

# Earthquake Hazards Program Website Usability Study Report

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# Earthquake Hazards Program Website Usability Study Report

## Introduction

The statement that sums up the major finding from this usability study is, “There’s a whole bunch of information on the website, but it’s difficult to find some of it.” The other thing that became obvious is that everyone has a different “tag” for what they’re looking for. For example, the topic “Earthquake Early Warning” was tagged as General Earthquake Topics, “Where are they?”, Earthquake Prediction, and Future Earthquake Hazards Information by the four participants.

On the positive side, the Latest Earthquake Information, which is the most important product on the website, is easy to find and well-presented.

The recommendations for modifications to the website attempt to make the information on the website easier to find, and also attempt to avoid the tagging of information at the highest level of the website.

Not all intended audiences were used in this study due to time constraints, but four participants were involved, representing general public (2), students (1), and professionals (1).

## Data

### Interviews/Observations

Interviews were conducted with the student and the professional, but not the two members of the General Public, who only performed the card sort. The author performed the interviews and observations. The findings are summarized below in the Report section.

### Card Sorts

The spreadsheet for the four Card Sorts is provided in the Appendix.

## Report

Both participants were able to find information on a recent earthquake easily, but they didn’t notice the link for the list of earthquakes under the maps. One participant commented that the US maps look outdated aesthetically, and they would like to have the functionality of Google Maps for the earthquake maps.

The participant who was asked to find information on an historic Peru earthquake was unable to find where the historical earthquake information was and finally gave up.

The participant who was asked to find information on earthquake prediction was also unable to find it and gave up. Information on tsunamis was also difficult to find.

One participant’s approach to finding any information on any website was to use a Google Search. The other participant said that having more information on the webpage about what was on the website and where it was located would be helpful.

## Recommendations

For overall improvement to navigation of the website and locating information, we need to provide a list of what is available under each website section on the homepage.

Prediction, Preparedness, and Probabilities/Hazard Maps need to be brought to the surface and have their own section.

Earthquake Topics needs more explanation about what it is; the word 'learn' needs to be associated with it.

Tsunami information needs to be easier to find, perhaps a link on the homepage.

Historical earthquake information is the worst part of the website. There is no clear place to go to get this information, and even if you do find it, there are so many different kinds of lists that it's impossible to figure out which list you need to look at. This problem needs to be solved on the back end with a database containing all information for all earthquakes, instead of providing users with a different list for each kind of information associated with an earthquake.

Since many people probably enter the site at levels below the homepage, we need to be sure that navigation around the website is clear on all pages.

## Mockups

The redesign of the EHP homepage brings all the elements of the website that are currently difficult to find to the front (except the historical earthquakes). The section labels and the sub-sections under each will be displayed on every webpage.

## Implementation Plan

Lisa will mockup the homepage and all the other section pages required for the new navigation in Adobe Illustrator. Scott will then create the mockup webpage in PHP for review. After reviews and modifications of all the new webpages, we will develop a plan for rolling them out to the public web servers.

## Earthquake Hazards Program

Home

About Us

Contact Us



Search

EARTHQUAKES

REGIONAL

LEARN

PREPARE

MONITORING

RESEARCH

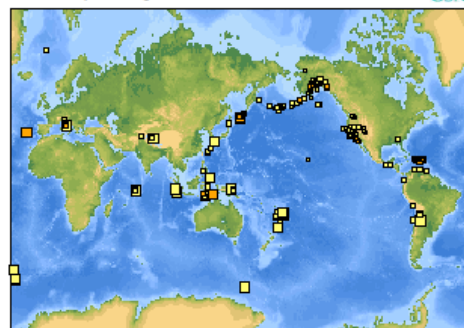
### Latest Earthquakes

Subscribe: [Earthquake Notification Service](#)

Did You Feel It? [Report an Earthquake](#)

World (Magnitude 4.5+)

Wed Nov 14 18:28:25 UTC



[Atom XML Feed](#)

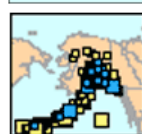
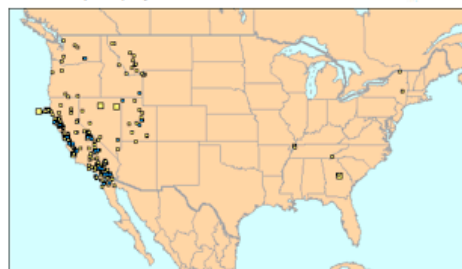
[Google Earth KML](#)

ShakeMap: [Maps depicting shaking intensity](#)

PAGER: [Estimate of population exposure](#)

USA (Magnitude 1+)

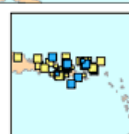
Wed Nov 14 18:27:09 UTC



ALASKA



HAWAII



PUERTO RICO

### Newsworthy Earthquakes

M 6.3 - Off The East Coast Of Honshu, Japan  
December 20, 2008

M 6.8 - Kermadec Islands Region  
December 09, 2008

M 5.1 - Southern California  
December 06, 2008

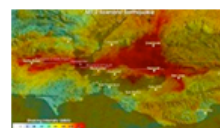
M 7.3 - Sea Of Okhotsk  
November 24, 2008

[Archives](#)

### Past 5 Earthquakes (M 2.5+)

### Featured Items

#### Earthquake Animations



Computer simulations of large, anticipated earthquakes on the Hayward and Rodgers Creek faults.

#### Shake Table Exhibit



Art installation in Parkfield, California using earthquakes to trigger a hydraulic shake table in near real-time.

### Additional Resources

- [Tsunami web sites](#)
- [Other USGS hazards web sites](#)
- [Other earthquake web sites](#)

### Today in Earthquake History

December 24, 1973

**M 4.1 - New Mexico** This earthquake was centered near Grants. The tremor caused minor damage in the Grants area and was also felt at Laguna, Bluewater, and Fort Wingate. Maximum reported intensity was V.

### Today's Earthquake Fact

The **core of the earth** was the first internal structural element to be identified. In 1906 R.D. Oldham discovered the core from his studies of earthquake records. The inner core is solid, and the outer core is liquid and does not transmit the shear wave energy released during an earthquake.

#### EARTHQUAKES

Past

Present

Future

#### REGIONAL

Info by Country/Region

Info by State

Faults

Hazard Maps

Regional Focus

#### LEARN

Earthquake Topics

FAQ

Visual Glossary

For Kids

Students & Teachers

Photos

Publications

Google Earth Files

#### PREPARE

How do I prepare?

A quake just happened...

Response Agencies

#### MONITORING

ANSS - United States

GSN - World

NSMP - Strong Motion

#### RESEARCH

Projects

Scientific Data

Software

External Support

Card no	Card name	Sort1	Sort2	Sort3	Sort4
1	Last 8-30 Days of Earthquakes - Lists & Maps	Current EQs	Where are they?	Recent Earthquakes	Past Earthquakes
2	Earthquake Info by State	EQ Info by Geographic Area	Where are they?	Historic Earthquakes	Information General Earthquake
3	1868 Hayward Fault, CA Information	Significant & Historic EQs	A Short History	Historic Earthquakes	Haz Information Past Earthquakes
4	ANSS - Advanced National Seismic System Network	Networks	Earthquakes Advanced	Resources from Other Organizations	Information Data
5	Earthquake Early Warning	General EQ Topics	Where are they?	Prediction	Future Earthquake
6	External Research Support	Research	Research	what is this?	Hazards Info
7	Crustal Deformation Research	Research	Research	Data & Research	Research
8	Earthquake Topics	General EQ Topics	Earthquakes 101	Earthquake Topics	About the EHP
9	Google Earth KML Files	Data	Where are they?	Data & Research	
10	Seismogram Displays	General Information	General Information- Visualization	Education	
11	Photo Collections	General Information	Visualization	Data & Research	Education
12	How do I prepare?	General Information	Earthquakes 101	General Information Earthquake	Education
13	Borehole Geophysics & Rock Mechanics	Research	Prediction	Research	Education
14	Research	Research	Data & Research	Research	
15	Last 7 Days of Earthquakes in the World - Lists & Maps	Current EQs	Where are they?	Data & Research	Research Past Earthquakes
16	Earthquake Probabilities	General Information	Recent Earthquakes	Information	Future Earthquake
17	Intermountain West office and earthquake info	Locations & Maps of Offices	Prediction	Hazards Info	General Earthquake
18	Faults	General EQ Topics	Locations & Maps of Offices	General Earthquake	Haz Information
19	Earthquake Hazards Research	Research	Data & Research	Data	Research
20	Software to Download	Software to Download	Data & Research	Research	
21	Visual Glossary	General Information	Earthquakes Advanced	General Information	About the EHP
22	Significant Earthquakes	Significant & Historic EQs	General Information- Visualization	General Information	Education
23	Earthquakes for Teachers	Earthquakes 101	A Short History	Historic Earthquakes	Past Earthquakes
24	Did You Feel It?	Current EQs	Earthquakes	Information	Information
25	Northern California office and earthquake info	Locations & Maps of Offices	Advanced	Recent Earthquakes	General Earthquake
26	Last 7 Days of Earthquakes in the U.S.	Current EQs	Where are they?	Locations & Maps of Offices	Haz Information Past Earthquakes
27	An earthquake just happened...	Current EQs	Where are they?	Recent Earthquakes	Information Recent Eqs
28	Earthquake Source & Effects Data	Data	Earthquakes	Data & Research	Data
29	ShakeMap-maps of shaking distribution	Data	Advanced	Recent Earthquakes	Recent Eqs
30	for individual earthquakes	Data	Earthquakes	Historic Earthquakes	Information
31	PAGER-shaking maps and population distribution	Data	Advanced	Recent Earthquakes	Recent Eqs
32	Publications	General Information	Earthquakes	Information	Information
33	Job Opportunities	General Information	Advanced	Recent Earthquakes	Research
34	Regional & Whole Earth Structure	Research	Earthquakes 101	General Information	About the EHP
35	Research	Research	Research	Data & Research	Research
36	Seismic Hazard Data	Data	Earthquakes	Data & Research	Data
37	Earthquake Geology & Paleoseismology	Research	Advanced	Data & Research	Research
38	Research	Research	Research	Data & Research	Recent Eqs
39	Information on an earthquake that just happened	Current EQs	Where are they?	Recent Earthquakes	Information
40	Pacific Northwest office and earthquake info	Locations & Maps of Offices	General Information- Area Info	Locations & Maps of Offices	General Earthquake
41	Current Earthquake-related News	Current EQs	Where are they?	Haz Information Recent Eqs	Information
42	Seismic Hazard Mapping	Data	Where are they?	Recent Earthquakes	Future Earthquake Hazards Info

39 GSN - Global Seismographic Network	Networks	Earthquakes Advanced	Resources from Other Organizations	Data
40 Seismic Waveform Data	Data	Earthquakes Advanced	Data & Research Resources from Other Organizations	Data
41 National Strong Motion Seismic Network Animations for Earthquake Terms & Concepts	Networks	Advanced General Information- Visualization	Education	Data
42 Concepts	General Information	Earthquakes Advanced	Education	Education
43 RSS/KML Feeds & Data	Data	Earthquakes 101	Data & Research Education	Data
44 Earthquakes for Kids	Earthquakes 101	Earthquakes 101	Education	Education
45 Earthquake Catalogs Strong Motion, Site Response & Ground Motion Research	General Information	General Information	Historic Earthquakes	Data
46 Motion Research	Research	Research	Data & Research	Research
47 FAQs	General Information	Earthquakes 101	General Information	Education
48 Information	Significant & Historic EQs	A Short History	Historic Earthquakes	Past Earthquakes
49 Southern California office and earthquake info	Locations & Maps of Offices	General Information- Area Info Earthquakes	Locations & Maps of Offices	Information General Earthquake Haz Information
50 Geodetic Data	Data	Advanced	Data & Research	Data
51 Earthquake Facts	General EQ Topics	Earthquakes 101	Recent Earthquakes	Education
52 Search for an Earthquake	Search for an EQ	Where are they? Earthquakes	Historic Earthquakes Resources from Other Organizations	Past Earthquakes Information Recent Eqs
53 Response Agencies	General Information	Advanced	Other Organizations	Information
54 Central & Eastern US office and earthquake info	Locations & Maps of Offices	General Information- Area Info	Locations & Maps of Offices	General Earthquake Haz Information
55 Earthquake Notification Service	EQ Notification Service	Where are they?	Earthquake Prediction	Recent Eqs Information
56 Earthquake Info by Country/Region	EQ Info by Geographic Area	Where are they?	Historic Earthquakes	General Earthquake
57 National Earthquake Information Center	Locations & Maps of Offices	General Information- Area Info	Resources from Other Organizations	Haz Information
58 Earthquake Games & Puzzles	Earthquakes 101	Earthquakes 101	Education	Education
59 Earthquake Information by Topic	General EQ Topics	Earthquakes 101	Earthquake Topics	General Earthquake
60 Famous Seismologists	General Information	A Short History	Education	Haz Information
61 So you want to be a seismologist?	General Information	Earthquakes 101	Education	Education
62 Puerto Rico/Guam & US Territories office and earthquake info	Locations & Maps of Offices	General Information- Area Info	Locations & Maps of Offices	General Earthquake
63 Contact Us	Contact Us	Contact Us	General Information	Haz Information
64 Top 10 Lists & Maps	Significant & Historic EQs	Where are they?	Historic Earthquakes	About the EHP
65 Our Mission	Our Mission	General Information	General Information don't know where to put it	Information About the EHP
66 Tsunami Information	General EQ Topics	Earthquakes 101	Resources from Other Organizations	About the EHP
67 Resources from Other Organizations	General Information	Earthquakes Advanced	Resources from Other Organizations	About the EHP
68 Albuquerque Seismological Lab - maintains instruments & gathers data from GSN	Locations & Maps of Offices	Earthquakes Advanced	Resources from Other Organizations	Data
69 Earthquake Photos	General Information	General Information- Visualization	Historic Earthquakes	Past Earthquakes
70 Recent Earthquake Map Animations	Current EQs	General Information- Visualization	Recent Earthquakes	Information
71 Locations and Maps of Offices	Locations & Maps of Offices	General Information- Area Info	Locations & Maps of Offices	Recent Eqs
72 Computer Simulations of Earthquake Rupture & Shaking Scenarios	Current EQs	Earthquakes	Data & Research	Information General Earthquake
73 Parkfield, CA Earthquake Information	Significant & Historic EQs	Advanced	Historic Earthquakes	Haz Information
74 Earthquake Prediction	General Information	A Short History	Earthquake Prediction	Future Earthquake
75 Earthquakes for Students	Earthquakes 101	Earthquakes 101	Education	Hazards Info
76 Historic Earthquakes	Significant & Historic EQs	Advanced	Education	Education
		A Short History	Historic Earthquakes	Past Earthquakes
				Information