



SAN FRANCISCO BAY AREA

Regional Interoperable Communications System

BayRICS

By connecting our first responders, we are ensuring that we will be better prepared for future disasters—natural or man-made.

— San Francisco Mayor,
Gavin Newsom

The Governor’s Office of Homeland Security is pleased to see the leadership exhibited by the San Francisco Bay Area in its initiative to solve the critical issue of emergency communications interoperability. I fully support the Bay Area’s efforts towards a regional solution and look forward to their continued collaboration with the State of California.

— Matt Bettenhausen, Director, California
Emergency Management Agency

Mission Critical Interoperable Communications

Ensures first responders can talk to who they need to, wherever they are, when they need it.

The need is apparent, the collaboration is unprecedented. The ten Bay Area Counties, with the leadership of the major cities of San Francisco, Oakland and San Jose, are creating an interoperable communications network that will allow first responders throughout the Bay Area to communicate day-to-day and in case of a disaster. The plan will establish a standards-based integrated voice and data network for public safety and all supporting mission-critical personnel.

The radio they use every day will become the radio they use everywhere.



Participating Public Safety and Public Service Professionals include:

- ✓ Sheriff
- ✓ Fire
- ✓ Public Health
- ✓ Police
- ✓ EMS
- ✓ Transit

The Communications Challenge

How we respond and recover from critical events will depend on our ability to communicate on our public safety radio networks. Our challenges include:

- Aged and outdated equipment
- Proprietary and incompatible radio technologies
- Fragmented and sparse radio frequencies
- Lack of funding and regional collaboration



The Vision

The BayRICS Vision is the ability for any public safety radio in the region to communicate with any other public safety radio regardless of location, radio system, or frequency band and to seamlessly roam throughout all 10 Counties in the Bay Area.



Our goal is to provide a communication solution that emergency responders can communicate as needed, on demand and as authorized, at all levels of government and across all disciplines.

— National Emergency Communications Plan

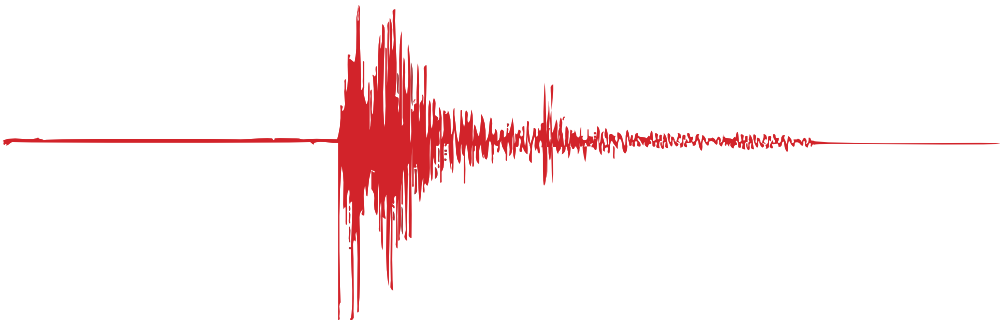
Area and population served:

- Over 100 cities and townships, including the 3 major cities of San Francisco, Oakland, and San Jose
- 10 counties: Alameda, Contra Costa, Marin, Napa, Santa Clara, Santa Cruz, San Francisco, San Mateo, Solano, and Sonoma
- 7.2 Million Residents, 15.8 Million Annual Visitors
- 7,200 Square Miles
- 6th most populous metropolitan region in the United States



The Vulnerability

The Department of Homeland Security has classified the San Francisco Bay Area as a top threat Urban Area, due to our world-renowned landmarks and assets. The U.S. Geological Survey estimates that there is a 62% probability that at least one earthquake of magnitude 6.7 or greater will occur on a known or unknown San Francisco Bay region fault before 2032. Our surrounding wildland areas are vulnerable to unexpected, devastating landslides and firestorms, such as the Santa Cruz Mountains wildfire of 2008 and the Oakland Hills Fire of 1991. These disasters will impact the entire region, and will require cooperation and communication among multiple public safety agencies across the Bay Area.





MAJOR THREATS AND TARGETS

- 8 major fault lines traverse the most populous regions of the Bay Area
- 8 major bridges, including the Golden Gate Bridge and the San Francisco-Oakland Bay Bridge, critically connecting the region
- 3 international airports, San Francisco, Oakland and San Jose
- Public transportation systems, including Muni and BART, the 7th and 14th largest transit agencies in the country
- Ports of San Francisco, Richmond and Oakland—the 4th busiest port in America
- Major research and educational facilities including 3 national laboratories: Lawrence Livermore, Berkeley and Sandia
- Silicon Valley, the technology hub of the United States
- Hetch Hetchy water system, serving 2.4 million residential, commercial, and industrial customers in the Bay Area
- 70 major chemical and petro-chemical facilities that pump billions of dollars into the economy annually

This initiative provides our first responders with the ability to communicate with other cities and counties across the Bay Area, further improving upon the way our emergency officials can respond.

— Oakland Mayor, Ron Dellums

Disasters don't recognize city or county borders... by working together as a region, our firefighters, police officers and medical personnel can respond more quickly in times of crisis.

— San Jose Mayor, Chuck Reed

With 35 member agencies in Alameda and Contra Costa counties, the East Bay Regional Communications System Authority is demonstrating that local governmental agencies can work together to develop an interoperable communications system. The BayRICS collaboration will ensure that interoperability is a reality for the entire region, our collective lives depend on it.

— City of Concord Mayor, William Shinn; Board Chair, East Bay Regional Communications System Authority

The Plan

GOVERNANCE

BayRICS utilizes a three tiered governance structure supported by the Bay Area Urban Area Security Initiative (UASI) for planning, implementation and funding. Collaborative planning efforts for the Bay Area County participants is coordinated and conducted through regular meetings of the Bay Area UASI Interoperable Communications Working Group. As we prepare for a catastrophic event in the Bay Area, regional collaboration expands beyond the ten county BayRICS borders and includes the 22 county Capitol/Bay Planning Area (CALSIIEC).

TECHNOLOGY

The BayRICS network will be a state-of-the-art communications system. It will utilize existing resources and precious spectrum, while incorporating the latest in standards-based technology and FCC-issued spectrum, prioritized for public safety use. Highlights include:

- Dedicated Microwave Backbone Loop
- Standards-Based Project 25 Infrastructure
- 4G Public Safety Broadband Technology
- Interagency Information Sharing
- Mission Critical Voice and Data Communications
- 700/800 MHz and VHF Frequency Overlay for rural areas
- Public safety specifications focused on redundancy and disaster resiliency

SYSTEM OF SYSTEMS

BayRICS will build upon the capabilities of the Regional Communications Systems (RCS) linked together providing region wide roaming for first responders:

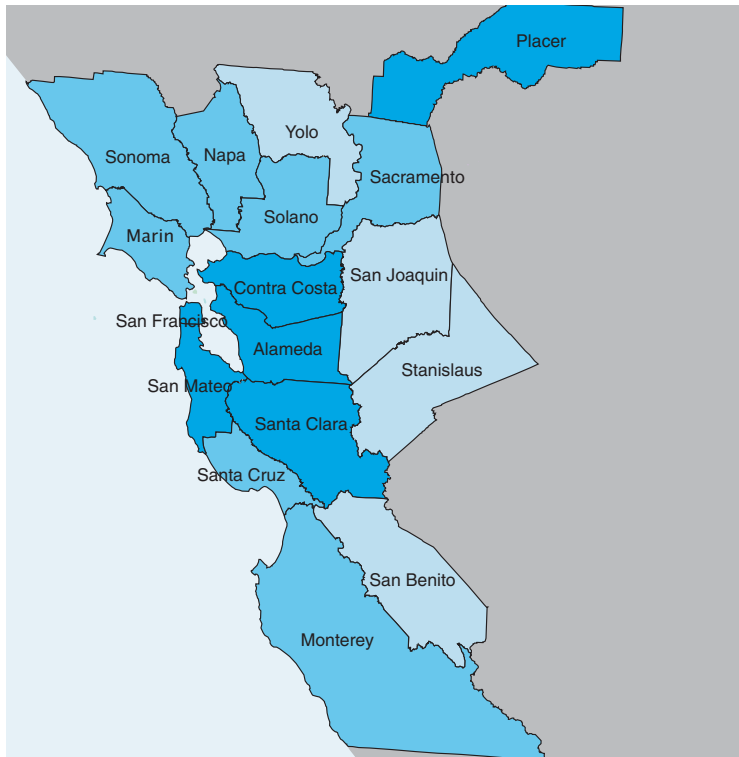
- East Bay RCS (Alameda and Contra Costa Counties)
- West Bay RCS (San Francisco and San Mateo Counties)
- Silicon Valley RCS (Santa Clara County)
- North Bay Counties (Marin, Sonoma, Napa and Solano Counties)

PROGRESS, TIMELINE, AND FUNDING




BayRICS will take a phased approach for deployment, focusing on the urban areas first, with the goal to connect the entire region by 2012. The region has received funding through numerous sources, including the Department of Commerce, Public Safety Interoperable Communications (PSIC) Grants, Department of Homeland Security (UASI) Grants and local matching funds. Several counties are in the implementation stages of BayRICS, and have purchased and installed equipment. The remaining counties are in the planning stages, and are developing detailed network designs and cost estimates.

We have a once in a lifetime opportunity to resolve this critical issue with the release of the 700 MHz spectrum and funding for the first responder interoperability.

— Laura Phillips, General Manager,
Bay Area UASI



BayRICS Project Status

-  P25 Implementation Stages
-  Planning Stages
-  Future Planning Stages



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