

# California releases Public Safety Microwave Network Strategic Plan

Posted At : March 30, 2011 4:39 PM | Posted By : Justin Spratley

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Over the past year, the state of California Technology Agency has released more than 200 pages worth of strategic planning documents related to its 9-1-1 and radio emergency communications plans, the most recent being the California Public Safety Microwave Network Strategic Plan. This plan focuses on the agency's Public Safety Communications Office-operated California Public Safety Microwave Network (CAPSNET).

CAPSNET is the primary microwave communications network used to support first responder voice and radio communication in the state (for an overview of microwave radio technology, see pages 7 and 8 of the plan). Maintaining the functionality of CAPSNET is critical to public safety operations in California, particularly in terms of natural disaster response. In a region where earthquakes and large-scale forest fires are a constant threat, maintaining a resilient communications infrastructure is of the utmost importance.

For those who haven't had the opportunity to read the report, below are some examples of possible CAPSNET areas of expansion:

- High-speed, highly reliable data (including voice) communications between critical dispatch and emergency command centers
- Providing primary communications or backhaul services in support of the state's next-generation 9-1-1 infrastructure
- Providing primary or backup data connectivity between critical public safety organizations
- Providing a supplement to satellite communications as the state's communication network of last resort  
Potential equipment replacement opportunities:
- Over the course of the next two to five years, nearly all of its 290+ microwave sites will need to be upgraded from current analog or legacy digital technology to the future-state architecture (Page 16)
- Rapidly modernize the CAPSNET infrastructure by replacing it with equipment capable of supporting next-generation broadband public safety voice and data communications requirements (Page 21)
- Improve the quality and survivability of the CAPSNET, and increase its redundancy and resilience by identifying and fixing potential vulnerabilities within the network (e.g., by building a microwave loop around Sacramento) (Page 21)
- Implement a next-generation, broadband-enabled architecture that utilizes a Multiprotocol Label Switching (MPLS) overlay over Ethernet digital transmission links across all of CAPSNET by the end of 2015 (Page 23)  
The vision is in place, but the money is in limbo. The strategic plan lists eight critical success factors for CAPSNET improvement, mostly focusing on coordinating between agencies. The final factor is that the "California Technology Agency is able to identify one or more additional funding sources that can be used to accelerate the modernization of CAPSNET equipment." This really should be first on the list. Without a sustainable source of funding, significant improvements to the CAPSNET system are simply not feasible. Proper planning on the part of the technology agency during its current economic difficulties will play a key role in convincing the legislature and taxpayers that CAPSNET improvements are a worthwhile endeavor, and that any funding provided is properly managed.

As a side note, if you are interested in learning more about the current and future architecture of emergency communications in California, do not be deterred by the length or technical titles of these documents. I have read all of the plans and am impressed at the agency's ability to present complex radio system information in a manner that does not require a degree in electrical engineering to understand.

[California Public Safety Network Strategic Plan](#)

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