

Social Media for Natural Disaster Response and Recovery

What is Social Media?

"Social media is an innovative way of socializing where we engage in an open dialogue, tell our stories and interact with one another using online platforms." (Associated Press, 2010)

Social Media for Natural Disaster Response and Recovery

Attributes and Objectives of Social Media

Get message out faster	Reach more people through another communication channel	Arguably relatively low operating costs
Reach people via mobile communication device	Instant, highly scalable form of communication	Direct from the source

Social Media for Natural Disaster Response and Recovery

Maximize Reach with Social Media

Channel

People reached

Cannot reach everyone with social media, but should be used **together** with other channels of communication to **maximize** reach within the community.

Social Media for Natural Disaster Response and Recovery

Who Uses Social Media?

- **73%** of adult internet users use social networking sites (Pew Research Center, 2013)
- **74%** of people with disabilities use social media (Wireless RERC, 2013)
- **98%** of states use social media to disseminate emergency information (Wireless RERC, 2013)

Social Media for Natural Disaster Response and Recovery

Increasing Usage From All Ages

Social networking site use by age group, 2005-2012
% of internet users in each age group who use social networking sites

Age Group	2005	2006	2008	Apr-09	May-10	Aug-11	Feb-12	Aug-12	Dec-12	May-13
All internet users	10%	15%	35%	45%	55%	65%	70%	75%	78%	80%
18-29	15%	25%	55%	65%	75%	80%	85%	88%	90%	92%
30-49	5%	10%	30%	40%	50%	60%	65%	70%	72%	75%
50-64	2%	5%	15%	25%	35%	45%	50%	55%	58%	60%
65+	1%	2%	5%	10%	15%	20%	25%	30%	35%	40%

The fastest growing social media user group = **Baby Boomers**

Source: Pew Internet Survey, 2013

Social Media for Natural Disaster Response and Recovery

Social Media Applications

Social Media for Natural Disaster Response and Recovery

Facebook

- Started in 2004
- Social networking site
- 1.23B+ active users
 - Approximately 20% from U.S. (Dec. 2013)



Social Media for Natural Disaster Response and Recovery

Twitter

- Started in 2006
- Microblogging and social networking service
- 140 character limit
- 240M+ active users, 500M tweets a day (Dec. 2013)



Social Media for Natural Disaster Response and Recovery

YouTube

- Launched in 2005
- Watch and share originally-created videos
- Over 3 billion videos viewed a day
- More video is uploaded to YouTube in one month than the 3 major U.S. networks created in 60 years



Social Media for Natural Disaster Response and Recovery

Vine

- Launched in January 2013 by Twitter
- 6-second, looping video sharing app
- 40M+ users (Aug 2013)



©Twitter

Social Media for Natural Disaster Response and Recovery

Instagram

- Founded in 2010
- Mobile application for sharing photos
- 2 million users within first 3 months
 - 150 million users (Dec. 2013)
- 55M photos uploaded daily (Dec. 2013)



Social Media for Natural Disaster Response and Recovery

TwitPic

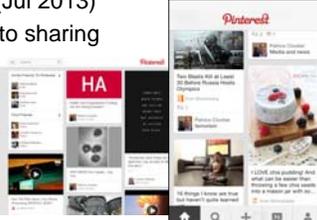
- Launched in 2008
- Share pictures and videos instantly



Social Media for Natural Disaster Response and Recovery

Pinterest

- Launched in March 2010
- 70M+ active users (Jul 2013)
- Pin-board style photo sharing
- Users can browse boards, "re-pin" content
- 80% of total pins are repins (SocialMediaToday, 2013)



Social Media for Natural Disaster Response and Recovery

Google+

- Launched June 2011
- Certain growth through integrated login and features
- 540M+ active users (Oct. 2013)



Social Media for Natural Disaster Response and Recovery

Challenges of Social Media and Public Information

People expect 2-way conversations	Set expectations if communications will not be interactive
Considerations must be made to reach vulnerable populations	Connect with organizations that communicate directly with vulnerable populations
Inaccurate information can spread quickly on social media	Link back to official sources of information
Difficult to reach population not connected to social media	Social media is used as an additional tool to supplement traditional channels of communication

Social Media for Natural Disaster Response and Recovery

How is Social Media Used in Disaster Management?

- Prepare public for emergencies
- Monitor for help needed
- Alert and warn public
- Keep public updated with news and information
- User feedback via messages, wall posts, polls, etc.
- Relief and recovery efforts
- Data Collection

Social Media for Natural Disaster Response and Recovery

Monitoring on Twitter: Hawaii Tsunami Warning

- 1) Ginafortillas tweets message:
- 2) Tinamahina re-tweets message @HI_CivilDefense:
- 3) HI_CivilDefense gets tweet and replies to both tweeters:



- Hawaii Civil Defense on Twitter

Social Media for Natural Disaster Response and Recovery

Integrated Approach

- Based on communications strategy
- Closely engages with key government agencies, partners, and community
- Uses interagency coordination to provide regular content to City and County Facebook pages
- Promotes agency personality through branding and photos



Social Media for Natural Disaster Response and Recovery

Response

San Francisco Department of Emergency Management

THE PREPAREDNESS MOVEMENT COMMUNICATIONS STRATEGY

SFDEM BLOG

The Earthquakes' Call to Action

Social Media for Natural Disaster Response and Recovery

Smart Phone Application SF Heroes

- Leverages social reward mechanisms
- Inspires preparedness by tying rewards and social incentives to meaningful real-life activities.
- Educates and motivates public preparedness
- Connects with Facebook, Twitter, other social media

Social Media for Natural Disaster Response and Recovery

Twitter Alerts

Ways you can receive Alerts

- Highlighted Tweet
- Text Message
- App Notification

During a crisis or emergency, FEMA will send you Twitter Alerts.

Alerts from FEMA will be updated with time-sensitive, critical information related to the unfolding event.

With Twitter Alerts activated, it's easier to get essential information when you need it.

Activate Alerts from @fema

©Twitter

- All public safety organizations can apply for Twitter Alerts: <http://about.twitter.com/products/alerts/enroll>

Social Media for Natural Disaster Response and Recovery

Recovery Efforts for Washoe Drive Fire

Social Media for Natural Disaster Response and Recovery

A Case Study in the Use of Social Media Throughout the Disaster Management Cycle

2011 Hurricane Irene

- Made landfall in Puerto Rico, North Carolina, New Jersey
- Severe damage and flooding in New Jersey and Vermont

Social Media for Natural Disaster Response and Recovery

Department of Homeland Security on Twitter

4,682 TWEETS | 298 FOLLOWING | 326,990 FOLLOWERS

Social Media for Natural Disaster Response and Recovery

Vermont Emergency Management Alerts, Updates on Twitter and Facebook

Vermont Emergency Management
Dorset has shelters open at the Dorset School and Summit hotel at Mt. Snow.
August 29 at 4:35am

Vermont Emergency Management
Town of Jamaica just opened a shelter at the Masonic Hall on Rt 30 in Jamaica.
August 29 at 4:35am

Vermont Emergency Management
Update for Saturday afternoon: Governor declares state of emergency - allows National Guard to assist in storm response. Wind gusts still expected to hit 40 Sunday into Monday. Flooding expected to be biggest threat - be safe!
August 27 at 9:47am

Vermont Emergency Management
Dorset has shelters open at the Dorset School and Summit hotel at Mt. Snow.
August 29 at 4:35am

Vermont Emergency Management
Town of Jamaica just opened a shelter at the Masonic Hall on Rt 30 in Jamaica.
August 29 at 4:35am

Vermont Emergency Management
Update for Saturday afternoon: Governor declares state of emergency - allows National Guard to assist in storm response. Wind gusts still expected to hit 40 Sunday into Monday. Flooding expected to be biggest threat - be safe!
August 27 at 9:47am

Vermont Emergency Management on Twitter

Vermont Emergency Management on Facebook

Social Media for Natural Disaster Response and Recovery

City of Trenton, New Jersey Information Exchange via Facebook

City of Trenton
639 likes

Social Media for Natural Disaster Response and Recovery

National Hurricane Center on Facebook and Twitter

Nat'l Hurricane Ctr
111,149 likes

Posted information and updates for public about Hurricane Irene's path

Social Media for Natural Disaster Response and Recovery

Red Cross Engages with Community via Facebook

American Red Cross
Here's the Spin (8.24.11) update on Hurricane Irene from the National Hurricane Center. Are you prepared? Check www.redcross.org to find out.

American Red Cross
Need to find a Red Cross shelter? Join the more than 120 who have already downloaded our free shelter app from iTunes, iPod touch, and iPad on the iTunes App Store.

Provide update about disaster

Provide relief assistance, shelter app helps people find shelter

Social Media for Natural Disaster Response and Recovery

Citizens Communicate with Each Other via Red Cross's Page

Lacy Bright Cosme excuse me but where is the red cross in waterbury, ct? We have no power and would love a hot coffee, hot meal or something, haven't seen any at all
August 29 at 5:56pm · x3 1 person

Stacy Anastasia Gibson (@Lacy...sounds like (you all) need to get together and assist (each) other. Make a campfire and cook something up that way. Those who complain, get nothing in return. Get UP and do something YOUrself!!!
August 29 at 7:08pm · x2 2 people

Jo Ann Cooper Troupe thats to bad as red cross is usually more on the spots where they are needed. wished i was closer to make you a meal and some hot coffee i would.
August 29 at 7:50pm · x1 1 person

Carrel Clawson Trahan @Lacy... do not work for the Red Cross, but I live in a state that has power so I looked up some info for you. There is a Center at 64 Holmes Ave in Waterbury, Pk. 203-755-1137 or one at 228 Meadow St., no Pk. listed. I am assuming that you used your phone to post to FB, so you should be able to call for assistance. Good luck!
August 29 at 8:37pm · x2 2 people

Social Media for Natural Disaster Response and Recovery

Weather Channel on Twitter and Facebook

The Weather Channel and weather.com
612,139 likes

Social Media for Natural Disaster Response and Recovery

Wells Fargo Communicates with Customers



Tweets from Wells Fargo Twitter page



Updates on Wells Fargo Facebook page

3-36

Social Media for Natural Disaster Response and Recovery

Significant Trends for Use in Disaster Management

- Redefining risk and crisis communications
- Expanding role of citizen journalism
- Enabling geographically-targeted alerts and notifications
- Using *crowdsourced* data
- Spawning Volunteer Technical Communities (VTC)
- Empowering rapid data visualization

3-36

Social Media for Natural Disaster Response and Recovery

Sandy: By the Numbers

- 10 Instagram photos per second (at peak)
- Top-shared terms on Facebook
 - “We are ok”
 - “Power” –lost power, have power, no power
 - “Damage”
 - “Hope everyone is ok”
 - “Trees”
- 20M+ tweets sent between Oct. 27-Nov. 1

3-37

Social Media for Natural Disaster Response and Recovery

Managing Expectations

- Broadcast role
 - Manage presence on social media platforms
 - Work within guidelines of published communication plan
- Interactive role
 - Monitor and respond to emergency requests
 - 76% of people expect help to arrive within 3 hours of posting to social media (Red Cross survey, 2010)

4-7

Social Media for Natural Disaster Response and Recovery

Establishing Online Identity

Visual signature

Organizational personality

“Voice”

Consistency

4-10

Social Media for Natural Disaster Response and Recovery

Misinformation and Corrections

Monitor

Quickly correct

State and explain

Alert command

Viral reality

Recognition

4-10

Social Media for Natural Disaster Response and Recovery

Building Credibility

- Build a reputation
- Create a Presence
- Stay Involved and Current with Information
- Provide access to first source of information

Social Media for Natural Disaster Response and Recovery

Facebook Structure

Social Media for Natural Disaster Response and Recovery

Facebook Pages

- Other users can become Fans and “Like” your Page
- Limited access to individual profile pages on your Organization Page
- Allows the ability to invite Friends

Social Media for Natural Disaster Response and Recovery

Why Create a Facebook Page?

- Can maintain a Fans list
- Update your status and broadcast messages (which gets shared with your Fans)
- Interact with the public via your Page
- Share pictures, videos, discussion board, application, wall posts, and groups

Social Media for Natural Disaster Response and Recovery

Twitter Earthquake Map

Social Media for Natural Disaster Response and Recovery

Using Twitter

- Simple, open, fast, searchable, topic-based platform
- Uses short messages: 140-character limit
- Enables following other users’ messages
- Enables building a following: Have other people follow you
- Send direct private messages
- Can repost other users’ public messages
- Can reply to a public or private message
- Can create a specific event using a hashtag (#)

Social Media for Natural Disaster Response and Recovery

What are Hashtags (“#” symbols)?

- Community-driven convention for adding additional context
- Used to **categorize** tweets according to a specific keyword or topic
- Anyone can create a hashtag
- Can occur anywhere in the Tweet
- Used before relevant keywords in their Tweet

TWCBreaking (TWCB) Breaking
New storms warning for Coosa and now Tallapoosa Co., AL. TAKE COVER in Kelliston, Alexander City! [wchh.nwlp.org](#)
#storm
13 Nov
Retweeted by PostNews

gaham2 (gaham2) Great Case Study of Queensland Police & Social Media #SMEU
[police.qld.gov.au/resources/info](#)
11 Nov
Retweeted by gaham2

Social Media for Natural Disaster Response and Recovery

Hashtags: Typhoon Haiyan in November 2013

Social Media for Natural Disaster Response and Recovery

Tools to Research on Twitter

- Trendsmap
– <http://trendsmap.com>
- Twitterfall
– <http://twitterfall.com>
- Klout
– <http://klout.com>

Social Media for Natural Disaster Response and Recovery

Advanced Twitter Search

Social Media for Natural Disaster Response and Recovery

Hootsuite & TweetDeck

Social Media for Natural Disaster Response and Recovery

Crowdsourcing

Volunteer Technical Communities

Social Media for Natural Disaster Response and Recovery

VTC Examples

- Crisis Mappers
- Crisis Commons
- Humanity Road
- Virtual Operations Support Teams

VOST
CRISIS mappers
CrisisCommons
HR HUMANITY ROAD

7-5

Social Media for Natural Disaster Response and Recovery

Virtual Operations Support Teams #VOST

- Social media monitoring, curation, and engagement on large-scale
- Globalized teams of trusted agents provide support to emergency managers and EOC personnel
- Force multiplier for small agencies and/or agencies with limited resources/capabilities

7-6

Social Media for Natural Disaster Response and Recovery

VTC Case Study: Crisis Mappers

The world's largest crisis mapping hub

Leveraging mobile platforms, computational linguistics, geospatial technologies, and visual analytics to power rapid crisis response

The Network catalyzes communication and collaboration between and among crisis mappers with the purpose of **advancing** the study and application of **crisis mapping** worldwide.

Launched in 2009

<http://crisismappers.net/>

Accessed in 191 countries

7-7

Social Media for Natural Disaster Response and Recovery

Social Media Reporting and Monitoring

Ushahidi Open Source software to collect, visualize and map data (reports)

CROWDMAP Free, hosted, Ushahidi

SwiftRiver Platform to help filter and make sense of information. Works with Ushahidi

7-8

Social Media for Natural Disaster Response and Recovery

Example Implementations

<http://oilspill.labucketbrigade.org/>

Oil Spill Crisis Map

7-11

Social Media for Natural Disaster Response and Recovery

Example Implementations (cont.)

<http://vtirene.crowdmap.com/>

VTirene Crowdmap

7-12

Social Media for Natural Disaster Response and Recovery

Example Implementations (cont.)

<http://stlouistornado.crowdmap.com/>

7-13

Social Media for Natural Disaster Response and Recovery

FEMA Smart Phone App "Disaster Reporter" Feature

- Take and submit GPS photo reports
- Displayed on public map

• <http://www.fema.gov/disaster-reporter>

7-14

Social Media for Natural Disaster Response and Recovery

Thank You!

828 Fort Street Mall • Suite 320
Honolulu, Hawaii 96813
Phone: 808.956.0600 Fax: 808.536.9110
website: ndptc.hawaii.edu

8-9