

# CALIFORNIA EARTHQUAKE CLEARINGHOUSE

Tools for Mobile Data Collection

# Need for Data Collection & Sharing

- 100s of engineers and scientists are expected to contribute data after a major earthquake in California
- The Earthquake Engineering Research Institute sends reconnaissance teams to earthquakes around the world
- Need for mobile data collection and near real-time data sharing solutions
- Make scientific and engineering observation by making a quick note or by filling out discipline specific forms

A horizontal bar at the top of the slide, divided into a red section on the left and a teal section on the right.

# Clearinghouse Fieldnotes

Collecting and Sharing Data

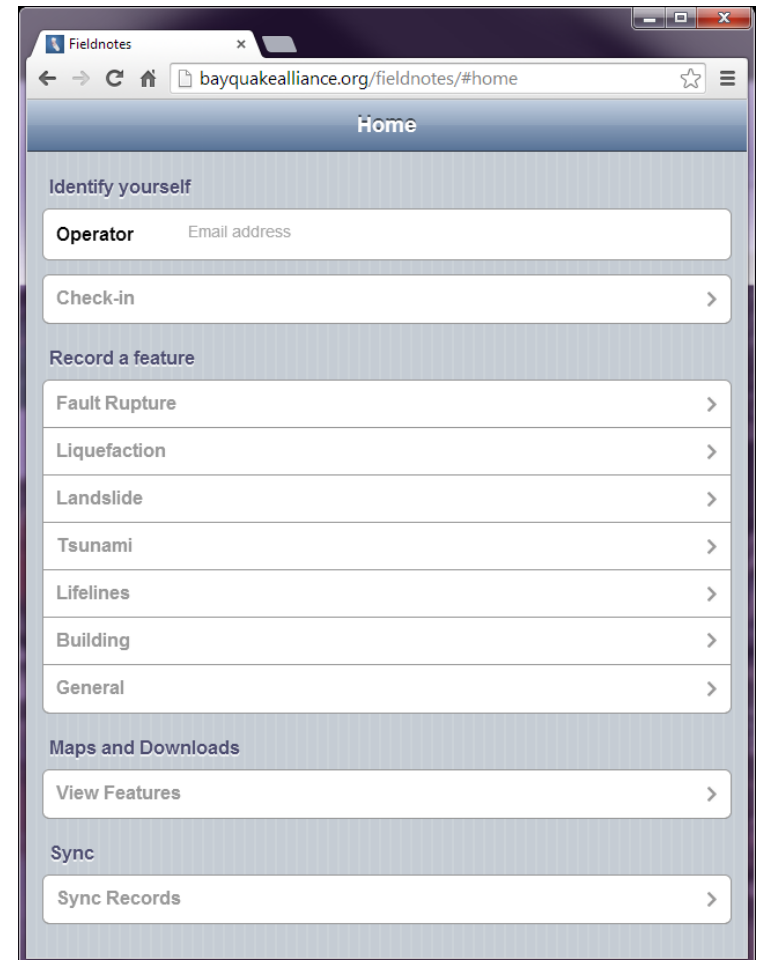
# Clearinghouse Fieldnotes

- HTML 5 web application with offline capabilities
- Facilitates mobile data collection and sharing
- Internal viewer allows users to view data collected by them and others within the application in real-time

# Clearinghouse Fieldnotes Demo

## Getting Started

- Open app at <http://bayquakealliance.org/fieldnotes>



# Clearinghouse Fieldnotes Demo

## Getting Started

- Enter your email address



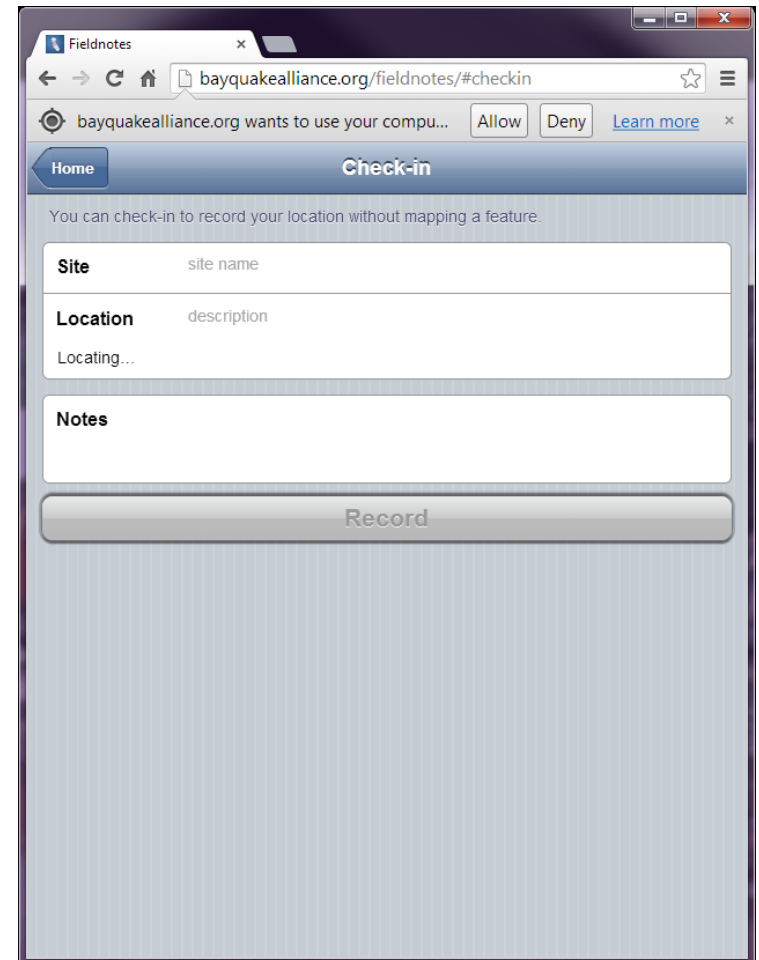
The screenshot shows a web browser window titled "Fieldnotes" with the URL "bayquakealliance.org/fieldnotes/#home". The page has a dark blue header with the word "Home" in white. Below the header, there are several sections of options:

- Identify yourself**: A text input field labeled "Operator" containing the email address "maggie@eeri.org".
- Check-in**: A button with a right-pointing chevron.
- Record a feature**: A list of buttons with right-pointing chevrons: "Fault Rupture", "Liquefaction", "Landslide", "Tsunami", "Lifelines", "Building", and "General".
- Maps and Downloads**: A button labeled "View Features" with a right-pointing chevron.
- Sync**: A button labeled "Sync Records" with a right-pointing chevron.

# Clearinghouse Fieldnotes Demo

## Checking-in

- ❑ Select Check-in to make a quick observation without filling out a form
- ❑ You will be prompted to allow your browser to use your location information – Select Allow



The screenshot shows a web browser window with the URL `bayquakealliance.org/fieldnotes/#checkin`. The page title is "Check-in" and it includes a "Home" button. A notification bar at the top indicates that the site wants to use the computer's location, with "Allow" and "Deny" buttons. The main content area contains a form with the following fields:

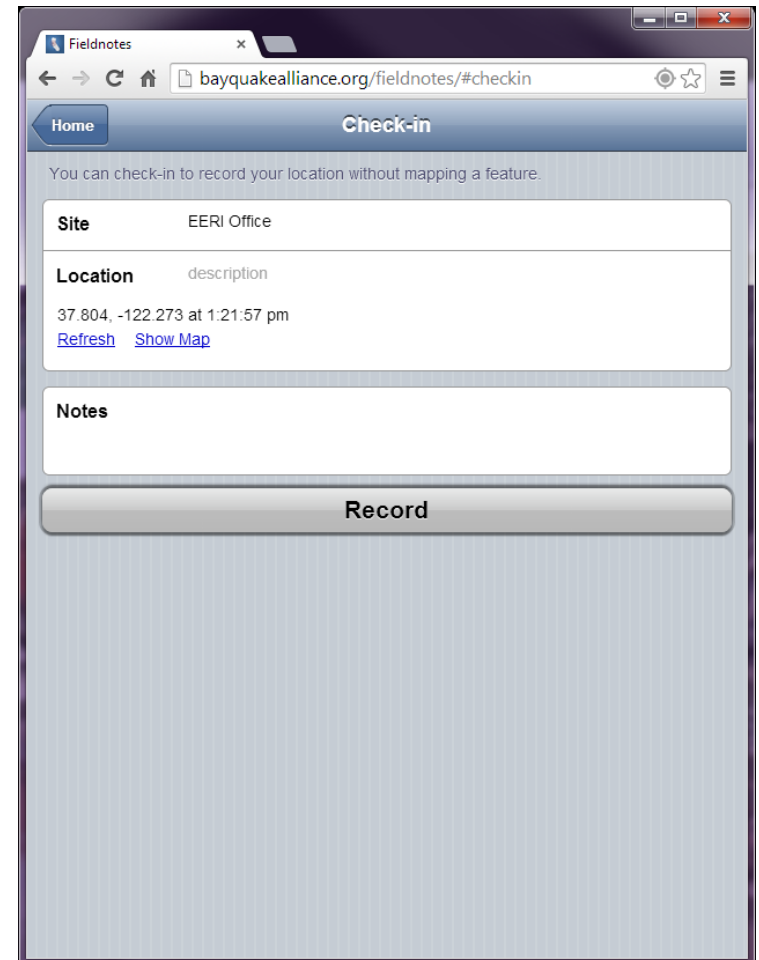
- Site**: site name
- Location**: description
- Locating...
- Notes**

A "Record" button is located at the bottom of the form.

# Clearinghouse Fieldnotes Demo

## Checking-in

- Enter a site name
- Note that your location information is automatically populated.
- Click on “Show Map” to see a map of your location



The screenshot shows a web browser window with the URL `bayquakealliance.org/fieldnotes/#checkin`. The page has a navigation bar with 'Home' and 'Check-in' buttons. Below the navigation bar, there is a message: 'You can check-in to record your location without mapping a feature.' The form contains the following fields:

Site	EERI Office
Location	description
	37.804, -122.273 at 1:21:57 pm
	<a href="#">Refresh</a> <a href="#">Show Map</a>
Notes	

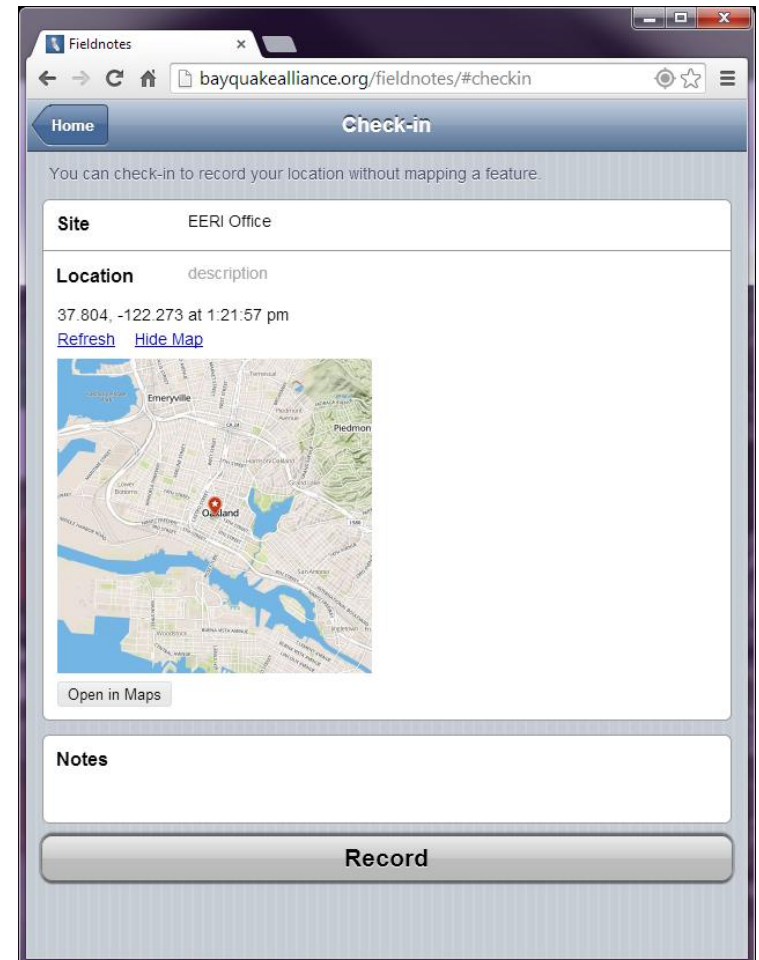
At the bottom of the form is a large 'Record' button.



# Clearinghouse Fieldnotes Demo

## Checking-in

- ❑ Enter a site name
- ❑ Note that your location information is automatically populated.
- ❑ Click on “Show Map” to see a map of your location



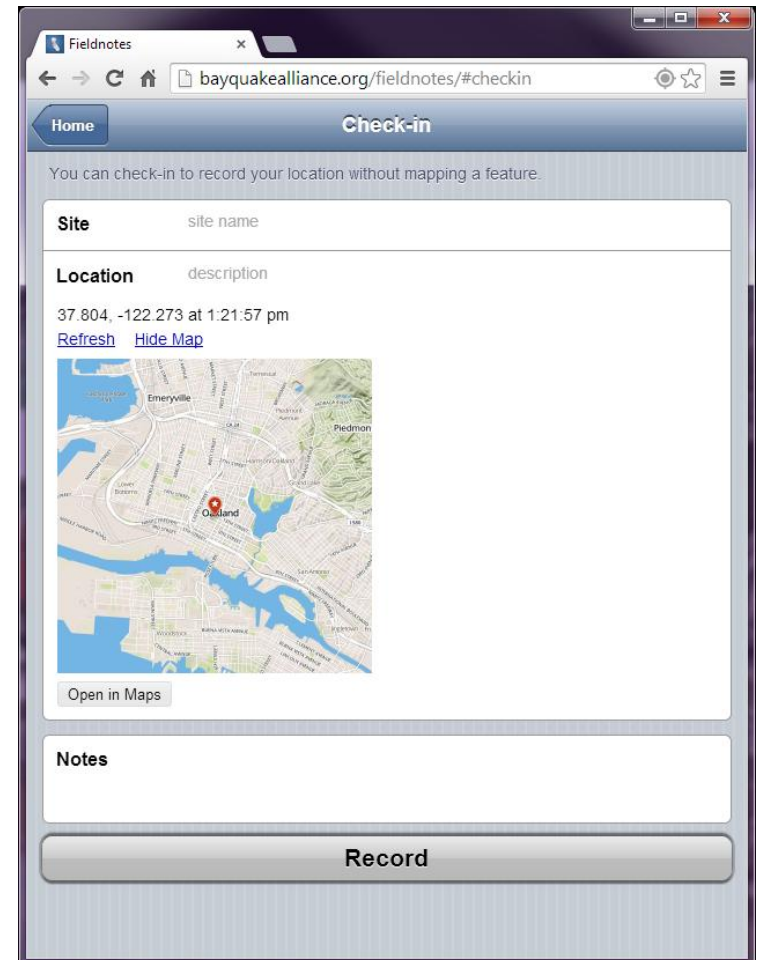
The screenshot shows a web browser window with the URL `bayquakealliance.org/fieldnotes/#checkin`. The page has a navigation bar with 'Home' and 'Check-in' buttons. Below the navigation bar, there is a message: 'You can check-in to record your location without mapping a feature.' The form contains the following fields:

- Site:** EERI Office
- Location:** description
- Coordinates:** 37.804, -122.273 at 1:21:57 pm
- Actions:** [Refresh](#) [Hide Map](#)
- Map:** A map showing the location in Oakland, California, with a red pin. Below the map is an 'Open in Maps' button.
- Notes:** A text input field.
- Record:** A large button at the bottom of the form.

# Clearinghouse Fieldnotes Demo

## Checking-in

- Enter any observations in the notes area



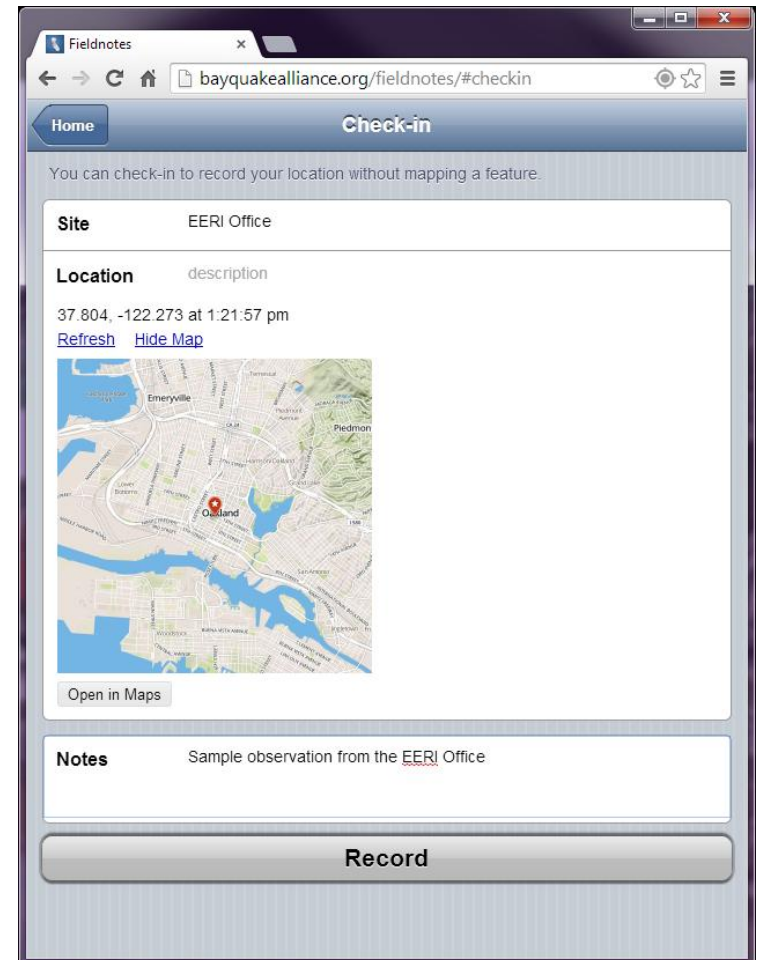
The screenshot shows a web browser window titled 'Fieldnotes' with the URL 'bayquakealliance.org/fieldnotes/#checkin'. The page has a navigation bar with 'Home' and 'Check-in' buttons. Below the navigation bar, there is a message: 'You can check-in to record your location without mapping a feature.' The form contains the following fields and elements:

- Site**: A text input field with the placeholder 'site name'.
- Location**: A text input field with the placeholder 'description'.
- Coordinates and Time**: A text field displaying '37.804, -122.273 at 1:21:57 pm'.
- Map**: A map showing the location of Oakland, California, with a red pin marker. The map includes labels for 'Emeryville', 'Oakland', and 'Piedmont'.
- Map Controls**: Two links, 'Refresh' and 'Hide Map', are located below the map.
- Open in Maps**: A button located below the map.
- Notes**: A large text area for entering observations.
- Record**: A large button at the bottom of the form.

# Clearinghouse Fieldnotes Demo

## Checking-in

- Enter any observations in the notes area



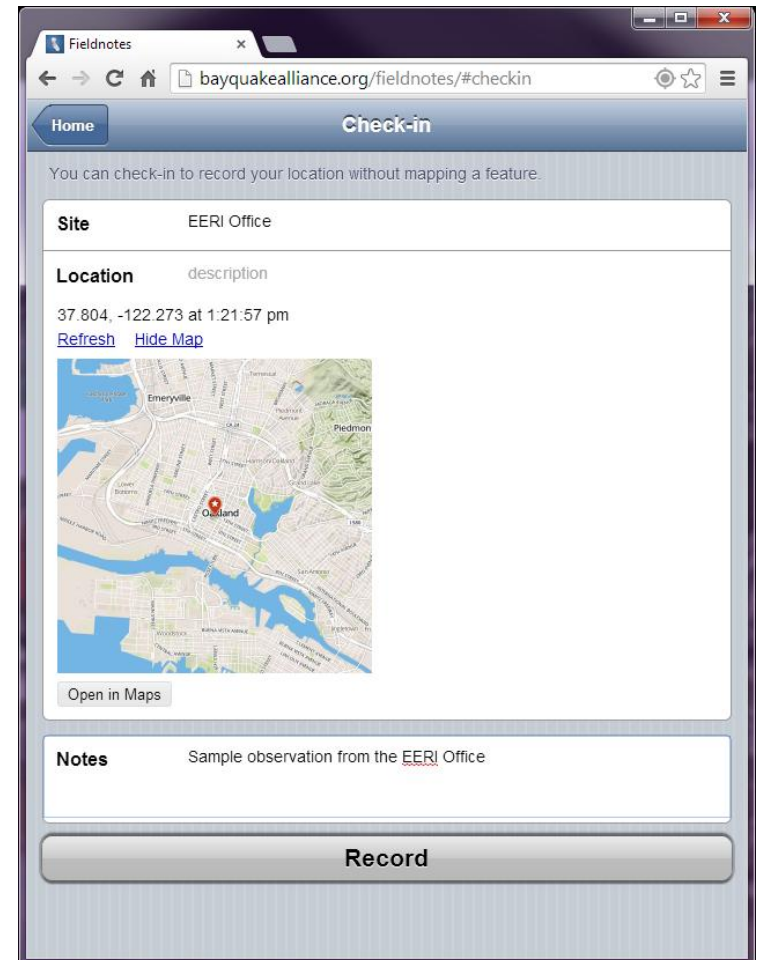
The screenshot shows a web browser window titled 'Fieldnotes' with the URL 'bayquakealliance.org/fieldnotes/#checkin'. The page has a navigation bar with 'Home' and 'Check-in' buttons. Below the navigation bar, there is a message: 'You can check-in to record your location without mapping a feature.' The form contains the following fields:

- Site:** EERI Office
- Location:** description
- Coordinates:** 37.804, -122.273 at 1:21:57 pm
- Actions:** [Refresh](#) [Hide Map](#)
- Map:** A map showing the location of Oakland, California, with a red pin indicating the current location. The map includes labels for 'Emeryville', 'Oakland', and 'Piedmont'.
- Map Action:** [Open in Maps](#)
- Notes:** Sample observation from the [EERI](#) Office
- Record Button:** A large button labeled 'Record' at the bottom of the form.

# Clearinghouse Fieldnotes Demo

## Checking-in

- Hit the Record button to record your data point



The screenshot shows a web browser window with the URL `bayquakealliance.org/fieldnotes/#checkin`. The page has a navigation bar with 'Home' and 'Check-in' buttons. Below the navigation bar, there is a message: 'You can check-in to record your location without mapping a feature.'

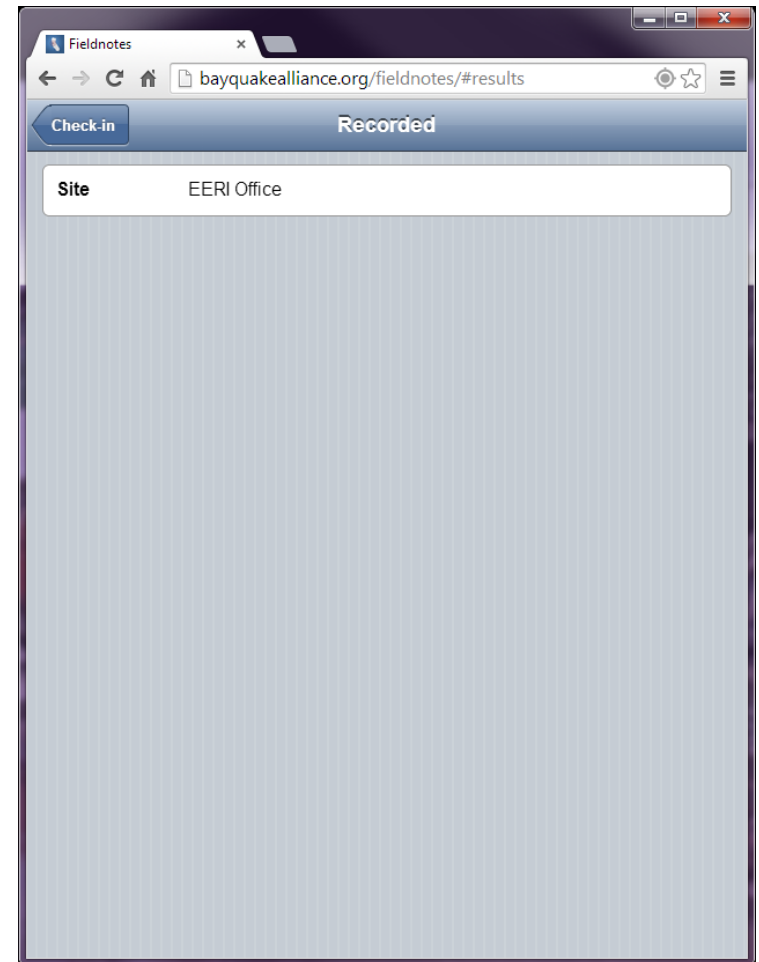
The form contains the following fields:

- Site:** EERI Office
- Location:** description
- Coordinates:** 37.804, -122.273 at 1:21:57 pm
- Actions:** [Refresh](#) [Hide Map](#)
- Map:** A map showing the location of Oakland, California, with a red pin indicating the current location.
- Open in Maps:** A button to open the location in a map application.
- Notes:** Sample observation from the [EERI](#) Office
- Record:** A large button at the bottom of the form to record the data point.

# Clearinghouse Fieldnotes Demo

## Checking-in

- You will see a confirmation page indicating that your information was recorded
- If you are **ONLINE**, your information is automatically sent to the server



# Clearinghouse Fieldnotes Demo

## Checking-in

- If you are OFFLINE, you will have to initiate this when you are connected again
- You can see how many records have not been uploaded in the “Sync Records” area of the Home menu



# Clearinghouse Fieldnotes Demo

## Filling Out a Form

- On the home menu, you will see many options in the “Record a Feature” Section
- Select a feature to fill out a form, for this demo, we will select “Building”



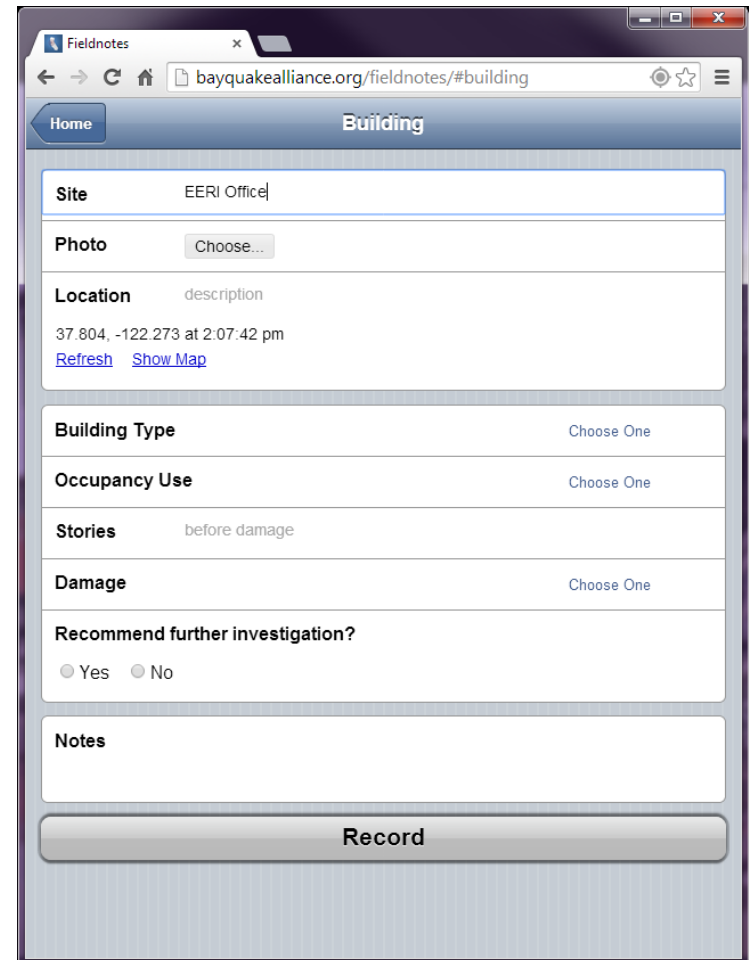
The screenshot shows a web browser window with the URL `bayquakealliance.org/fieldnotes/#home`. The page is titled "Home" and contains several sections:

- Identify yourself**: A form with a label "Operator" and the value "maggie@eeri.org".
- Check-in**: A button with a right-pointing chevron.
- Record a feature**: A list of buttons with right-pointing chevrons: "Fault Rupture", "Liquefaction", "Landslide", "Tsunami", "Lifelines", "Building", and "General".
- Maps and Downloads**: A button labeled "View Features" with a right-pointing chevron.
- Sync**: A button labeled "Sync Records" with the text "3 records" and a right-pointing chevron.

# Clearinghouse Fieldnotes Demo

## Filling Out a Form

- Similar to Checking in  
enter a site name



The screenshot shows a web browser window with the URL `bayquakealliance.org/fieldnotes/#building`. The page title is "Building" and it has a "Home" button. The form contains the following fields:

- Site:** EERI Office
- Photo:** Choose...
- Location:** description  
37.804, -122.273 at 2:07:42 pm  
[Refresh](#) [Show Map](#)
- Building Type:** Choose One
- Occupancy Use:** Choose One
- Stories:** before damage
- Damage:** Choose One
- Recommend further investigation?:**  Yes  No
- Notes:** (empty text area)

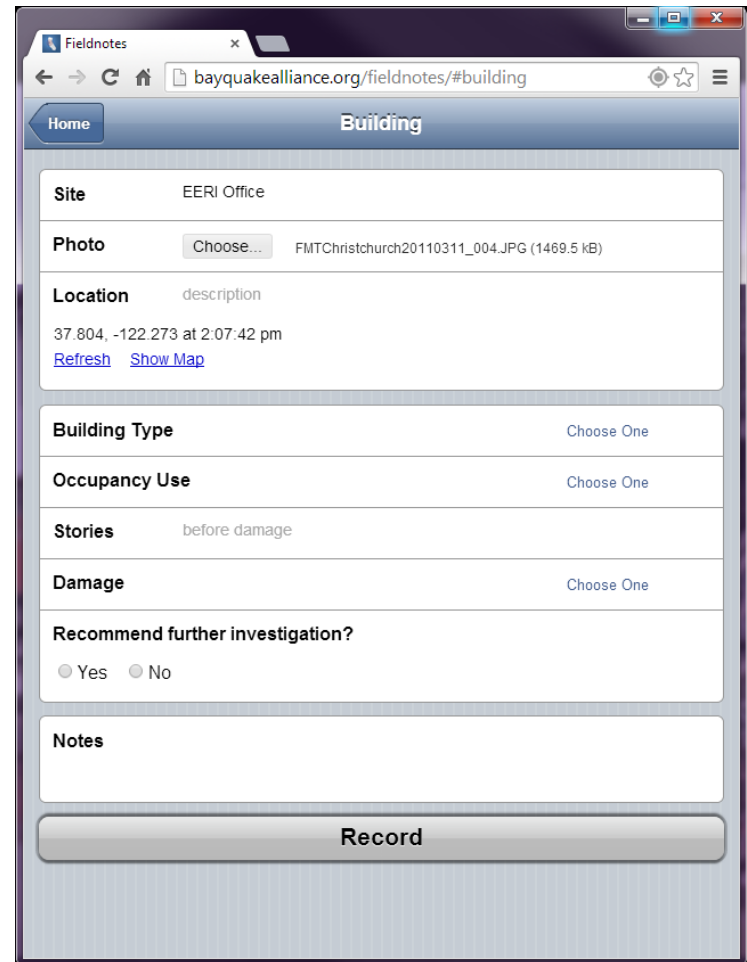
A "Record" button is located at the bottom of the form.



# Clearinghouse Fieldnotes Demo

## Filling Out a Form

- A photo of the feature, in this case a building, can be selected to accompany the information submitted through the form
- Location information is again automatically populated



The screenshot shows a web browser window with the URL `bayquakealliance.org/fieldnotes/#building`. The page title is "Building" and it features a "Home" button. The form contains the following fields:

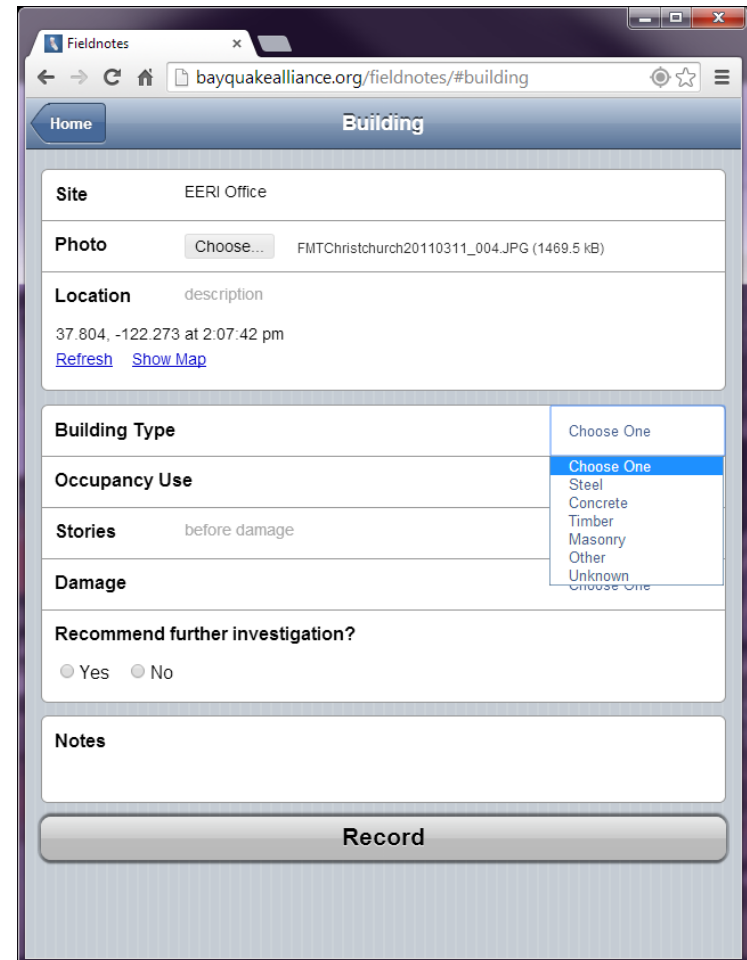
- Site:** EERI Office
- Photo:** Choose... FMTChristchurch20110311\_004.JPG (1469.5 kB)
- Location:** description  
37.804, -122.273 at 2:07:42 pm  
[Refresh](#) [Show Map](#)
- Building Type:** Choose One
- Occupancy Use:** Choose One
- Stories:** before damage
- Damage:** Choose One
- Recommend further investigation?:**  Yes  No
- Notes:** (empty text area)

A "Record" button is located at the bottom of the form.

# Clearinghouse Fieldnotes Demo

## Filling Out a Form

- In this form there are 5 questions to answer



The screenshot shows a web browser window with the URL `bayquakealliance.org/fieldnotes/#building`. The page title is "Building". The form contains the following fields:

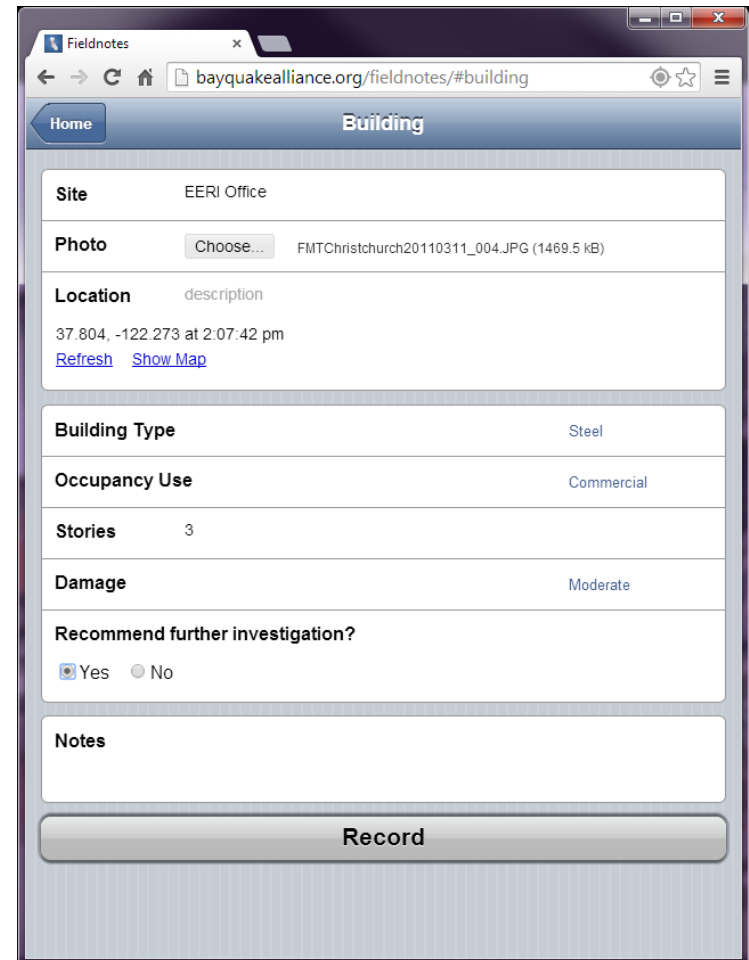
- Site:** EERI Office
- Photo:** Choose... FMTChristchurch20110311\_004.JPG (1469.5 kB)
- Location:** description  
37.804, -122.273 at 2:07:42 pm  
[Refresh](#) [Show Map](#)
- Building Type:** Choose One
- Occupancy Use:** Choose One  
Steel  
Concrete  
Timber  
Masonry  
Other  
Unknown  
Choose One
- Stories:** before damage
- Damage:**
- Recommend further investigation?:**  
 Yes  No
- Notes:**

A "Record" button is located at the bottom of the form.

# Clearinghouse Fieldnotes Demo

## Filling Out a Form

- After answering all questions, there is a space to add more text in the Notes section



The screenshot shows a web browser window with the URL `bayquakealliance.org/fieldnotes/#building`. The page title is "Building" and it has a "Home" button. The form contains the following fields:

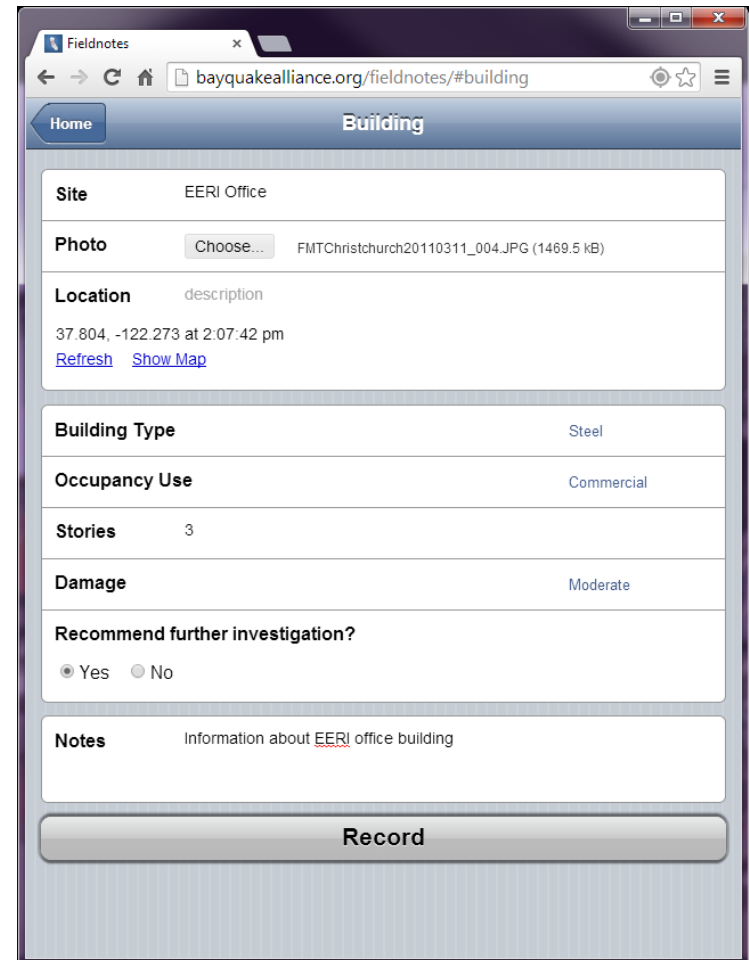
Site	EERI Office
Photo	Choose... FMTChristchurch20110311_004.JPG (1469.5 kB)
Location	description 37.804, -122.273 at 2:07:42 pm <a href="#">Refresh</a> <a href="#">Show Map</a>
Building Type	Steel
Occupancy Use	Commercial
Stories	3
Damage	Moderate
Recommend further investigation?	<input checked="" type="radio"/> Yes <input type="radio"/> No
Notes	

At the bottom of the form is a large "Record" button.

# Clearinghouse Fieldnotes Demo

## Filling Out a Form

- Once the form is complete, the information can be sent or stored by clicking record



The screenshot shows a web browser window with the URL `bayquakealliance.org/fieldnotes/#building`. The page title is "Building" and it features a "Home" button. The form contains the following fields:

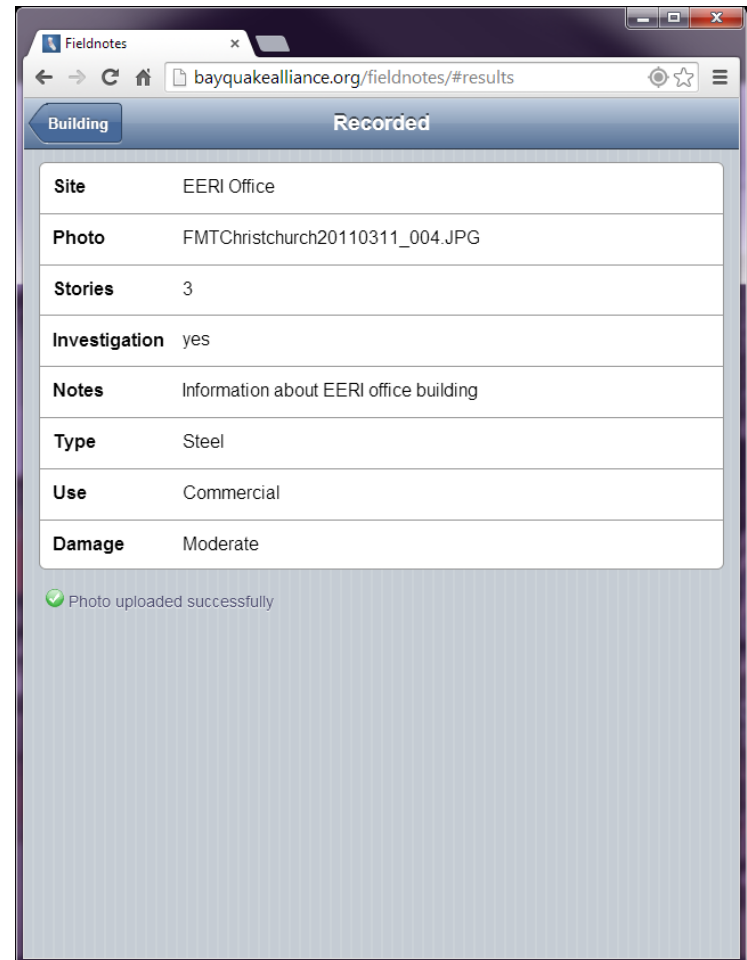
Site	EERI Office
Photo	Choose... FMTChristchurch20110311_004.JPG (1469.5 kB)
Location	description 37.804, -122.273 at 2:07:42 pm <a href="#">Refresh</a> <a href="#">Show Map</a>
Building Type	Steel
Occupancy Use	Commercial
Stories	3
Damage	Moderate
Recommend further investigation?	<input checked="" type="radio"/> Yes <input type="radio"/> No
Notes	Information about EERI office building

At the bottom of the form is a large "Record" button.

# Clearinghouse Fieldnotes Demo

## Filling Out a Form

- After recording you will see confirmation
- If you included a photo, it will take a moment to upload



The screenshot shows a web browser window with the URL `bayquakealliance.org/fieldnotes/#results`. The page displays a 'Recorded' entry for a building. The entry details are as follows:

Site	EERI Office
Photo	FMTChristchurch20110311_004.JPG
Stories	3
Investigation	yes
Notes	Information about EERI office building
Type	Steel
Use	Commercial
Damage	Moderate

Below the table, a green checkmark icon is followed by the text 'Photo uploaded successfully'.

# Clearinghouse Fieldnotes Demo

## Viewing and Downloading Features

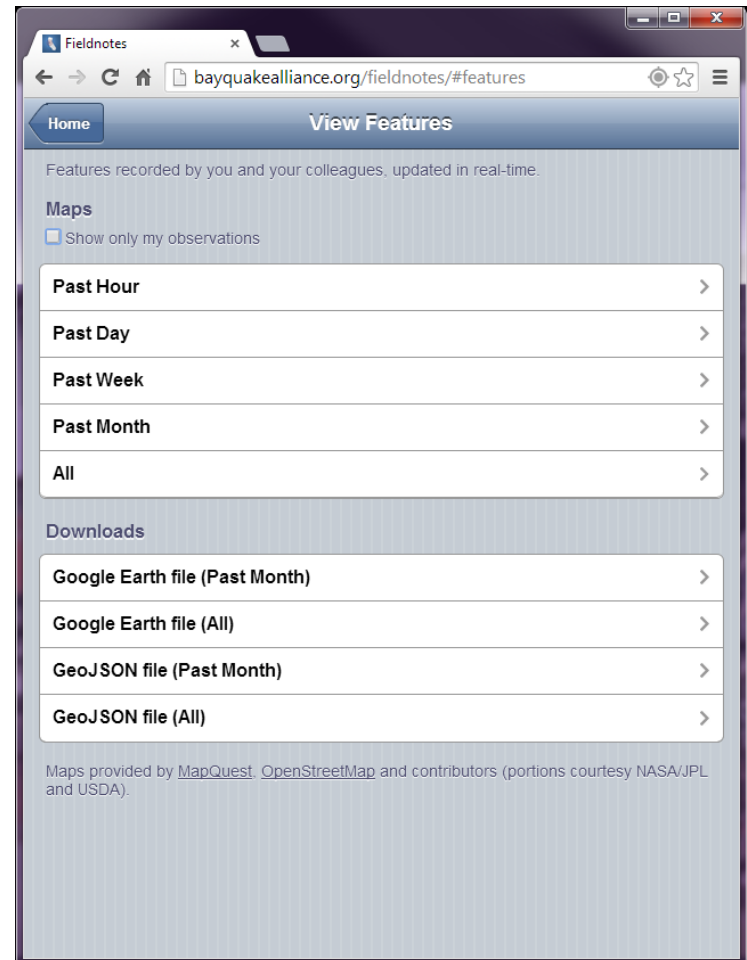
- This application also has a built in map feature that allows users to see or download all points that have been recorded
- Select “View Features”



# Clearinghouse Fieldnotes Demo

## Viewing Features

- This application also has a built in map feature that allows users to see or download all points that have been recorded
- Select “View Features”



# Clearinghouse Fieldnotes Demo

## Viewing Features

- Selecting “All” shows a map with all points ever collected using this application

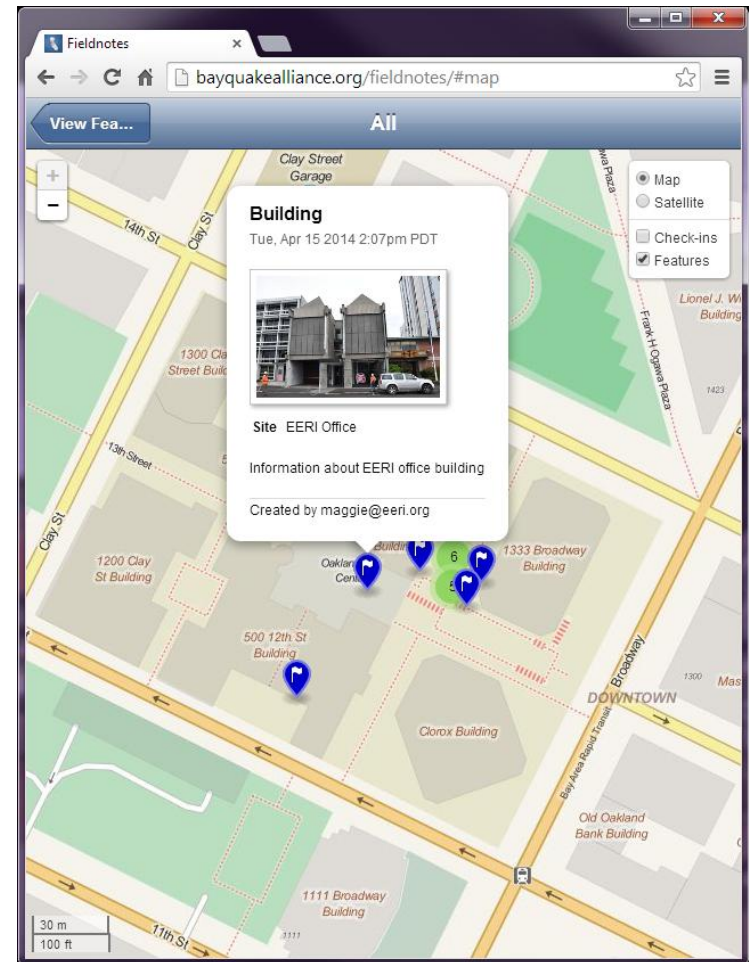




# Clearinghouse Fieldnotes Demo

## Viewing Features

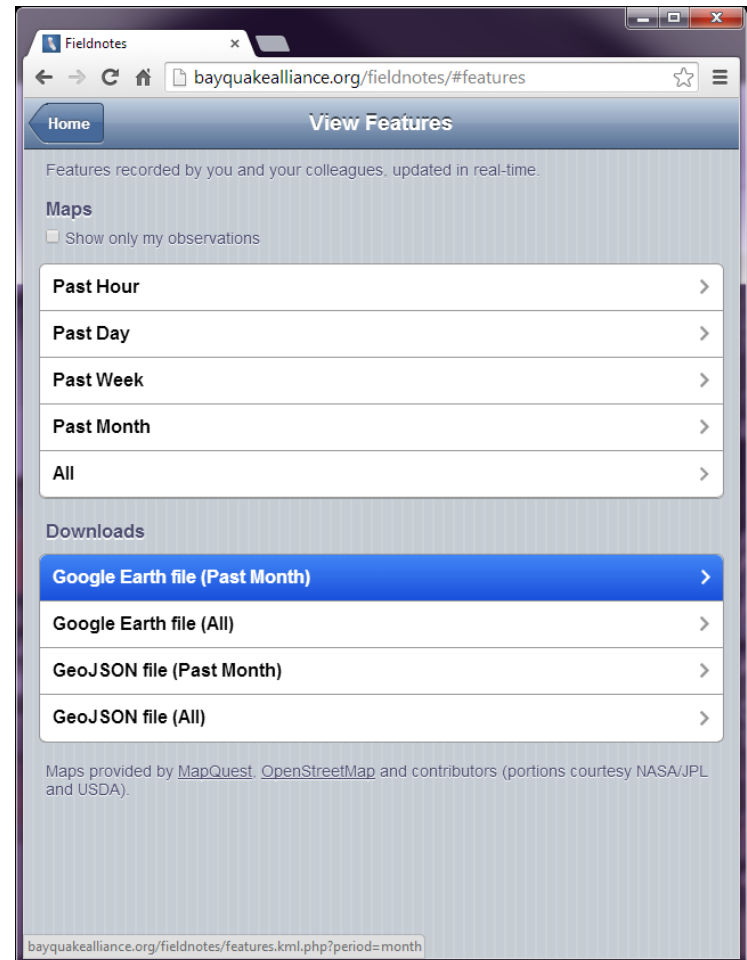
- Selecting one of the pins will show the information collected at that site



# Clearinghouse Fieldnotes Demo

## Downloading Features

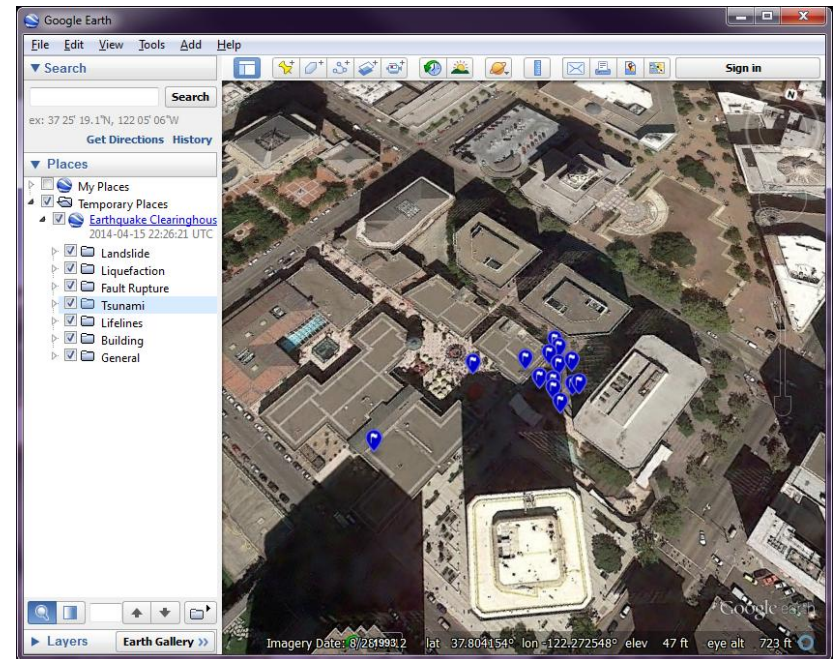
- It is also possible to download all the information to view in another mapping application such as Google Earth
- Selecting this option initiates downloading a kml file



# Clearinghouse Fieldnotes Demo

## Downloading Features

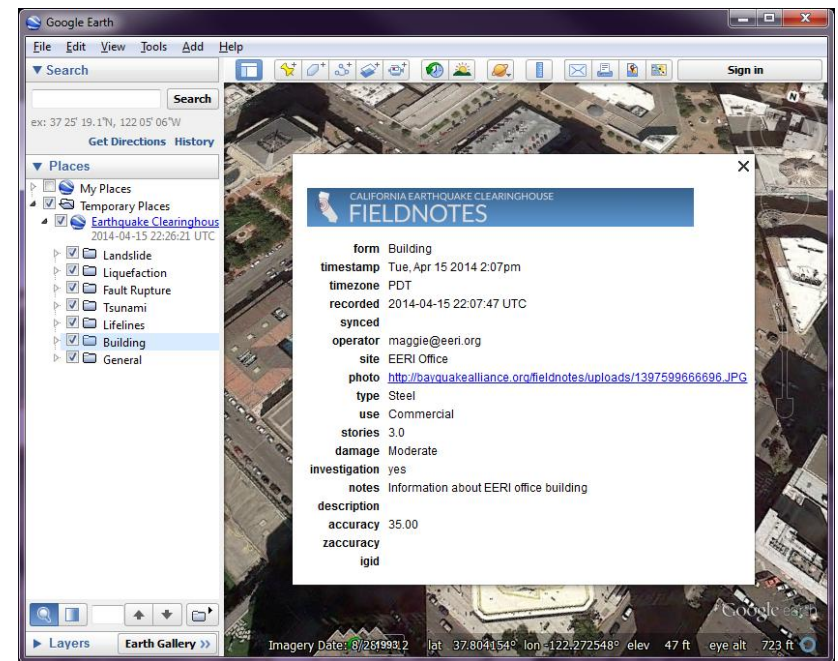
- This is what the data looks like in Google Earth
- It is possible to toggle on and off the different categories of features



# Clearinghouse Fieldnotes Demo

## Downloading Features

- Selecting a pin brings up all the information for that point, including the form data and a link to an associated picture



# Summary

- Lightweight tool for mobile data collection
- Online viewing facilitated as all data is hosted online

