

California Earthquake Clearinghouse response to South Napa Earthquake

Summary for USGS Debrief on September 4, 2014
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California Earthquake
Clearinghouse



Cal EMA
CALIFORNIA EMERGENCY
MANAGEMENT AGENCY

DEFINITION:

Clearinghouse = physical (or virtual) location where timely information and data is shared by researchers, engineers and scientists who are conducting (field or remote) reconnaissance after an earthquake.

PURPOSE:

- Clearinghouses allow all agencies in the field to coordinate efforts, administer access to restricted areas, share findings, and make plans for teams in the field each day.
- Clearinghouses link the scientific research community with agencies and organizations responsible for emergency response and recovery.

CA Clearinghouse Management



- California Geological Survey (CGS) is chair
- EERI is vice chair

South Napa Activation

- Activated during 7:00am call on Sunday Aug 24, 2014 (within 4 hours of eqk)
- Physical Clearinghouse location created near central Napa with support of Caltrans facility & their satellite communications truck (Sun afternoon)
- Virtual Clearinghouse site launched by EERI (Sun afternoon)
- Active from Sunday Aug 24--Tues Aug 26
- Nightly briefings while active

Participants & Teams

- Over 100 visitors visited physical clearinghouse and attended its briefings from Sunday Aug 24 - Tues Aug 26
- Represented organizations included:

ABAG	Degenkolb	Maffei Structural Engineering	SGH
AMEC	Ebaa Iron	Miller Pacific Co	Simpson Strong-Tie
Arup	EERI	OMR/DOC	SPA
BFP Engineers	Exponent	OSU	Stanford/EERI
Caltrans	FEMA	Partner ESI/EERI	State Farm
California Earthquake Authority	Fugro	PEER & UC Berkeley	Tipping Mar
California OES	GEER	PG&E	TTG
Cal Poly	GEI Consultants	RMS	UC Davis
CGS	Holmes Culley	SEAOC	USACE
CSSC	Kleinfelder	SFSU	USGS

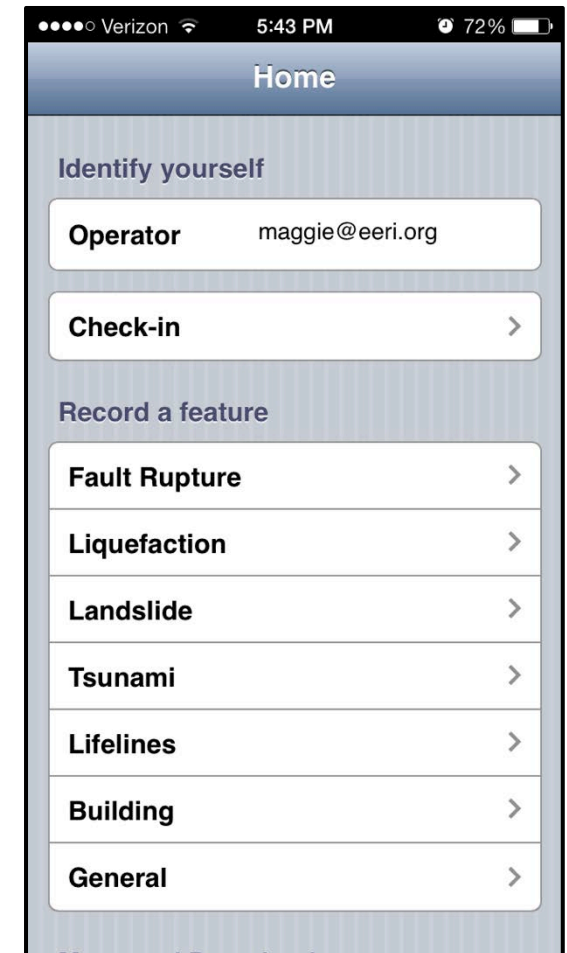
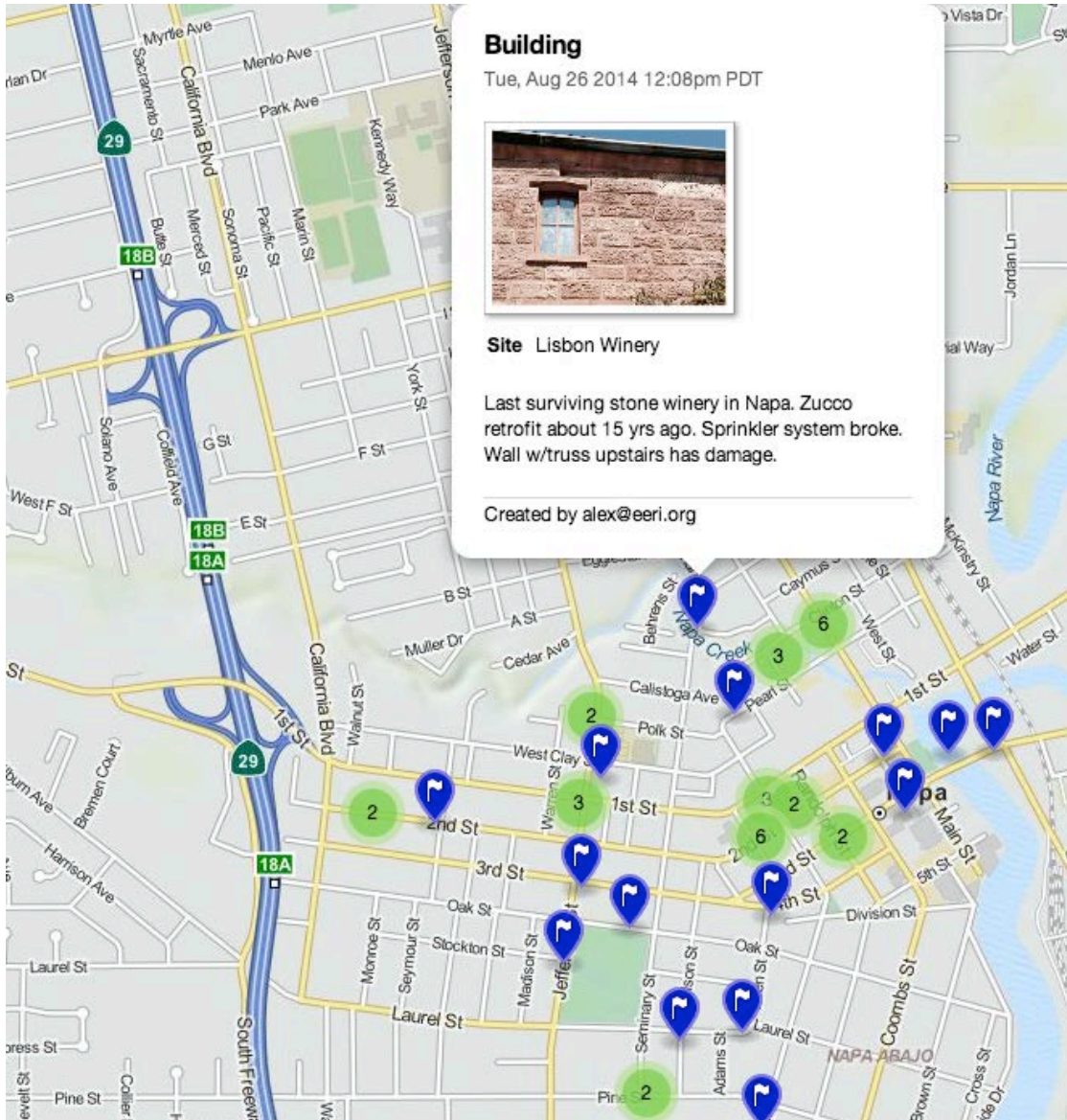
Clearinghouse Success

- **Overflight Coordination**
 - With support of CHP flew multiple flights to acquire imagery on Sunday and Monday
- **LiDAR**
 - Coordinated a coalition to acquire high accuracy imagery in the most critical areas
 - USGS, CGS, DWR, PEER/GEER
- **Nightly briefings to share findings research community, SOC, REOC, & FEMA Region 9**
- **Multidisciplinary Data Sharing & Integration**
 - Technology interoperability with XchangeCore in support of data sharing

Data Collection Methods

- Clearinghouse Fieldnotes (field-based web app developed by Scott Haefner & Luke Blair of USGS)
- EERI Photo Upload Tool (post-recon desktop upload)
- USGS Synthesis Layers (via Luke Blair)
- Shared KML or KMZ Data Layers from teams and individuals

Data Source: Clearinghouse Fieldnotes



Data Source: EERI Photo Upload Map

GEO-LOCATED PHOTO UPLOAD TO INTERACTIVE MAP

This is the best option for adding data when you return from the field on your desktop computer. It allows you to geo-locate your photos and add them to the clearinghouse via the map interface below.
[Map](#) / [Gallery](#)

Mw 6.0 - South Napa Earthquake 2014-08-24

To browse, zoom or scroll on the map and click any of the markers. To add a point, double-click on the map or enter lat/long or a street address to the right. In order to view the map in "Earth" mode, you need to have the Google Earth plugin installed for your browser.

To download a KML file to import in Google Earth, [click here](#).

85 points on this map

Show Categories:

- Structural
- Transportation
- Geotechnical
- Social Impacts
- Nonstructural
- Tsunami
- Strong Motion Sensors

To add a photo to this map, do one of the following:
[Tutorial here](#)

← **Double-click on the map**
 (Won't work in "Earth mode")

OR

Enter Lat and Long

Lat:


Long:

OR

Enter a street address including city and country

Montana Dr

Apparent lateral spreading. No observable lateral or vertical offset.



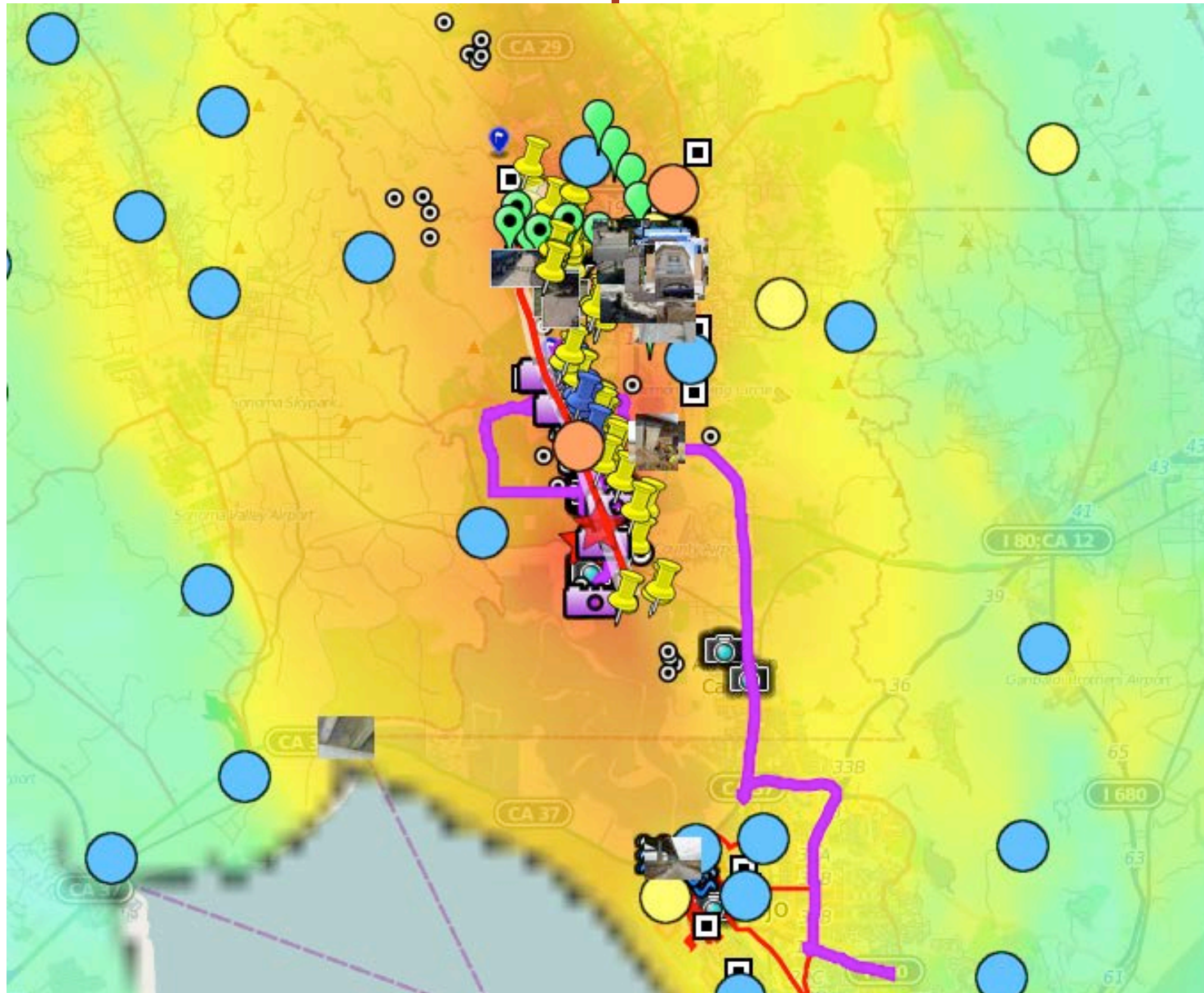
There are multiple photos for this point, [click here to view](#)

Category: Geotechnical

Photo by: J. Lawson

[Details](#) | [Edit](#) | [Delete](#)

ArcGIS Online Map Viewer



View & Share Clearinghouse Data

South Napa Clearinghouse website:

<http://www.eqclearinghouse.org/2014-08-24-south-napa/>

ArcGIS Online Map: bit.ly/1smi6so

Google Earth:

https://drive.google.com/folderview?id=0B_skoYqbxPVHdIBiSm9IYkNpUDg&usp=sharing

Add data using Clearinghouse tools at:

<http://www.eqclearinghouse.org/2014-08-24-south-napa/how-to-contribute/>

Information about the California Earthquake

Clearinghouse: <http://www.californiaeqclearinghouse.org/>



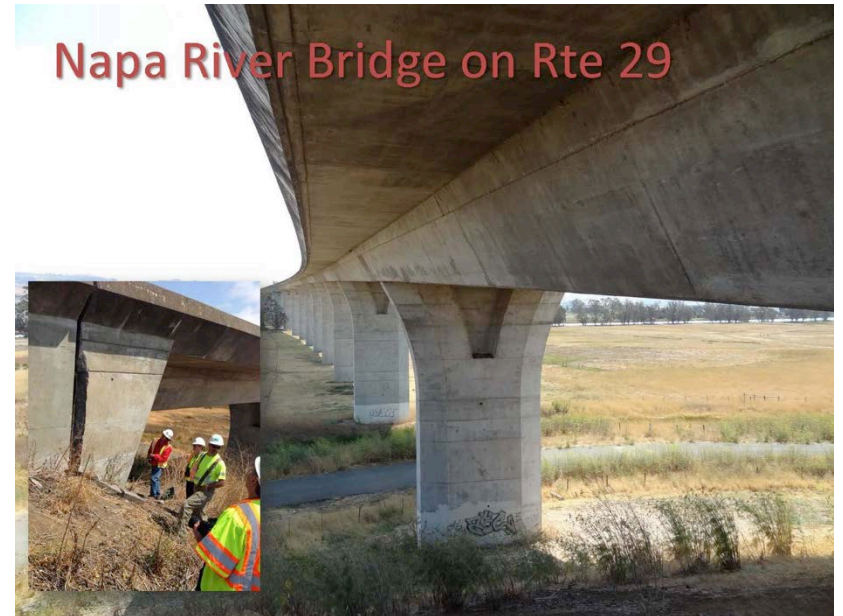
Preliminary Damage Findings for the Built Environment

- URM damage in downtown Napa from light damage to partial collapse.
 - Efforts are underway to collect detailed performance data to understand the effectiveness of implemented retrofits.
- Mobile Home damage observed
- Wood-frame houses damage to masonry chimneys, and cripple walls.
 - Some success stories of buildings that implemented cripple wall retrofits were documented



Preliminary Damage Findings for Built Environment

- Limited damage to roadways and bridges
 - being repaired quickly
- Tagging & cordoning of damaged structures have presented challenges
 - may warrant further investigation
- Structural & nonstructural damage will have impacts on business recovery.
- Damage to wineries and storage facilities
 - will have major impacts on the industry in light of the upcoming harvest.



Let's Be Ready for Next Time...

- Check-in
 - learn what others are doing in the field
 - get access to restricted areas
- Use Clearinghouse Tools
 - provide live data upload from the field
 - allow clearinghouse disciplinary leads to synthesize field data findings for briefings
 - gives emergency response and recovery agencies access to live data layers
- Add recommendations to your data entries
 - for response and recovery agencies
- Participate and attend at briefings