Planned Timeline

- 2026 — LA-RICS integration
- 2026 — Planning with other systems
- 2027 — Implement other systems
- 2027 — FirstNet investigation



6. Smart Connect & Smart Features

For field personnel, the most visible change in the 2026–27 period will be the rollout of Motorola Smart Connect across the APX family of radios. When a subscriber moves out of P25 LMR coverage, Smart Connect automatically routes voice traffic over the best available broadband path (LTE, Wi-Fi, or satellite) in seconds, without any action from the user. The transition is seamless in practice, talkgroup assignments, encryption keys, and all P25 features remain fully intact. When LMR coverage returns, the radio switches back automatically. Combined with Smart Mapping, this feature gives dispatchers real-time visibility into radio locations even when units operate in broadband mode—a capability with direct operational value during wildfires, floods, and other large-scale incidents where personnel spread across areas with inconsistent LMR coverage. Smart Connect testing on the latest APX NEXT radio with roaming over LTE and satellite direct to device was field tested in conjunction with Motorola. Additional testing was conducted using a Motorola APX 8500 mobile tethered to a cellular modem and Starlink router for enhanced mobile coverage capable of roaming on LTE and low earth satellites.

Details and benefits to Smart Connect and Smart Features are highlighted in the illustration below.

~3s	LTE/Wi-Fi/Sat	Zero	100%
Approx. switch time	Supported broadband types	User actions required	P25 feature continuity

Automatic Switching — Roaming
Monitors signal strength and transitions to broadband in seconds (typically 3sec) without user intervention. Prioritizes LMR and switches back automatically.

Feature Continuity
P25 packets transmitted unchanged over broadband. Talkgroups, encryption, and radio functionality remain identical to on-LMR operation.

Security
End-to-end P25 encryption and TLS-encrypted control signals between radio and gateway on all voice and data traffic.

Smart Mapping / Locate
Real-time radio tracking on APX map interface and via Command Central Aware Software.

Compatible Devices

Portable Radios

- APX™ NEXT series via WiFi, LTE or LEO
- APX 8000 series via Wi-Fi
- APX N70 via Wi-Fi or LTE
- APX N50 via Wi-Fi
- APX N30 via Wi-Fi
- APX 6000 enhanced series (BN) via Wi-Fi

Mobile Radios

- APX 8500 via Wi-Fi or Data Modem Tethering
- APX 6500 enhanced series (BN/CN) via Wi-Fi or Data Modem Tethering

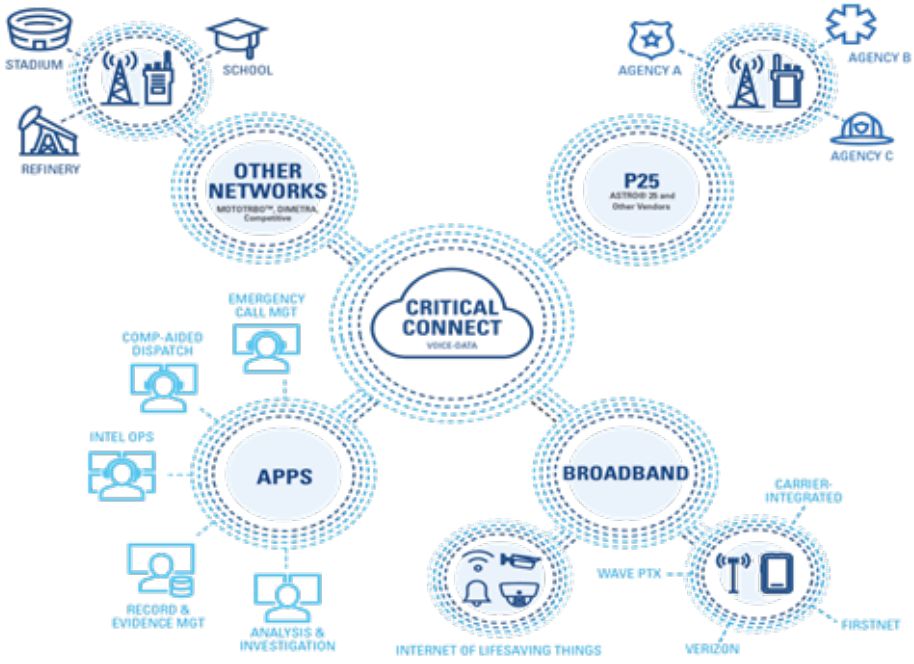
7. Critical Connect — Cloud Based Interop Gateway

Critical Connect is a cloud-based bridge with the ability to link CRIS to outside agencies without heavy hardware. Critical Connect solves a major challenge in California public safety communications. It connects agencies operating on different radio systems, or no P25 system at all, into a single operational picture without requiring expensive infrastructure changes.

As a cloud-hosted interoperability gateway, Critical Connect allows CRIS to extend secure talkgroup access to partner agencies over the internet. This subscription-based model allows new agencies to onboard CRIS in hours instead of weeks, with all access managed and revoked from a central location.

PSC has purchased a major expansion to our Critical Connect talk path count enabling the ability for more interoperable throughput to be implemented early 2H 2026. By combining Critical Connect, Smart Connect, and WAVE PTX, CRIS creates a layered communications architecture. This ecosystem safely connects traditional P25 radios, smartphones, and web browsers under strict, uniform security controls.

The diagram below illustrates the architecture and ecosystem of Critical Connect as a platform to enable interoperability between different communications systems.



Critical Connect Key Benefits

Cloud-Based Bridge	Replace hardware-heavy patching with a single, secure cloud connection between CRIS and external agencies.
Fast and Scalable	Set up or tear down secure communication links in just a few clicks. No on-prem infrastructure required
Broadband Access	Allow users on cellular or private LTE networks to access CRIS directly.
Security & Control	Centralized access control. Secure encrypted connections between CRIS core and external agencies.
Licensing	CRIS currently owns 100 licenses at $3,000 per license per year.

8. WAVE PTX — Push-to-Talk Over Cellular

WAVE PTX extends CRIS access to lower-cost devices and users outside the traditional P25 radio ecosystem. Instead of requiring every CRIS subscriber to carry a dedicated public safety grade radio, WAVE PTX can deliver push-to-talk capabilities through a smartphone app, a ruggedized LTE device, or a web-based dispatch interface.

Connectivity to CRIS talkgroups is securely bridged through Critical Connect. This architecture ensures that identical access controls and security policies apply to every user, regardless of their device type. For smaller agencies, mutual aid volunteers, and support personnel who need situational awareness without full radio hardware, WAVE PTX offers a highly cost-effective path to CRIS participation. WAVE PTX is currently being tested by a small group of subscribers as proof of concept. Full deployment is scheduled to begin alongside the Critical Connect rollout in 2H 2026.

Wave PTX Key Benefits

PTT on Your Cell Phone Use standard smartphones with full PTT capabilities connected to CRIS talkgroups via Wave PTX app.	**Lower Cost Two-Way Radios** Dedicated rugged devices with Wave PTX support for demanding field environments.

Web-Based Dispatching Browser-based dispatch console for agencies needing flexible dispatch without dedicated hardware.

9. Core Native Consoles — Command Central AXS

The Command Central AXS Console represents a significant step forward for CRIS dispatch operations. Unlike legacy Console Subsystem Interface (CSSI) based consoles, AXS connects natively to the ASTRO 25 Core as an Internet Protocol (IP) wireline endpoint, eliminating an entire layer of hardware and reducing both cost and

complexity. For dispatchers, the platform provides a modern, software-defined interface that supports full P25 digital services, end-to-end encryption, and seamless integration with Smart Connect and Wave PTX. For system administrators, management is centralized through the CRIS Core, allowing software updates to be delivered remotely. The new consoles are currently deployed in a lab environment for testing as well as customer sites for real-world testing. Conventional channel gateways allow the console to dispatch on both legacy channels in addition to the P25 trunked talk groups in use by many agencies.

Command Central Key Features

Native Core Integration	Connect directly to the CRIS ASTRO 25 Core as a native IP wireline console — eliminating the need for a CSSI gateway.
Simplified Infrastructure	CommandCentral Hub consolidates desktop audio, headset jacks, and speakers into a single hardware footprint.
End-to-End Security	Full P25 digital services include end-to-end AES-256 encryption and secure group calls.
Interoperability	CRIS owns one license today; second license is planned with CHP AXS Console purchase.

Operational Benefits

Unified Communications	Integrates with SmartConnect (LMR to LTE/Wi-Fi/Satellite) and WAVE PTX.
Resource Management	Managed via CRIS Core for centralized configuration and software updates.
Enhanced Dispatching	Designed for large agencies requiring robust infrastructure and dedicated dispatch environments.

Deployment Timeline

1H 2026	**Internal Testing, Beta Deployment** • Core team validation, integration testing with CRIS ASTRO 25 Core. • Limited agency beta rollout. Gathering feedback and performance data.
2H 2026	**General Release** • Full public availability. Agency onboarding and training support.
1H 2027	**Small Agency Enabling** • Continued rollout and support for smaller agencies statewide.

10.Conclusion

In combination, these initiatives position CRIS to become California's premier statewide public safety communications platform, one that extends far beyond traditional LMR. By expanding coverage, accelerating site deployment through resilient alternative

backhaul, strengthening interoperability with regional systems, and integrating broadband enabled capabilities such as Smart Connect, Critical Connect, WAVE PTX, and next-generation AXS dispatch consoles, PSC is building a communications ecosystem that is more reliable, flexible, and responsive to the evolving needs of public safety agencies. This roadmap reflects a deliberate, phased investment strategy that delivers measurable improvements at every stage while laying the foundation for future technologies. As implementation progresses through 2028, CRIS will provide public safety agencies with a resilient, secure, and interoperable communications network capable of supporting California's increasingly complex emergency response mission for decades to come.