

Google Crisis Response

IEEE Global Humanitarian Technology Conference

Nigel Snoad, Product Manager Google
23 October 2013

Making Critical information more accessible in times of disaster

Deliver accurate, relevant, credible information to the public

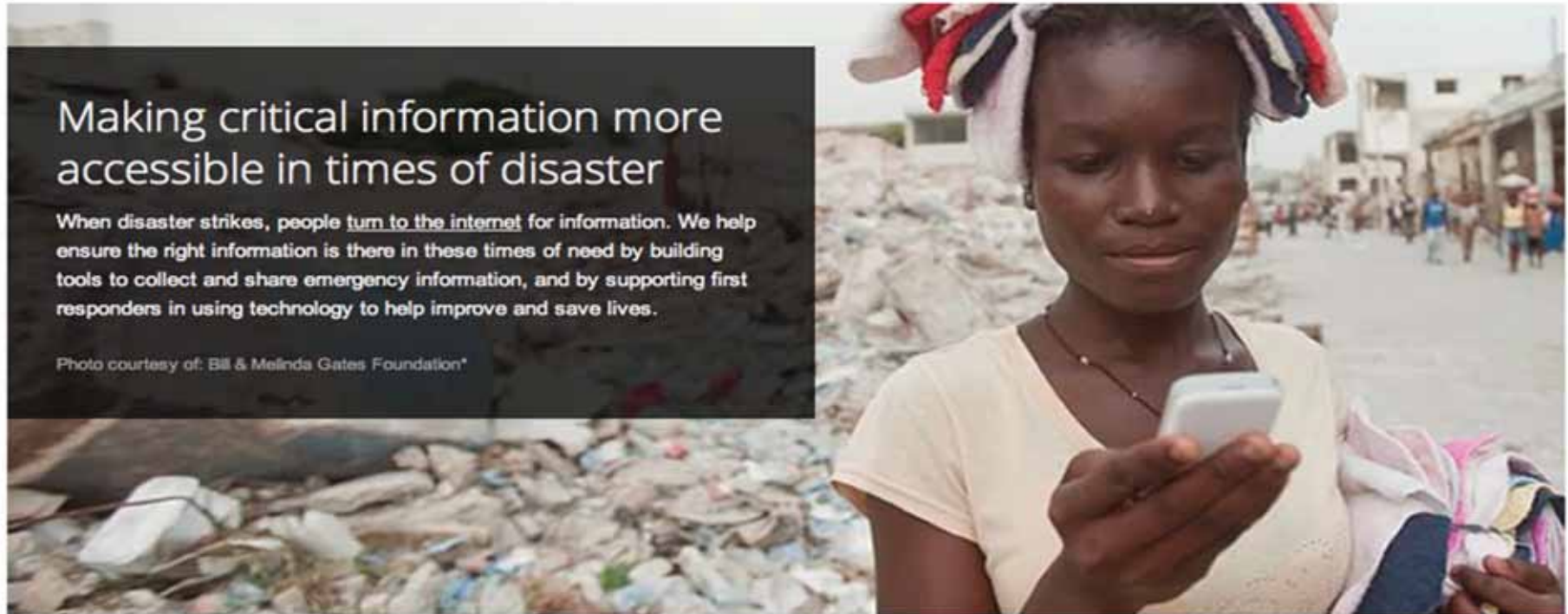
- for **all** emergency events affecting life and property
- as **fast** as possible
- **across** many products and via open standards



Making critical information more accessible in times of disaster

When disaster strikes, people [turn to the internet](#) for information. We help ensure the right information is there in these times of need by building tools to collect and share emergency information, and by supporting first responders in using technology to help improve and save lives.

Photo courtesy of: Bill & Melinda Gates Foundation*



Response Efforts

We have been responding to natural disasters since Hurricane Katrina in 2005 by making information such as storm paths, shelter locations, emergency numbers, and donation opportunities easily accessible. Learn about our [past responses](#).

Tools for Responders

First responders can use technology to streamline internal operations and get information to the public as quickly, broadly, and effectively as possible. We've published some [solutions](#) to help responders achieve these goals.

Get Tech Prepared

See how simple technology can help you prepare for a crisis. Learn to create an emergency plan, store important documents in the cloud, and use SMS when phone lines are down. See the [check list](#) developed in collaboration with Ready.gov.



40+ responses since 2010



January 12, 2010

Slide 5

1

Need to see to use the picture?

DO we have some pictures which have been vetted to use>

Alice Bonhomme-Biais,

Pre-Earthquake - Aug 26, 2009

© GeoEye



1 Day After Earthquake - Jan 13, 2010

© GeoEye



13 Days After Earthquake - Jan 25, 2010

© Google



what else could we do?



Relevant Maps

Post-Earthquake Imagery

Haiti Disaster Response Map

Haiti Layer List

- USGS Shake Map [KML](#)
Credit: [U.S. Geological Survey](#)
- Haiti Seismic Readings [KML](#)
January 2010
Credit: [U.S. Geological Survey](#)
- Haiti Damage Assessment [KML](#)
Credit: [Google Earth Library](#)
- Haiti Medical Facilities [KML](#)
Credit: [Ushahidi](#)
- IDP Staging Areas [KML](#)
Credit: [Ushahidi](#)
- GeoEye-1 Satellite Imagery
Captured 1/13/10.
Copyright [GeoEye](#) 2010
Zoom in to see imagery.
- GeoEye-1 Satellite Imagery
Captured 1/16/10.
Copyright [GeoEye](#) 2010.
- NOAA Aerial Imagery
Captured 1/17/10.
Copyright [NOAA](#) 2010.

Haiti Earthquake January, 2010

- Date: 2010/01/12
- Time: 21:53:10 UTC
- Magnitude: 7.0
- Latitude: 18.457
- Longitude: -72.533
- Depth (km): 13.0
- More Info: [USGS Details Page](#)

Data provide by USGS.
For more information, see:
[- List of earthquakes in this area](#)
[- Map of earthquakes in this area](#)
[- USGS Earthquakes Homepage](#)
[- Real-time Google Earth Feeds](#)

Map tiles from Google Map Maker. [Improve the map](#) or [Add Map Maker to your Maps API](#).

Map data ©2010 Google, Europa Technologies - [Improve the map](#) or [Add Map Maker to your Maps API](#)

Map | Hybrid | Earth

Person Finder

Person Finder: Haiti Earthquake
English | [Français](#) | [Kreyòl](#) | [Español](#)

What is your situation?

[I'm looking for someone](#) | [I have information about someone](#)

Currently tracking about 55,200 records.

PLEASE NOTE: All data entered by you will become publicly available, and viewable and usable by anyone. Data in Person Finder includes data entered by users and data entered based upon publicly available information and certain other sources. Google does not review or verify the accuracy of the data.

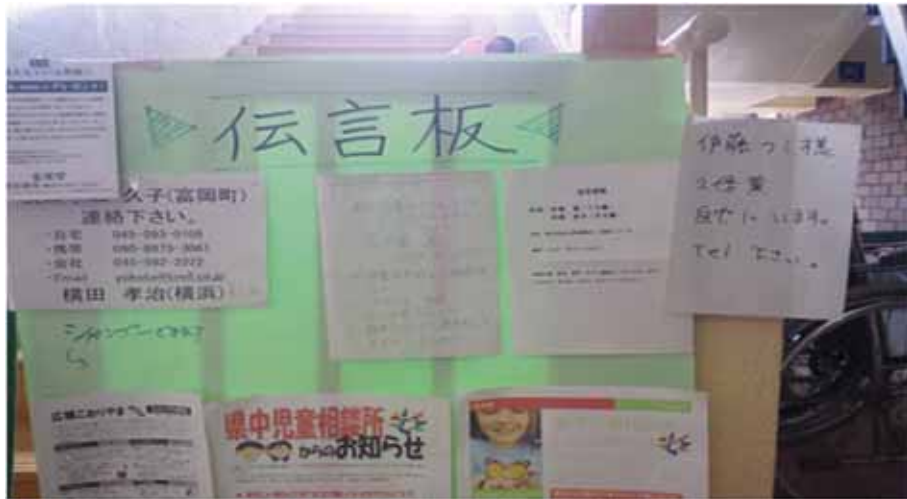
[Embed this tool on your site](#) - [Developers](#) - [Terms of Service](#)

powered by


- United multiple sites running missing persons databases
- 72 hour hackathon across Google

google.org/personfinder

code.google.com/googlepersonfinder



Google Japan's Public Gallery Albums (60)

Sort displayed albums by: Upload date

Share



Drop Box Apr 9, 2011 photos: 6



2011_04_08_1330_name_list Apr 7, 2011 photos: 1



2011_04_05_1330_name_list Apr 4, 2011 photos: 6



2011_04_03_1330_name_list Apr 2, 2011 photos: 1



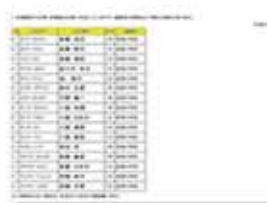
2011_04_02_1330_name_list Apr 1, 2011 photos: 8



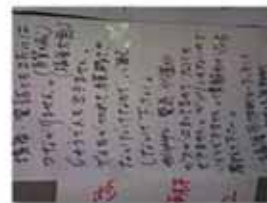
2011_03_31_0130_name_list Mar 30, 2011 photos: 49



2011_03_30_0130_name_list Mar 29, 2011 photos: 39



2011_03_28_1820_name_list Mar 28, 2011 photos: 129



Google Japan photos Follow

Recent Comments View All

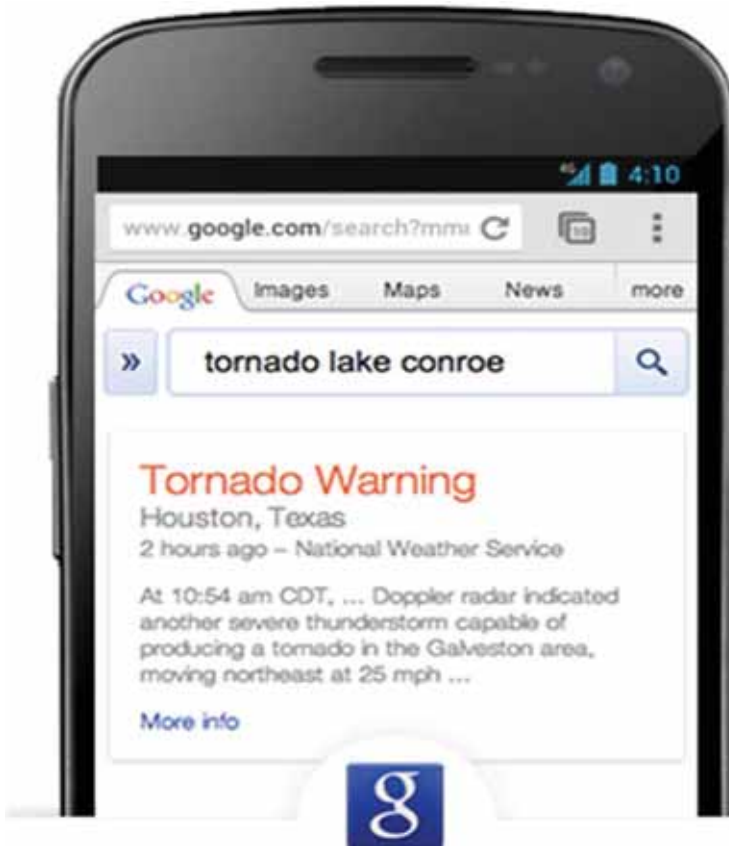
- "PFWチェック開始" shiba ta
"善王寺コミュニティセンター避難者名簿..." 長島R
"Sawaさん、片寄(かたよせ)さんでよ..." 宮本昌和
"すでに登録されている場合は、行方不明..." oblivion
"PFWチェック完了 Ochi" Ochi

Browse Tags

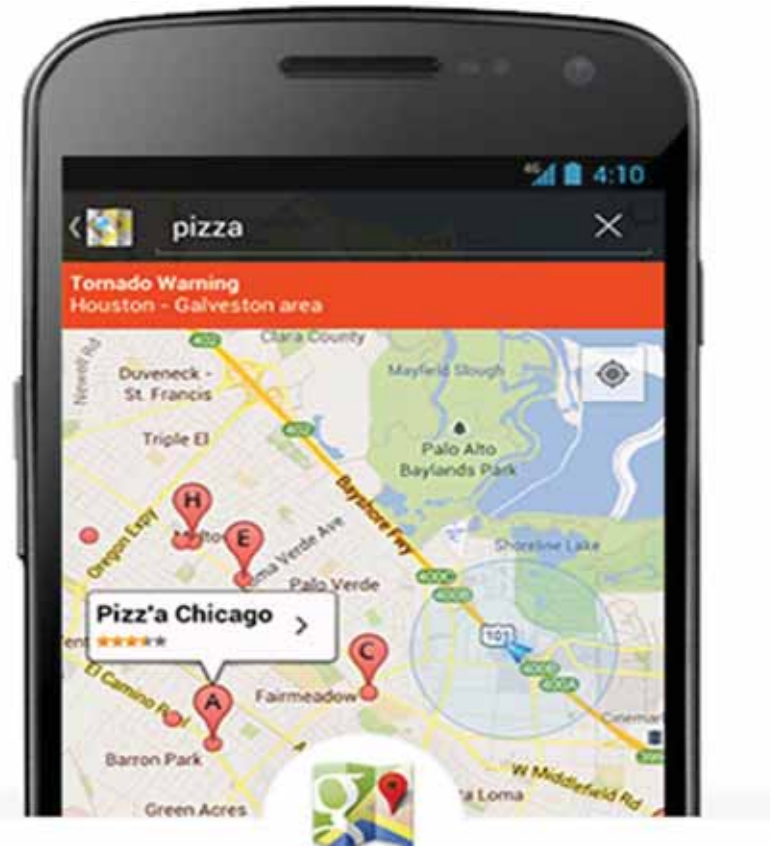
picnik (1)

RSS

Public Alerts



Web Search



Google Maps

Public Alerts - Push Notifications

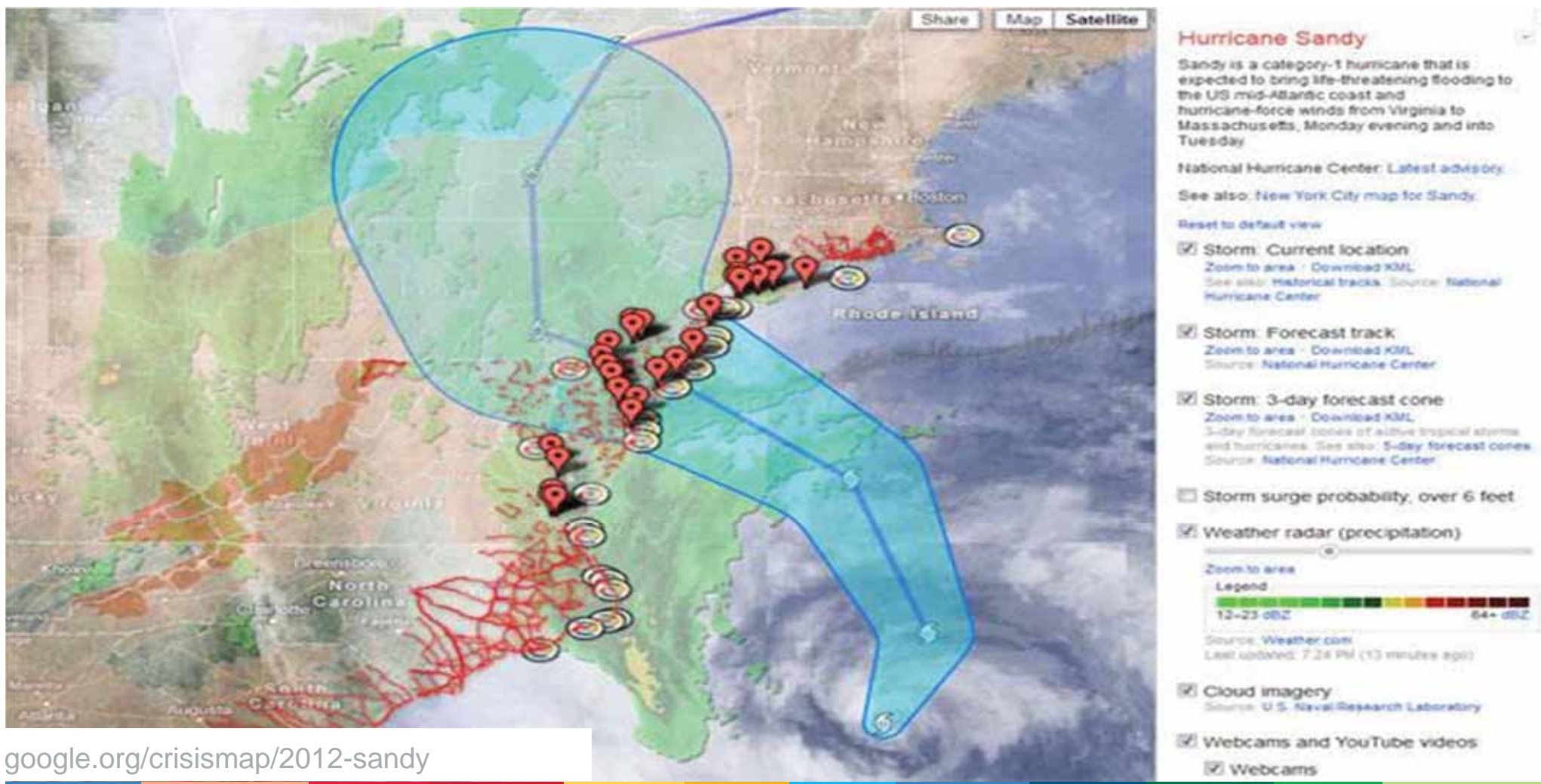
google.org

<http://www.google.com/now>



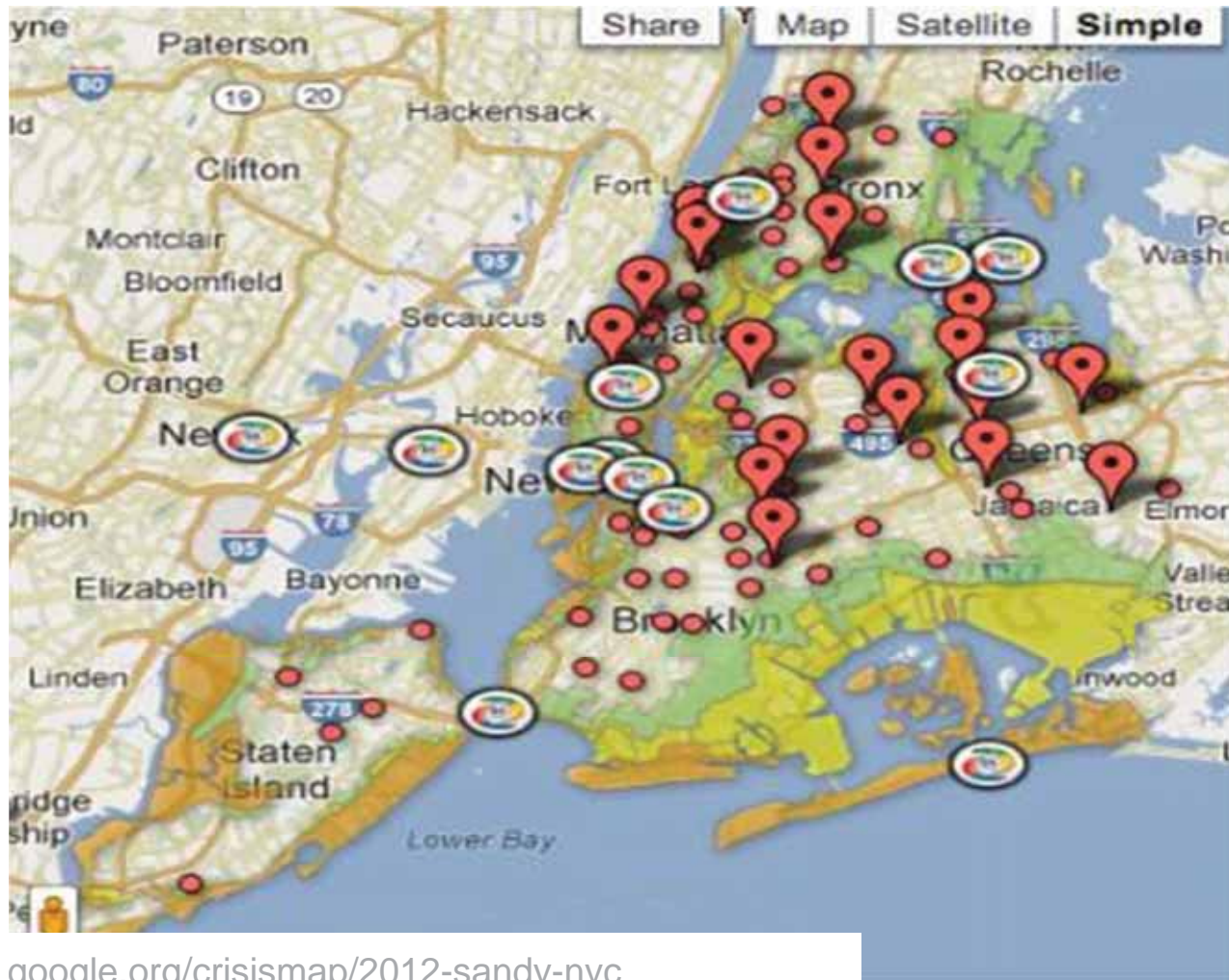
Google Now

Google Crisis Map



google.org/crisismap/2012-sandy

Sandy / NYC



google.org/crisismap/2012-sandy-nyc

Hurricane Sandy: NYC

Sandy is expected to bring life-threatening storm surge flooding to the mid-Atlantic coast, Monday evening and into Tuesday.

- Latest alerts, NYC Emergency Mgmt
- City of New York on Twitter
- NYC Emergency Mgmt on Facebook
- WNYC Transit Tracker
- National Hurricane Center advisories
- ready.gov: Preparing for a hurricane

[Reset to default view](#)

Evacuation zones

[Zoom to area](#) - [View data](#)

Legend

- A: Flood risk from any hurricane near NY
- B: Flood risk from a Category 2+ hurricane
- C: Flood risk from a Category 3+ hurricane

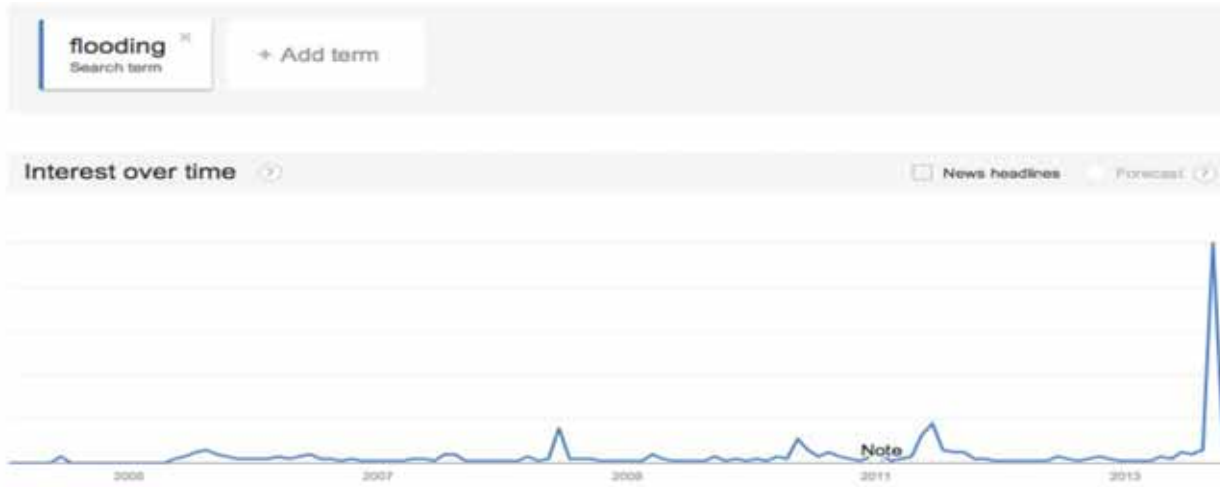
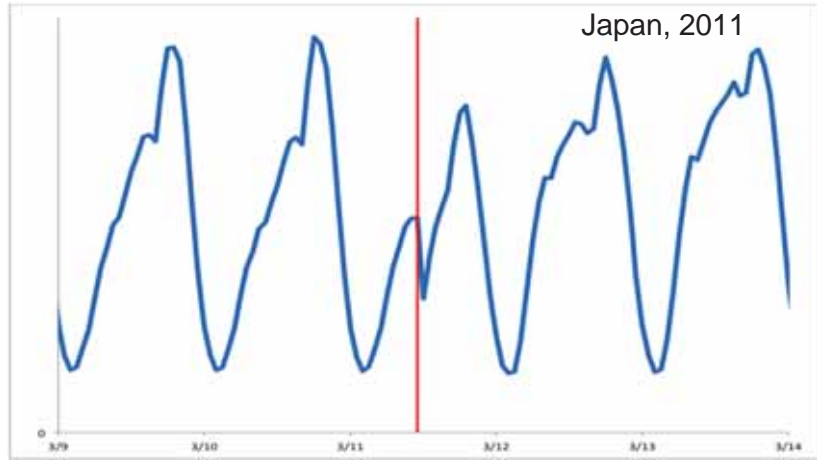
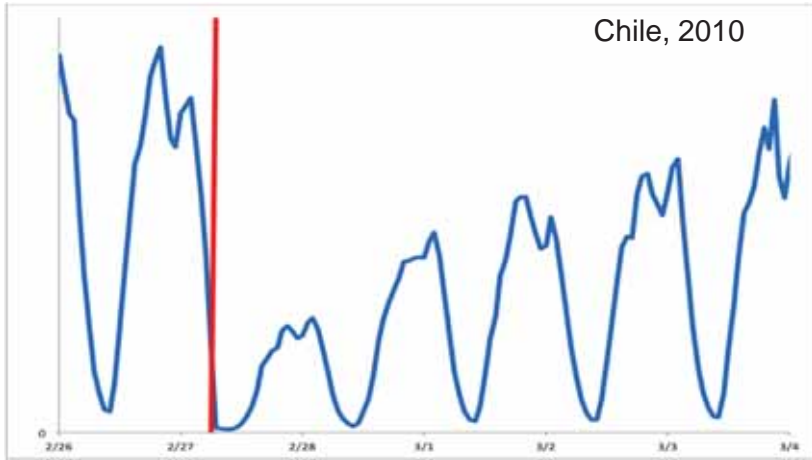
MANDATORY EVACUATION ordered for Zone A: see NYC website

Source: NYC OpenData

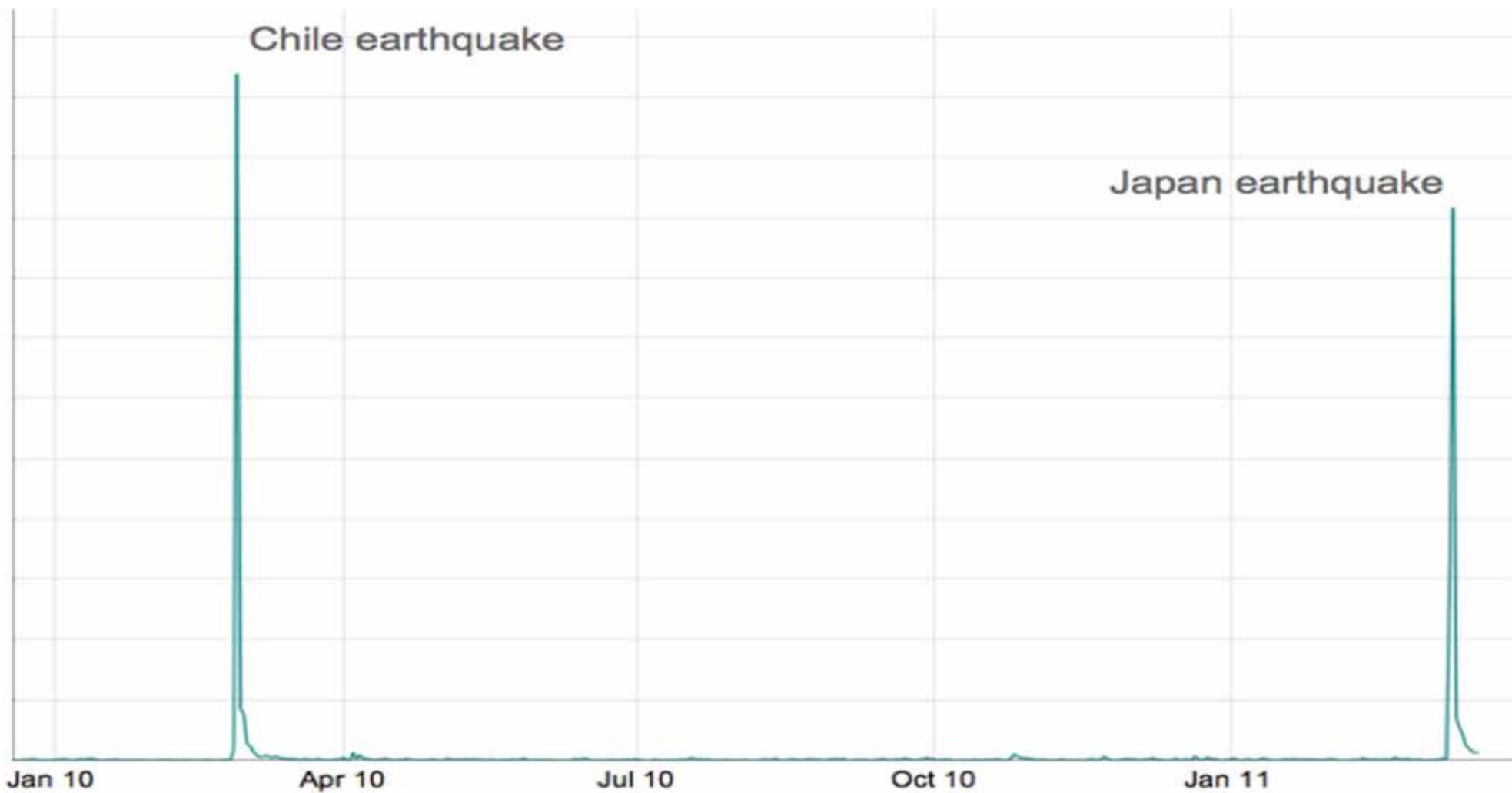
Evacuation centers

[Zoom to area](#) - [View data](#)

Internet use after a disaster



Colorado, 2013



Open letter of thanks to everyone at Google from Tokyo, Japan



From: Ruth Shiraishi

Date: Fri, Mar 25, 2011 at 1:35 PM

To Whom it May Concern,

My name is Ruth and I help lead a company in Tokyo. I first met Ms. K from Google, Japan some 8 years ago when you were a fledgling search engine here and since then have had the honor to meet many consultants and employees from Google ...

However, on March 11, your technology changed our lives.

At 2:46 p.m. when the earthquake struck Japan our phones would not connect. I remember standing in the middle of Ginza, watching glass panels on skyscrapers shake and vibrate, taxi drivers stop and get out of their cars, people all looking up. Looking up and wondering, "Will this be the last thing I see?"

I also remember dialing my children's number again and again on my blackberry to try and make sure my daughter at her friends house in Gotanda and my son on his way in to the city on the train, were okay. As the after shocks came, I saw countless people tapping their mobile phones hoping to get through to someone, some how. I walked to one of our buildings nearby and all of us were seeking some type of communication and more than anything else, Gmail came through for us.

Our desk top email systems would not go through, our phones SMS would not work but gmail connected. Gmail connected us to each other in the company, to our loved ones around Tokyo and worried family and friends around the world.

and
he day.

I am sure that developing all the various cutting edge products takes a lot of effort, team work and patience. Please hang in there and keep innovating. For Japan, I think your position as the best communication method in an emergency situation has been cemented and putting up the earthquake info link on your top page almost immediately made everyone in Japan know your concern and care for us when we all felt afraid and vulnerable. As Embassies expressed "support" while they advised their citizens to get out and as the overseas media latched on to any hype to be dragged from the tragedy, you were there as a fundamental source of information and communication for people on the ground and in the fray.

With Sincere Thanks,
Ruth Shiraishi
Tokyo, Japan

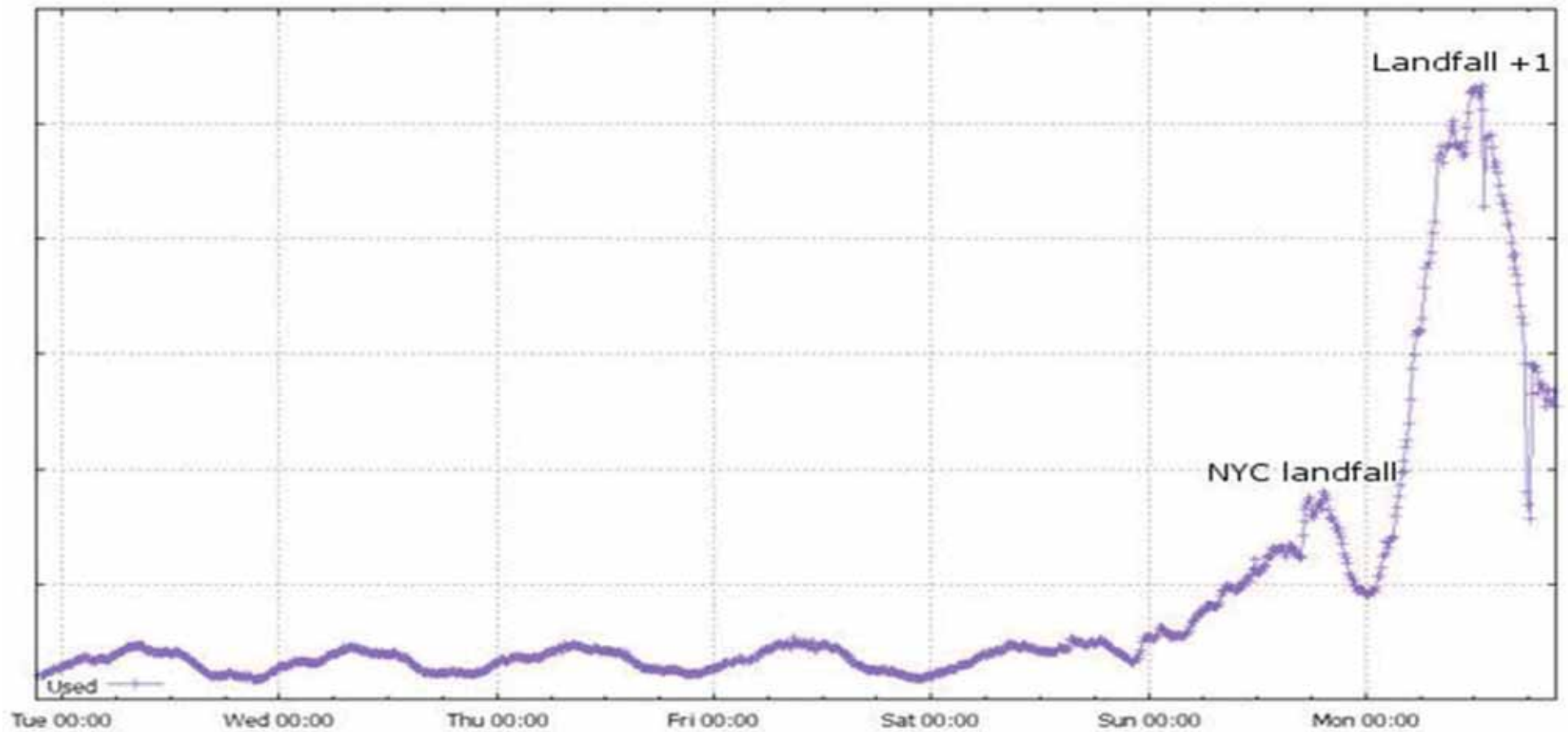
The growth of mobile affected users

Crisis Map Mobile Traffic
google.org/crisismap
2012-2013



Google Crisis Response - How are you using this map? Tell us - Help

Pageviews (hard data)



Feedback (anecdota)

Affected user: *"I looked to see if my house was still there. I can [now] see my house."*

Red Cross responder: *"[I used the map to decide] where to assign disaster response resources and volunteers."*

State of New Jersey: *"Seriously, you guys are really delivering systems of value. Having worked with ... other companies through this crisis ... Google is — by far — adding the most value, in the most intelligent and helpful of ways."*



Any information about the disaster?

accurate

relevant

credible

timely

accessible





Before

How should I **share** what's going on with my contacts outside the city? What is my **employer** advising us to do? What is my **school** or teacher advising us to do? Will I **lose my job** if I leave? How much will it **cost** to evacuate? How do I move my **elderly** or **sick** loved one? Is it worth evacuating this person? What is everyone else in my **neighborhood** doing? Are they evacuating? **Where** would I evacuate to? Getting **accurate** evacuation **information** about my **community**. What do city/parish **officials advise** in terms of evacuating? What do **trusted** local newscasters think? How does this storm compare with others that I've experienced? How **severe** is it? What is the path of the storm? What is the status of **evacuation routes**? What options are there if I have **no car**? How should I **prepare my home** for a potentially long-term evacuation? What stores are still open for **last-minute supplies**? What **supplies** do I need to ride out the storm? What are the **essential** things I need to take for a potentially long-term evacuation? Where can I get **food** and **supplies** along my evacuation route?

During

Where are all of my **friends** and **family**? How can we let everyone know where we ended up? And check in with those who stayed behind? What are the essential things I need to know about **my destination** (shopping, gas, etc.)? Keeping **sick/elderly/young children safe** on the road. Where can I get **medical care** along my evacuation route? Contact information for emergency services where I ended up. What **hotels** and **shelters** have space? Who has **gas**? Where are the open **ATMs** on my evacuation route? What is the **wait time** at stores and other service centers? Where are the contraflow **routes**? Where are the **backroads** and **alternate routes** to avoid congestion? How to tap into **charities** and **donations** to ease the **cost** of evacuation? How do I stay in touch with people if the **phone** are **lines down**? How can I **share** the **news** about what's happening with the outside world? Who else in my **neighborhood** is also staying? Where can I get news **updates specific to my area** (not just metro city-wide)? Where should I store my **possessions**, like my car? Are there are authorities in my area sticking around (in case I need help)? What **services** are still up and running (e.g. police, fire)? If my home floods, where is the nearest **safe place**? Is there anyone around that needs **shelter**?

After

Where is everyone and what is their status? Where can I get **medical help**? What **pharmacies** are open? How do I care for the **sick or injured** if there aren't medical facilities near by? How can I alert the outside world to conditions in my area? What are the **announcements** by city/local officials? What **resources** does my community have so we can share? How to alert others to resources I've found? When will the national guard or police be here (for **safety**)? How **safe** are the conditions in my area? How do I keep my area **safe** from looters? When will **power** be back on in my area? Where in the area is there still power? Where is there **WiFi**? My home is destroyed - where can I find **shelter**? Where can I get a **hot shower**? Where can I find **ice** (to keep food fresh)? Where can I find **clean water**? What stores are open and what **supplies** do they have? Where can I get **food**? How do I keep my food supply safe (from **spoilage**, etc.)? Where can I wash my clothes? Where can I get cleaning supplies? Where can I get coupons for food, **basic necessities**? What is the **wait time** at stores and other service centers? Where can I go to get **donations** (clothes, etc.)?

Long After

Questions about **financial aid**? What are the **requirements** and **deadlines** for aid? What kind of aid can I **qualify** for? How can I dispute a **rejection** for aid? How can I keep track of where my **applications** stand? If I apply for one type, will I be **disqualified** for that? What financial help can get my **small business** up and running again? I've **lost important documents** in the storm. What are the steps to building a **new life elsewhere**? I need to **find a new job** or source of **income** since my job went with the storm. Where can I get **mental health** or spiritual help for **PTSD**? What are the steps in **rebuilding a damaged home**? Are there new construction regulations? Where can I find **reliable contractors** (who aren't out to **scam** me)? Where can I get **home repair supplies**? What **health issues** should I watch out for (bad water, chemicals in home)? How to deal with **toxins** in my home? Mold? Dead animals? Who in community has working resources (**washing machine**, car) to share? How to get the city to resume **services**, e.g. **garbage pick-up**? If services such as **schools** remain closed, where do I send my kids? How can I lobby for services such as **libraries** and schools to be rebuilt? Where can we get **fresh food** (especially if I have **no car**)? How do we keep our **neighborhood safe** from thieves? I was **robbed**/my place looted during the storm. How can I get my stuff replaced? How do I get around the city if **public transport is down** and I don't have a car?

What's happening?

How bad is the event?
What should I do now?
What roads are out?
What areas will get worse or better?

Where are the people I care about?

How do I contact them?
Where are they now?
Does anyone else know where they are?

Where are the resources I need?

I need shelter.
I need water, power, food, medicine.
I have resources; what can I do?
How can I volunteer?

Who creates useful information?

- Officials
- News & media
- Ordinary people



FEMA



International Federation
of Red Cross and Red Crescent Societies





FEMA



ALJAZEERA



International Federation
of Red Cross and Red Crescent Societies



REUTERS



Associated Press



ALJAZEERA

FEMA



International Federation of Red Cross and Red Crescent Societies



American Red Cross



REUTERS

Hurricane Sandy Gas Shortage



on The Hard Way

uters, Superstorm Sandy New York, Fuel
Gas Shortage, New York Oil Supply, New

Nov 27
he...



Hoards Fuel For

[Read More: Fuel Hoarding, Gas Hoarding, Hurricane Sandy Gas Shortage, Hurricane Sandy, Hurricane Sandy Nyc, Gas Station Hoarding, New York News](#)

JACKSON HEIGHTS -- A Queens gas station owned by a taxi tycoon is refusing to sell gas to anyone but yellow cabs -- with preferential treatment for hi...

[Read Whole Story](#)



LOOK: Major Gas Shortage Bring Insane 1970s-Style Lines At The Pump

The Huffington Post | Ryan Grenoble | Posted 11.09.2012 | Business

[Read More: New York Gas Shortage, 1970s Oil Crisis, Video, Opec, Hurricane Sandy, Hurricane-Sandy-Fuel-Shortage, Exposure, US Oil Embargo, Hurricane Sandy Gas Shortage, 1970s, Business News](#)

In our nation's Northeast, it's beginning to look a lot like Christmas the 1970s oil crisis. Thanks to the back-to-back struggles of Hurricane San...

[Read Whole Story](#)





NJ Office of Emergency Management

ALERTS & UPDATES

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NJOEM Alerts - Home
 NJOEM - READY.NJ.GOV
 Google Crisis Map - Sandy

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 NJ Office of Emergency Management
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LIST OF PHARMACIES, HOTELS, RESTAURANTS AND GAS STATIONS THAT ARE UP AND RUNNING

Scribd. Print Fullscreen

Type	Status	Address	City	State	Zip	Latitude	Longitude
Fuel	Up	WOODSTOWN AMOCO	Woodstown	NJ	8008	39.66465	-75.200329
Fuel	Up	CNTR SQUARE RD BP	Swedesboro	NJ	8005	39.74765	-75.310579
Fuel	Up	PAULSBORO AMOCO	Faulkboro	NJ	8066	39.83158	-75.241268
Fuel	Up	973 Memorial Pkwy.	Phillipsburg	NJ	8865	40.698764	-75.168434
Fuel	Up	342 Brooklawn Circle	Brooklawn	NJ	8030	39.89655	-75.120654
Fuel	Up	342 Brooklawn Circle	Brooklawn	NJ	8030	39.89655	-75.120654
Fuel	Up	1420 Admiral Wilson Boulevard	Camden	NJ	8109	39.941157	-75.104129
Fuel	Up	1420 Admiral Wilson Boulevard	Camden	NJ	8109	39.941135	-75.104062
Fuel	Up	PHILLIPSBURG BP	Phillipsburg	NJ	8865	40.779901	-75.100355
Fuel	Up	1295 Hurrtville Road	WOODBURY	NJ	8096	39.823578	-75.090275
Fuel	Up	1295 Hurrtville Road	Woodbury	NJ	8096	39.823578	-75.090275
Fuel	Up	Black Horse Pike and Kings Highway	Mount Ephraim	NJ	8059	39.8815	-75.086
Fuel	Up	MOUNT EPHRAIM AMOCO	Mount Ephraim	NJ	8059	39.87954	-75.085219
Fuel	Up	Black Horse Pike S&M Kings Highway	Mount Ephraim	NJ	8059	39.87954	-75.085219
Fuel	Up	SEWELL BP	Sewell	NJ	8080	39.743975	-75.083804
Fuel	Up	6807 Route 130 South	Pennsauken	NJ	8110	39.947702	-75.067507
Fuel	Up	6807 Route 130 South	Pennsauken	NJ	8110	39.947702	-75.067507
Fuel	Up	BLACKWOOD AMOCO	Blackwood	NJ	8012	39.80147	-75.066614
Fuel	Up	655 BUSINESS INC	Pennsauken	NJ	8110	39.95576	-75.058344
Fuel	Up	700 ROUTE 73 N	PALMYRA	NJ	8065	39.996483	-75.012616
Fuel	Up	CHERRY HILL BP	Cherry Hill	NJ	8002	39.9275	-75.030549
Fuel	Up	1212 KINGS HIGHWAY	CHERRY HILL	NJ	8034	39.919685	-75.004287
Fuel	Up	MAPLES SHADE BP	Maple Shade	NJ	8052	39.951302	-74.994308
Fuel	Up	BOWERS AMOCO	Cherry Hill	NJ	8003	39.88021	-74.987954
Fuel	Up	WILLIAMSTOWN AMOCO	Williamstown	NJ	8094	39.70694	-74.979394
Fuel	Up	323 State Route 31 S.	Washington	NJ	7882	40.778395	-74.978587
Fuel	Up	323 State Route 31 S.	Washington	NJ	7882	40.735315	-74.975596
Fuel	Up	238 ROUTE 31 NORTH	HAMPTON	NJ	8827	40.710771	-74.966686
Fuel	Up	MACS AMOCO	Dulran	NJ	8075	40.017361	-74.956429
Fuel	Up	JAMES LORINGER	Dolanco	NJ	8075	40.017375	-74.956409
Fuel	Up	1746 Route 31	Clinton	NJ	8809	40.6413	-74.9141
Fuel	Up	1746 Route 31 North	Clinton	NJ	8809	40.650904	-74.911205
Fuel	Up	MARLTON BP	Marlton	NJ	8053	39.88345	-74.908434
Fuel	Up	284 US HWY 202/31	FLEMINGTON	NJ	8822	40.498836	-74.856176
Fuel	Up	10 58 31	Hemington	NJ	8822	40.504895	-74.852339

Meta

Posted at 4:45 pm on Thu, Nov 1, 2012

Views (90831)

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Short URL

Tweet 1,655

Like 11k

Alert Systems

Nixle NJ Alert

Social Media

NJOEM Facebook

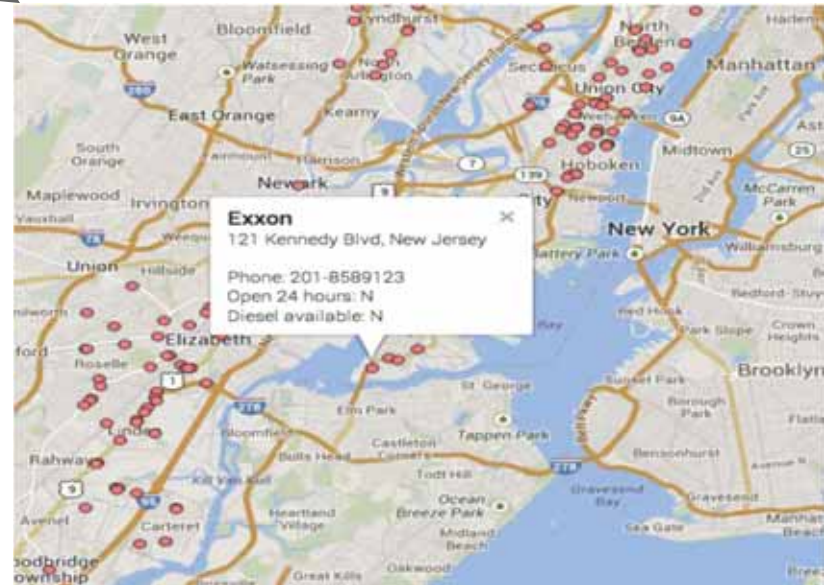
NJOEM Twitter

Hurricane Sandy Recovery Info

NJOEM Hurricane Sandy Recovery

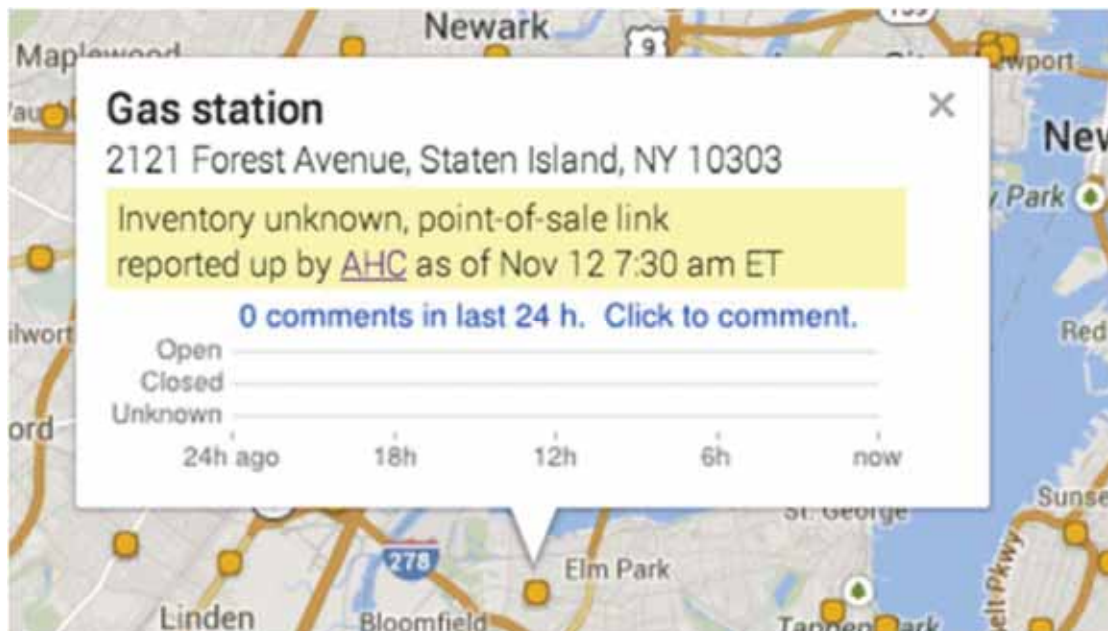


THE STATE OF NEW JERSEY
OFFICE OF HOMELAND SECURITY & PREPAREDNESS



NIMSAT
NATIONAL INCIDENT MANAGEMENT SYSTEMS
AND ADVANCED TECHNOLOGIES

Who creates useful information?



Gas stations

[Edit](#) · [Delete](#)

Legend

- Gas available
- Gas inventory low or uncertain
- Gas not available
- Gas not available (no power)
- Gas not available (no power, no gas)

NOTE: It is not possible to predict the rate at which inventories change. Click a station to see its last update time. Sources: [mapler.info](#) and [IMSOCIO](#); [GasBuddy](#); [AHC](#) data maintained by [NIMSAT](#). [Download KML](#).

Comments on Fuel, 4 NORTI x

crisismapfeedback.appspot.com/discuss/ahc.fuel.n40.7726w073.7336

Comments on Fuel, 4 NORTHERN BLVD, Great Neck, NY

All comments are public and cannot be deleted. Google does not review or verify comments.

This store / facility is:

Unknown Open / in service Closed / not in service

18 d ago: [open](#)

Just filled up there. All types of gas available. They accept credit cards. They are not price gouging. Wait time was about 40 minutes. Car line started at Northern Boulevard and Buttonwood, R on Pembroke, R again on Glenwood, and R into the station. They are well-organized. There was a walk up line that looked to be about 15-20 people long. Don't know how long they waited.

22 d ago: [open](#)

It's open for business.

[Google.org](#) · [Privacy](#) · [Terms of Service](#)

Find it

Map Satellite Hybrid Terrain



DESCRIPTION

IMSOCIO Contact
<http://www.imsocio.org>
 Mapper Contact: 732 418 9135
 E-mail: imsociofhs@gmail.com
 Twitter: <http://www.twitter.com/imsocio2012>
 Facebook:
<http://www.facebook.com/groups/findgasstations>
To Add/Update Data
 please click following Link
<http://www.mappler.info/gashelper>

CATEGORY

- Open
- Sold Out
- Charging Station
- No Power
- No Power with GAS
- Unknown

Recent feedback from Google Crisis map

- open
- closed
- unknown



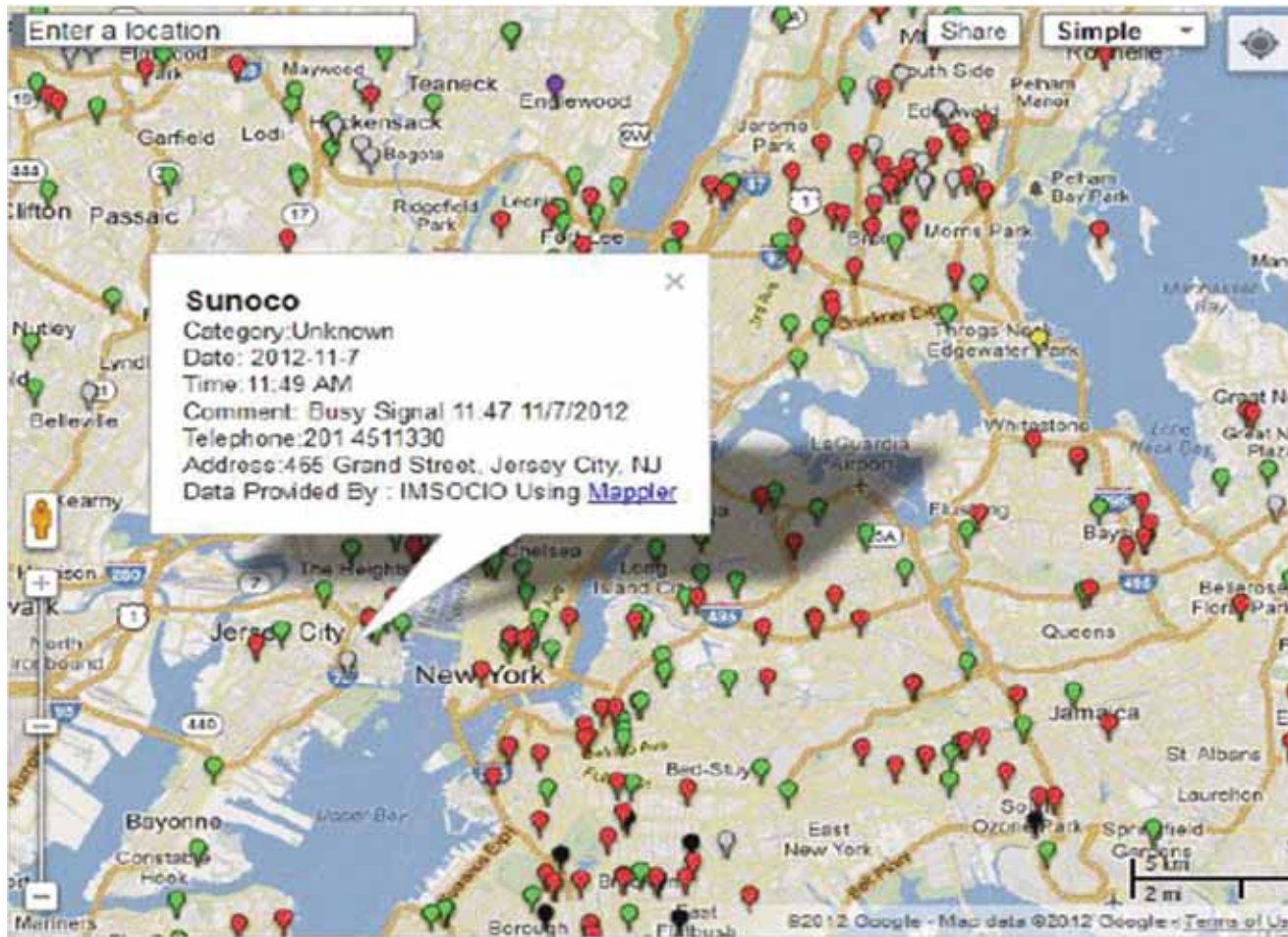
Map data ©2013 Google - Terms of Use



mappler.net/gasstation



Photo courtesy of Dayana Bustamante, nbclatino.com



Sunoco
 Category: Unknown
 Date: 2012-11-7
 Time: 11:49 AM
 Comment: Busy Signal 11:47 11/7/2012
 Telephone: 201 4511330
 Address: 466 Grand Street, Jersey City, NJ
 Data Provided By: IMSOCIO Using [Mappler](#)

Superstorm Sandy: NYC

Sandy was a major storm that caused extensive flooding, physical damage, power and transportation outages, and fatalities in NY and much of the US East coast.

- Latest alerts, NYC Emergency Mgmt
- City of New York on Twitter
- NYC Emergency Mgmt on Facebook
- WNYC Transit Tracker
- NYC gov information including volunteering and school status

How are you using CrisisMap? [Tell us](#)

[Reset to default view](#)

- Pharmacies, restaurants, hotels
- Gas stations

Mappler gas station status

Zoom to area

Legend

- Open
- Sold out
- Charging Station
- No power
- No power with gas
- Unknown

Crowd-sourced mapping of gas station status. Source: [mappler.info](#) and [IMSOCIO](#)

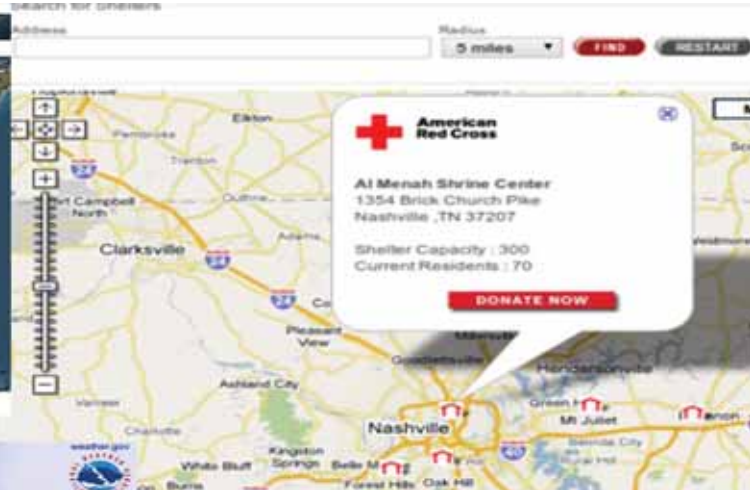
- Hess fuel inventory

[Full map](#). How are you using this map? [Tell us](#).
 © Google - [Google.org Crisis Response](#) - [About this map](#)

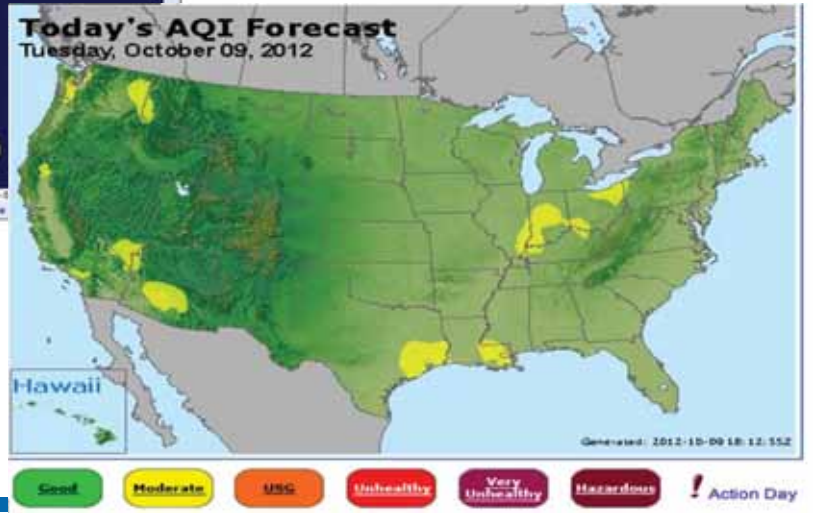
Simple

Standard

Open



NATIONAL WEATHER SERVICE
Significant River Flood Outlook
Click a region on the national map below to access more detailed RFC data.





National Weather Service National Hurricane Center



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Last update Tue, 9 Oct 2012 18:05:46 UTC

- Last NHC advisory issued on OLIVIA
- Read the October issue of the Q&A with NHC from the monthly series
- National Hurricane Center's views on the use of scales to communicate the storm surge hazard (PDF)

[Eastern Pacific](#)

[Atlantic](#)



[Graphical Tropical Weather Outlook](#) | [Active Storms](#) | [Marine Forecasts](#)



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Name	Provider	Metadata	Preview	Shapefile	Map	KMZ	WMS	geoRSS/ Excel
Current Disaster Declarations	FEMA GIS	Metadata	View	shp	Map	KMZ	WMS	geoRSS
Historical Disaster Declarations	FEMA GIS	Metadata	View	shp	1964- 2012 2000- 2012	KMZ	WMS	xlsx
FEMA Regions and Offices	FEMA GIS	Metadata	View	shp	Map	KMZ	WMS	
Hurricane Evacuation Routes	HSIP Gold '11	Metadata	View	shp	Map	KMZ	WMS	





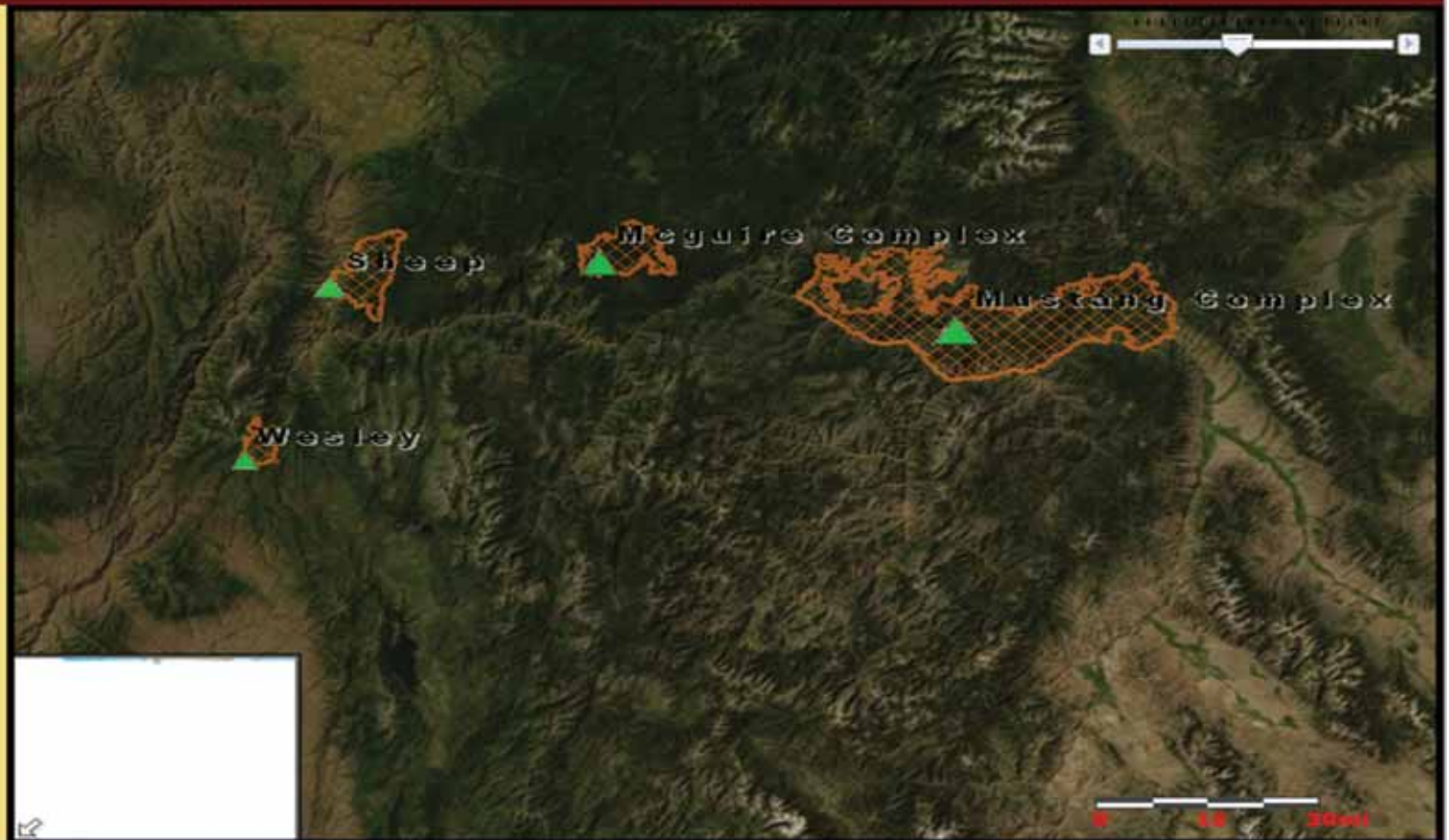
Map Layers

Dynamic Data

- ▶ Active Fires
- ▶ Past Fires
- ▶ Boundaries
- ▶ Climate Prediction

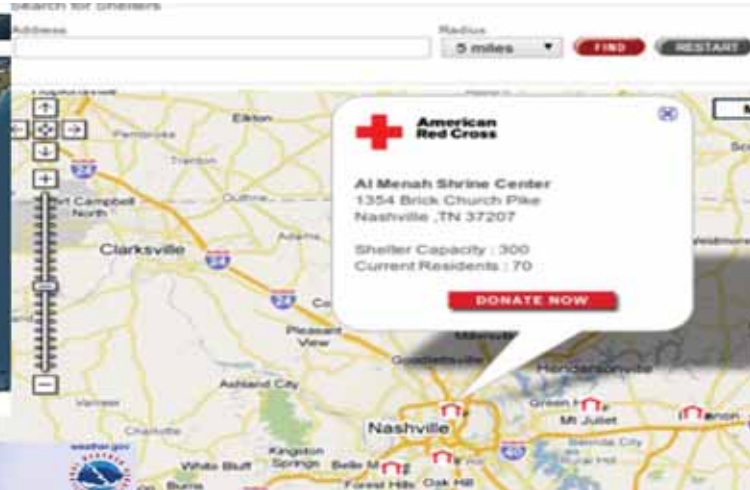
Base Maps

- ▶ Base Data

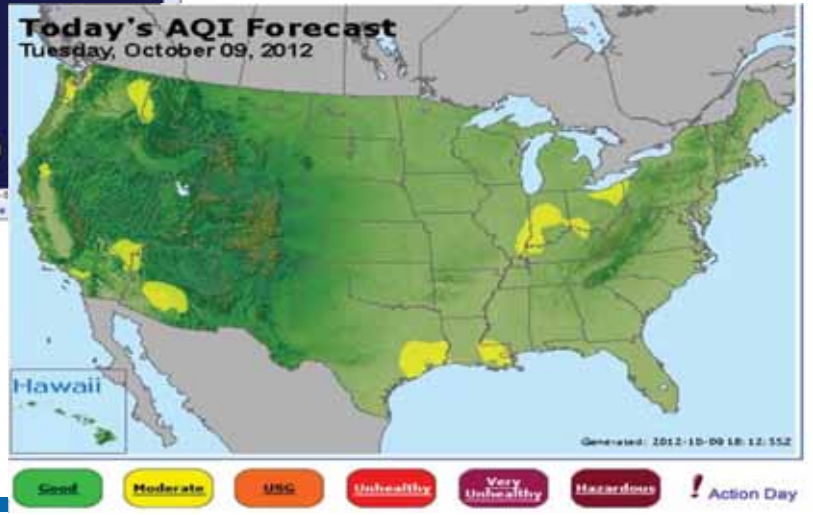


Latitude: 46.24, Longitude: -117.11 Scale: 1 : 2,311,162

Thermal MODIS 2012-10-09 451 (MDT); HMS 2012-10-09 745 (GMT); Fire Perimeters 2012-10-09; Sit Reports 2012-10-08



NATIONAL WEATHER SERVICE
Significant River Flood Outlook
Click a region on the national map below to access more detailed RFC data.



Search for Shelters

Address

Radius

5 miles

FIND

RESTART

The map displays the Nashville, Tennessee area with various shelter locations marked by red house icons. A detailed popup window for the AI Menah Shrine Center is shown, providing the following information:

- American Red Cross**
- AI Menah Shrine Center**
- 1354 Brick Church Pike
- Nashville ,TN 37207
- Shelter Capacity : 300
- Current Residents : 70
- DONATE NOW**

The map includes navigation controls on the left side and a 'Map' button in the top right corner. Major highways like I-24 and I-40 are visible.

1

Good maps are hard to find.

2

Map viewers vary in quality.

3

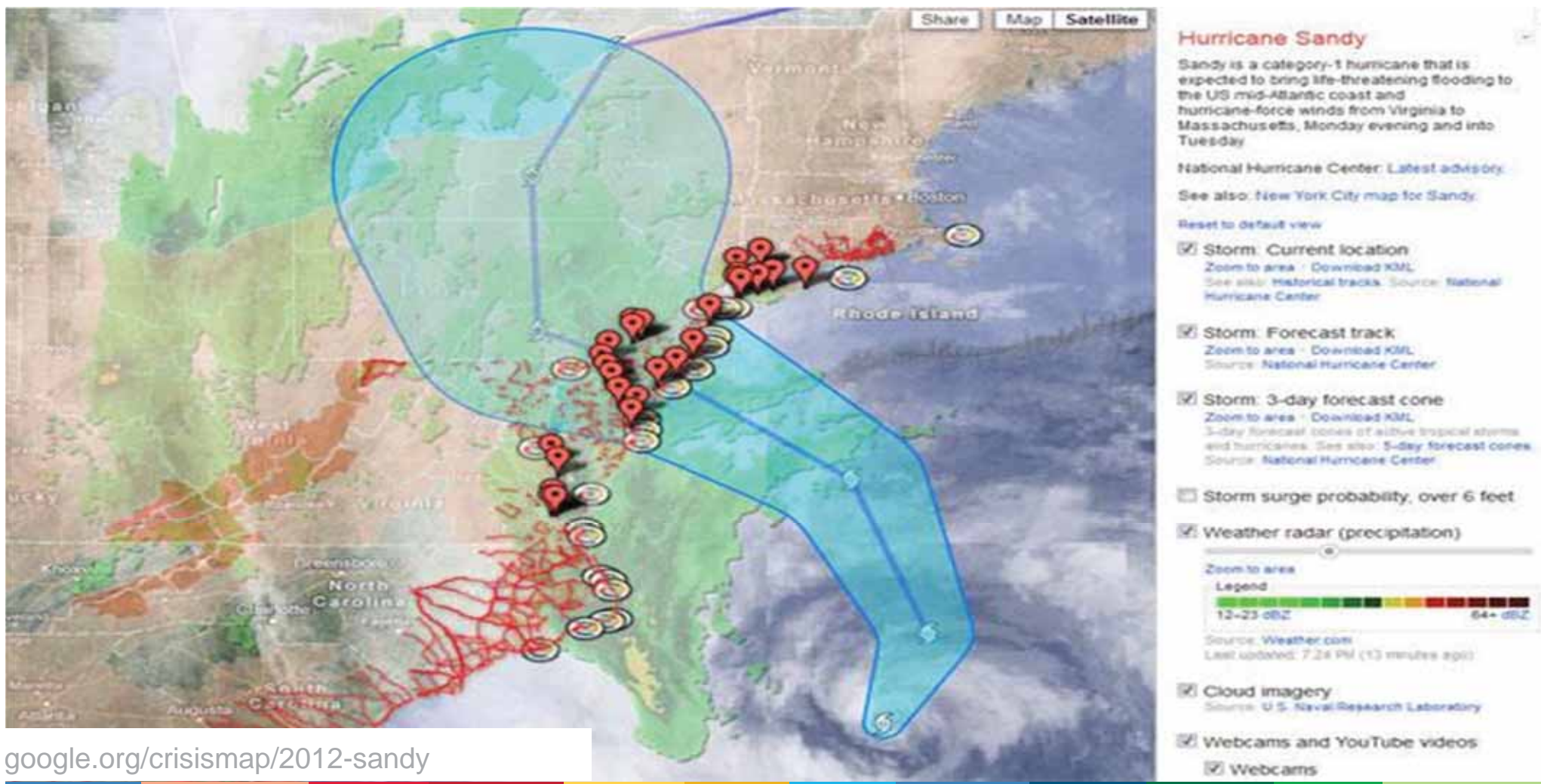
Data is isolated; no context.



Slide 52

- 2 map viewers are weak? This slide's language needs to be softened w /more context
Kate Parker,
- 3 +pcoakley@google.com
Alice Bonhomme-Biais,
- 2 Thanks Kate, I guess that is a bit negative. How about "Map viewers vary in quality"?
Phil Coakley,

Google Crisis Map



google.org/crisismap/2012-sandy

Sandy / NYC



google.org/crisismap/2012-sandy-nyc

Hurricane Sandy: NYC

Sandy is expected to bring life-threatening storm surge flooding to the mid-Atlantic coast, Monday evening and into Tuesday.

- Latest alerts, NYC Emergency Mgmt
- City of New York on Twitter
- NYC Emergency Mgmt on Facebook
- WNYC Transit Tracker
- National Hurricane Center advisories
- ready.gov: Preparing for a hurricane

[Reset to default view](#)

Evacuation zones

[Zoom to area](#) - [View data](#)

Legend

- A: Flood risk from any hurricane near NY
- B: Flood risk from a Category 2+ hurricane
- C: Flood risk from a Category 3+ hurricane

MANDATORY EVACUATION ordered for Zone A: see NYC website

Source: NYC OpenData

Evacuation centers

[Zoom to area](#) - [View data](#)

Recovery: Where's the damage? Where can I help?

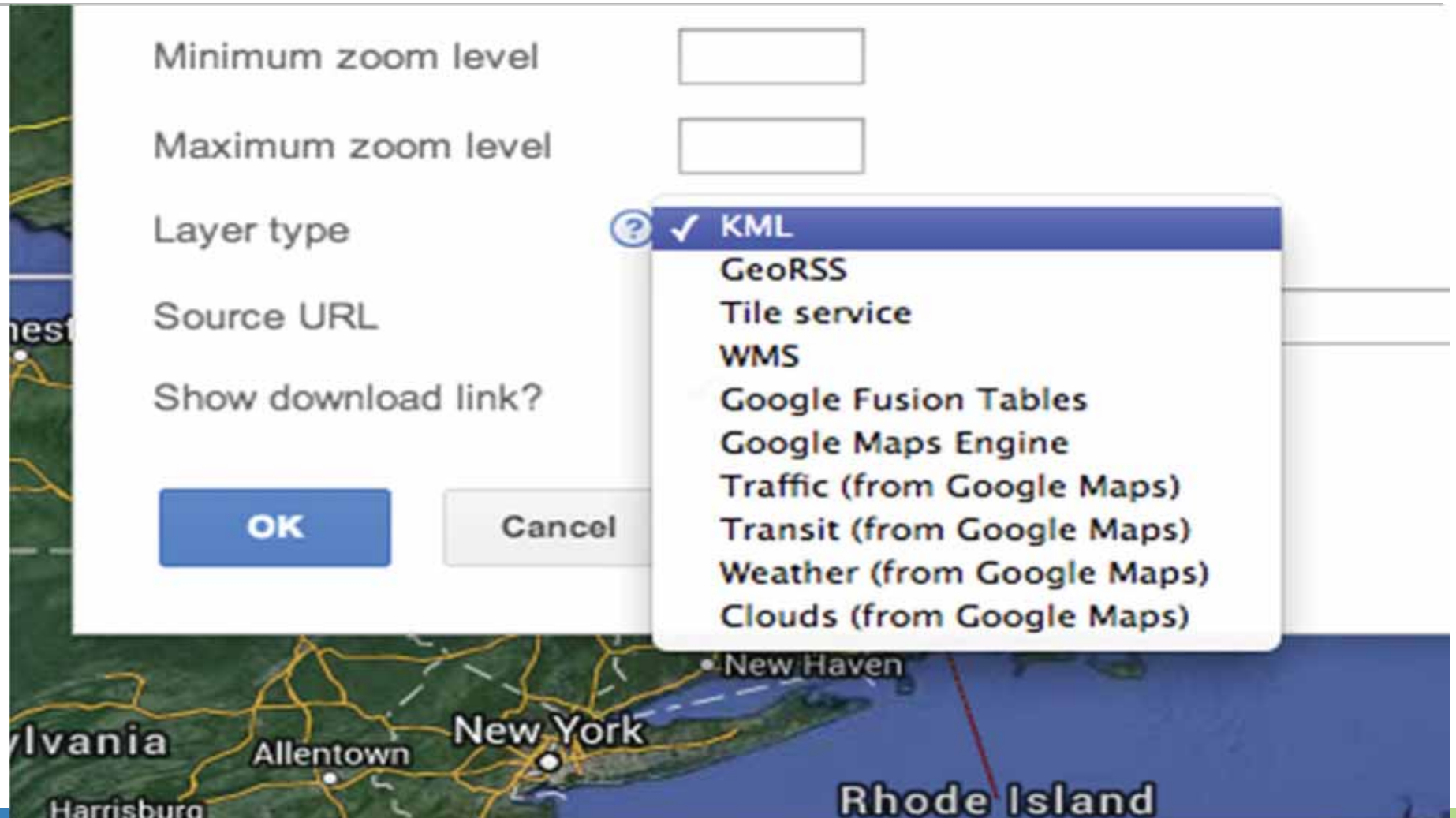


Google Crisis Map

- Explore map data in the context of other map data
- Built on Google App Engine, Maps API JavaScript, Closure JavaScript library
- Embeddable on other sites
- Mobile-friendly
- Open sourced at code.google.com/p/stratomap
- Supports standard data formats: KML, GeoRSS, image tiles, WMS, ...



Geo Data Formats



Sendai Earthquake & Tsunami

March 11, 2011

[Person Finder \(消息情報\): 2011 東日本大震災](#)

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どちらかを選択してください。

[人を探している](#)

[消息情報を提供する](#)

現在、およそ 615600 件の記録が登録されています。

短縮 URL : <http://goo.gl/sagas> (携帯対応)
[情報提供元](#) (NHK 安否情報も含みます)
[災害に関する情報](#)

注: 入力したデータはすべて公開され、誰でも表示、使用できる状態になります。また、消息データには、直接、ユーザーがパーソンファインダーに入力した情報のほか、公開された情報その他の情報源に基づき入力された情報が含まれています。Google では、これらのデータの正確性の確認は実施しておりません。

[このツールを自分のサイトに埋め込む - デベロッパー](#) - [利用規約](#)

powered by 

Person Finder: [Earthquake](#)

[I'm looking for someone](#)

[I have information about someone](#)

PLEASE NOTE: On active Person Finder sites, all data entered is available to the public and usable by anyone. Google does not review or verify the accuracy of this data.

[About Google Person Finder](#) · [Developers](#) · [Terms of Service](#)

powered by **Google**

google.org/personfinder

code.google.com/googlepersonfinder

Person Finder Design Principles

- Convergence: bring data together from disparate systems and sources
- Data must be traceable: avoid unknown reliability and accountability
- No central authority: each aggregator chooses which data sources to trust
- Duplicates are allowed: records can be linked, but each aggregator decides how

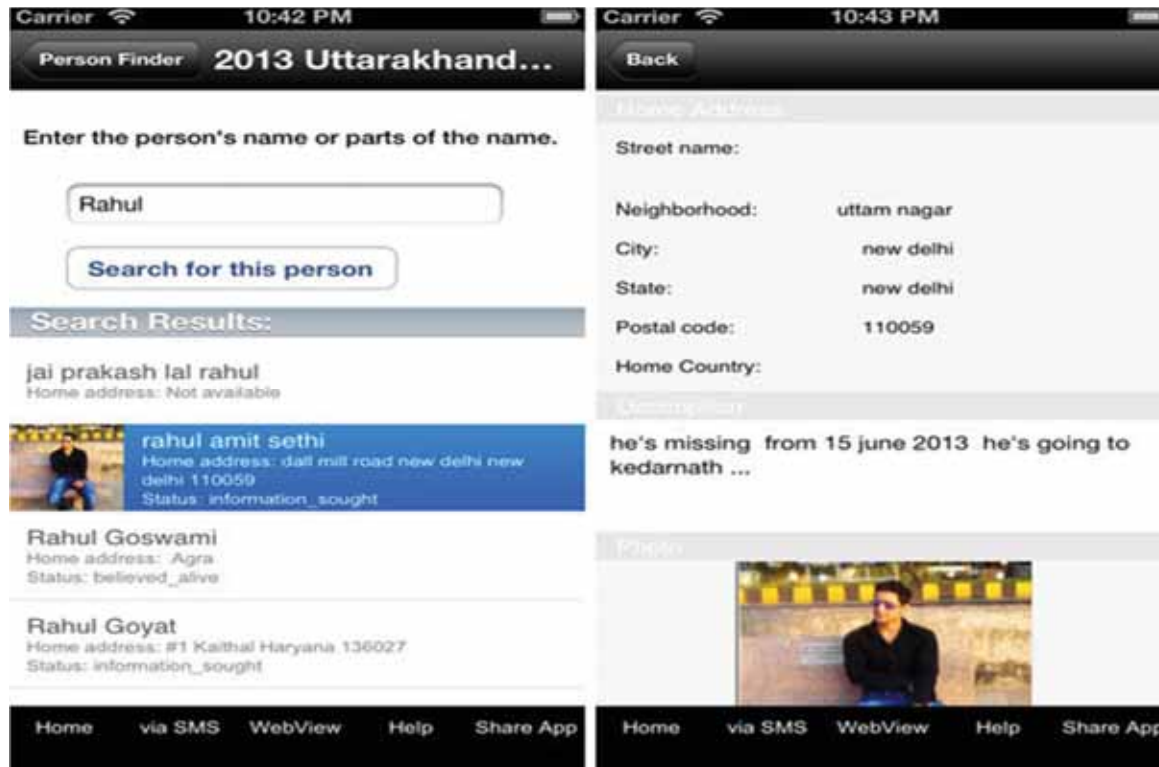
Uttarakhand Floods, June 2013

Date: 22-06-2013

Name	Gender	Age	Notes
01			आने वाले राती / हाथल राखिका नाम परे
01			रमाका राती w/o कुटुम्बे रहे (बेताल अज्ञानीय नए-मानिकी जिन) ज्ञानीय
			01
			01
			01
			01

Add Row | Remove Row | Submit

Uttarakhand Floods, June 2013



END