

Partnerships Provide Earthquake Warning in California

Earthquake early warning systems notify affected populations of an imminent earthquake. Although this warning may be given only be a few seconds in advance of the event, those seconds can give people enough time to take protective measures and limit person and property damage.

The Coachella Valley Regional Earthquake Warning System (CREWS) is the first of several regional early warning systems to be implemented in Southern California. It is a partnership between the Coachella Valley Association of Governments (CVAG) and Seismic Warning Systems, Inc. Agency partners include 12 cities in the CVAG, three school districts, the Coachella Valley Emergency Managers Association, and the Eastern Riverside County Interoperable Communications Authority. Private partner Seismic Warning Systems develops and deploys earthquake detection, analysis, and notification technology.

In the Coachella Valley, CREWS will provide earthquake early warning services to 4 emergency dispatch centers, 90 schools, 37 fire stations, four health care facilities, 7 police stations, and 3 tribal emergency operations centers.

The Imperial County Regional Earthquake Warning System (ICREWS) is a public-private partnership between Imperial County and Seismic Warning Systems with support and backing from the State of California and FEMA. Initial ICREWS include Imperial County Fire Department, Imperial County Sheriff's Office, the Cities of Brawley and El Centro, Calexico Fire and Police Dispatch

Centers, Calipatria Fire Department, El Centro Regional Medical Center, and Pioneers Memorial Hospital.

CREWS and ICREWS protects first responders, hospitals, water facilities, and critical government assets by quickly transmitting warnings of dangerous earthquakes before the earth starts shaking.

Fast, sustainable communication between sensors, data centers, and critical facilities are essential to an earthquake warning system. The High Performance Wireless Research and Education Network (HPWREN) is a project of the Applied Network Research group at the San Diego Supercomputer Center, University of California, San Diego. HPWREN supports Internet data applications in research, education, and public safety. Seismic Warning Systems is a Tier 1 member of HPWREN.

HPWREN provides collaborative, Internet-connected cyber infrastructure. It supports a high-bandwidth wireless data network in San Diego, Riverside, and Imperial Counties in areas that are typically not well served by other data networks. Backbone nodes, typically sited on mountaintops such as Toro Peak, connect areas that are often hard to reach in the remote Southern California backcountry. HPWREN data transmission is essential to both CREWS and ICREWS.

This article interprets and presents information originally provided online by ICREWS, HPWREN, the US Geological Survey, and Seismic Warning Systems.

