

## California Earthquake Clearinghouse – Best Practice

The California Earthquake Clearinghouse is a cooperative organization managed by the California Geological Survey (CGS) in partnership with the California Office of Emergency Services, U.S. Geological Survey (USGS), Earthquake Engineering Research Institute (EERI), and California Seismic Safety Commission (CSSC). Clearinghouse resources and information are shared by government agencies, non-profit organizations and academia and incorporate the expertise of engineers, geologists, seismologists, sociologists, economists, and other researchers who collect information about the affected area to facilitate the gathering and sharing of information, maximize its availability, and best use the talents of those present.

Following an earthquake, the Clearinghouse establishes a temporary physical location, generally with easy access to both the damaged area and emergency operations field facilities. In addition, they maintain a full-time virtual presence for information and data sharing. The Clearinghouse's principal function is to provide State and Federal disaster response managers, and the scientific and engineering communities with prompt information on ground failure, structural damage, and other consequences following significant seismic events. The Clearinghouse:

- coordinates field investigations of earth scientists, engineers, and other participating researchers
- facilitates sharing of observations through regular meetings and through the Clearinghouse website
- notifies disaster responders of crucial observations or results

The California Earthquake Clearinghouse began the Technology Interoperability project in the fall of 2011 to facilitate secure, two-way sharing of critical information (geospatial and non-geospatial) in support of the organizations responding to earthquakes in California. The data addressed is organized around incident related content, in standardized formats, for use by decision-makers. Partners in the project include California Office of Emergency Services, Federal Emergency Management Agency Region 9, California National Guard, California Department of Public Health, California Environmental Protection Agency, NASA Jet Propulsion Laboratory, City of Walnut Creek, Single Automated Business Exchange for Reporting (SABER), and the Community Clinic Association of Los Angeles County.

In the August 24, 2014, M6.0 South Napa earthquake, more than 100 people, from 40 different organizations participated in the Clearinghouse. The Clearinghouse has also leveraged the timing of frequent earthquake preparedness drills (roughly every six months) to support development milestones in effort to implement their data sharing strategies. In support of these exercises, Clearinghouse personnel and volunteers utilize several available applications for organizing, displaying and sharing information about the damaging effects of an earthquake. Field data collection activities are carried out on mobile platforms (i.e. smartphone, pda) to collect simulated data representing surface fault rupture, earthquake-induced landslide and/or liquefaction ground failure, or engineering/structural data. Most recently, the Technology Interoperability Project supported both field report data and geospatial information exchange, connecting CalOES, NASA JPL, FEMA Region 9, and the CA National Guard. In the last exercise, more than 100 field observations, several GIS layers, and numerous analytical models were exposed to multiple applications through the Clearinghouse.