



Plenary Presentation: Esri's Public Safety Assistance Program— How We Can Help You

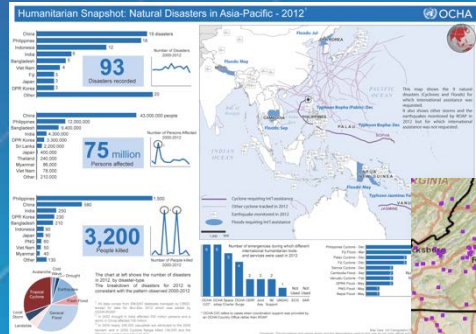
Chris McIntosh, Esri

Jon Pedder, Esri

Desiree Kocis, GIS Coordinator, Massachusetts Emergency Management Agency

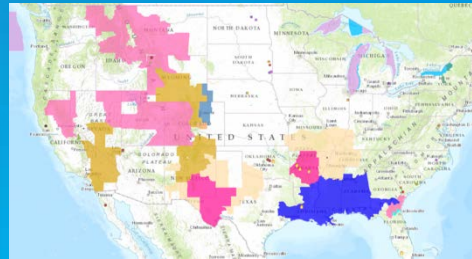
Planning for and Managing Emergencies (Incidents)

Asia-Pacific Natural Disasters



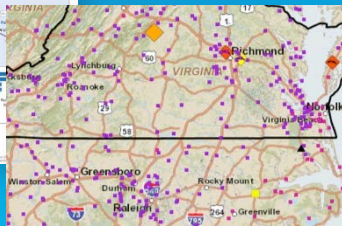
Asia Pacific Region

Interior Geospatial Emergency Management



U.S. Department of the Interior USGS

Hazard Map



VDEM

Documenting Storm Damage



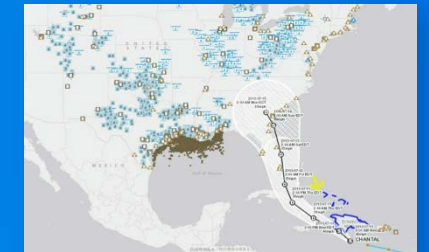
U.S. Department of the Interior / Urban Forestry Administration, Washington, DC

Risks from Sea Level Rise



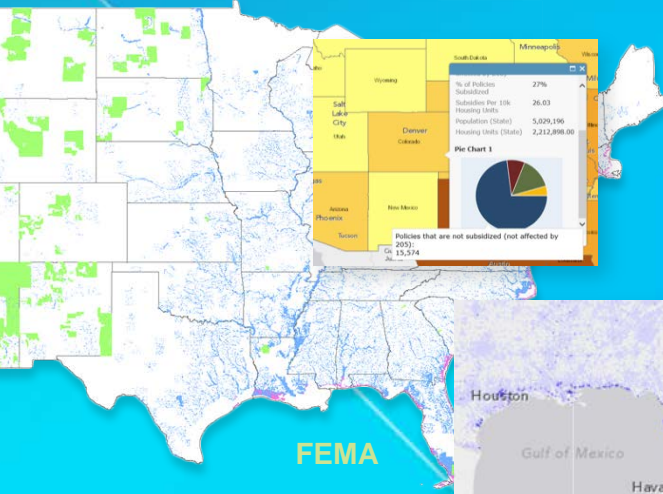
New York City, Jersey City

Storm Threat to Energy Infrastructure



U.S. Energy Information Administration

Flood Planning



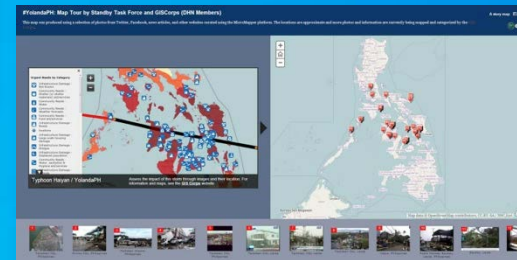
FEMA

Posted Warnings



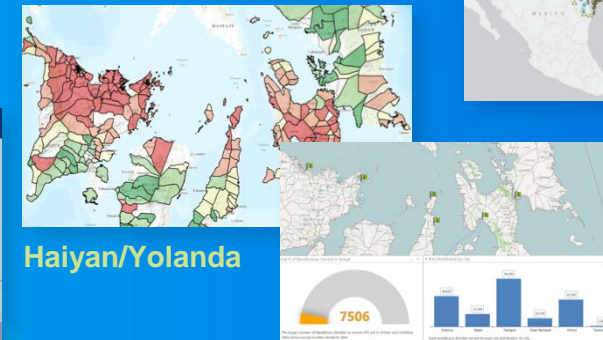
National Weather Service

Typhoon Damage Assessment



Standby Task Force / GIS Corps

Typhoon Response

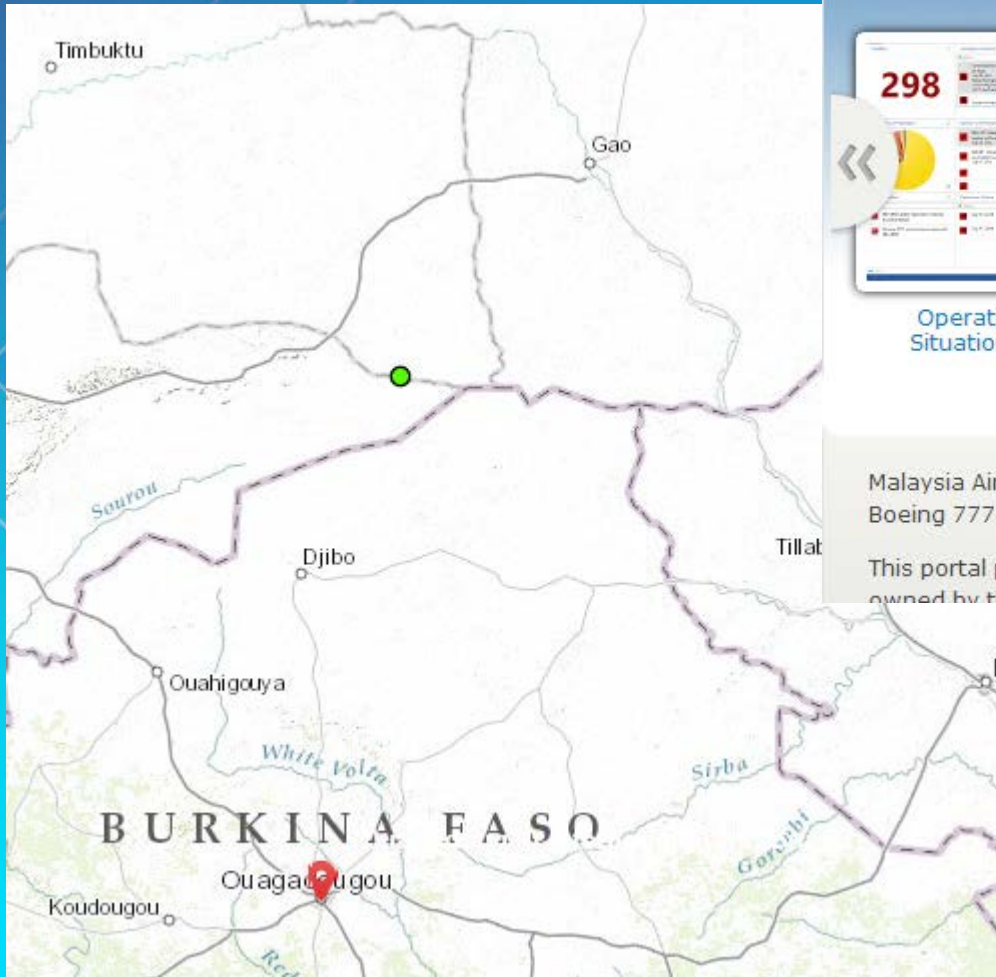


Haiyan/Yolanda

World Vision

Esri Response: Disasters in 2014

MH-17 – Last day of UC 2014



Operations View and Situational Awareness

Social Media and Languages Spoken

Malaysian Airlines flight MH17 Tracking

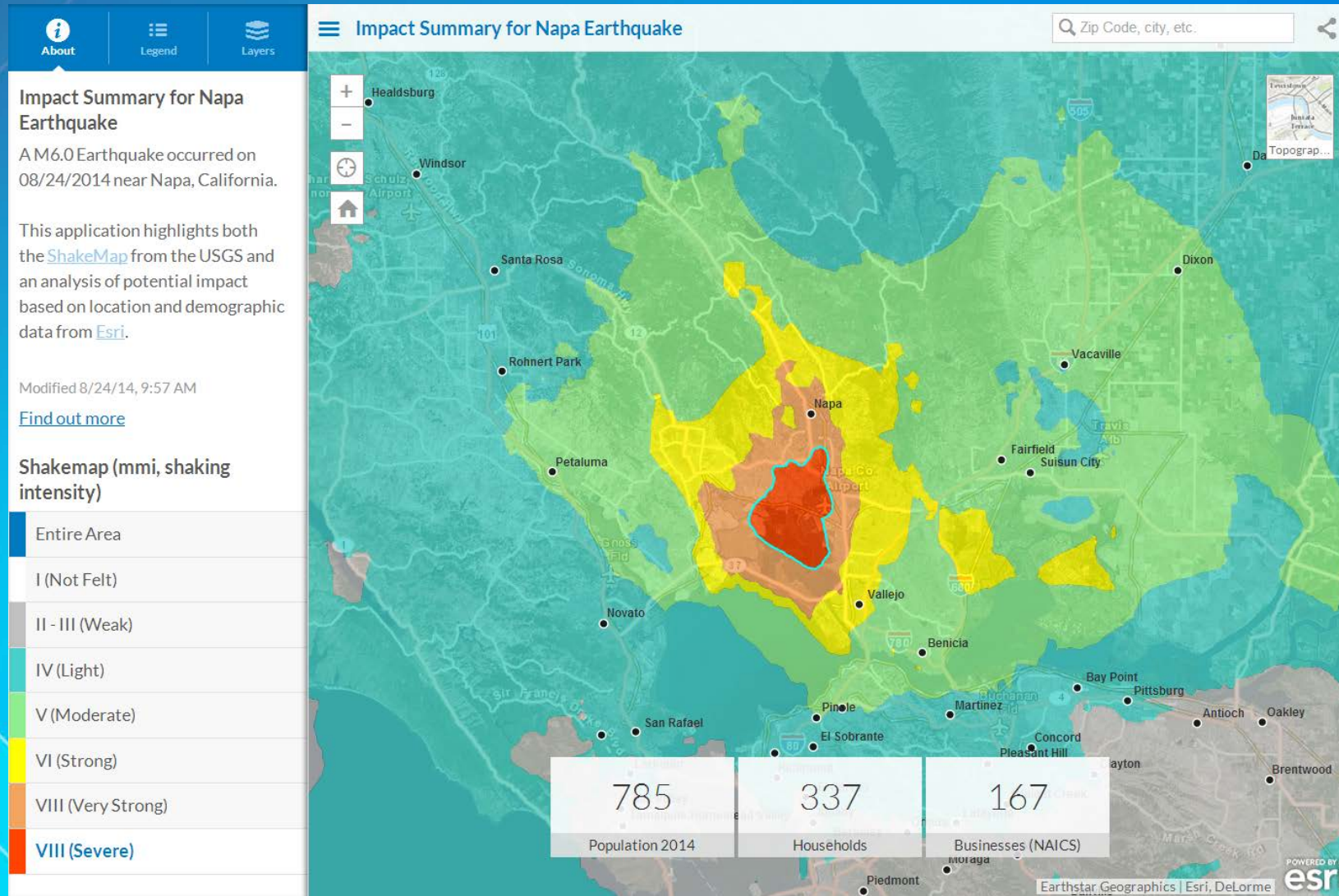
Passengers, Crew, Families, Embassies and Missions

Malaysia Airlines flight 17 (MH17 or MAS17) was a scheduled passenger flight from Amsterdam Schiphol airport to Kuala Lumpur airport. The Boeing 777-200ER operating this service on 17th July 2014 disappeared from radar at 13:15 hours UTC, and crashed in the Ukraine.

This portal presents historical, contextual, geospatial and briefing materials to assist in the response and understanding of the incident. It is owned by the Defence Geospatial Division (BGSD), Department of Survey and Mapping Malaysia (JUPEM)

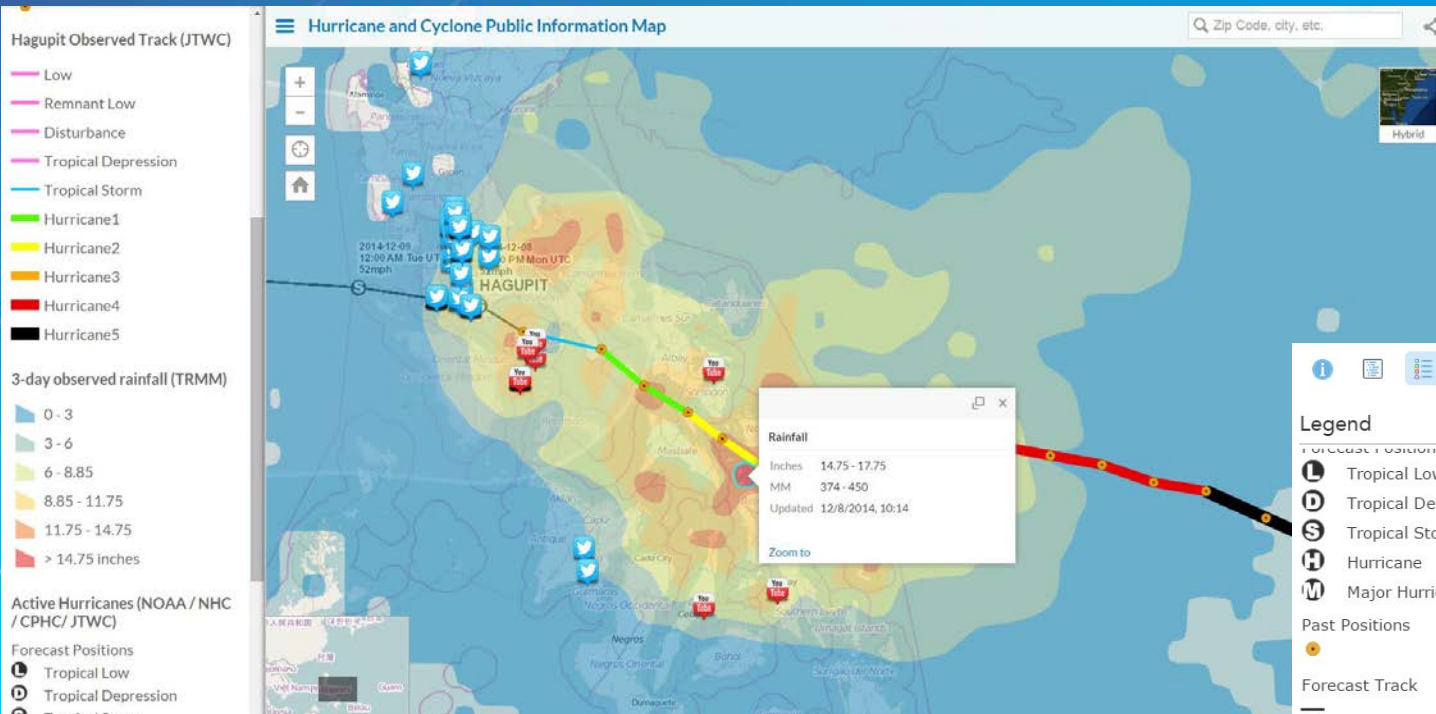
Esri Response: Disasters in 2014

Napa Earthquake



Esri Response: Disasters in 2014

Hagupit/Ruby PH Rainfall (December 2014)



Legend

Forecast Positions

- Tropical Low
- Tropical Depression
- Tropical Storm
- Hurricane
- Major Hurricane

Past Positions

-

Forecast Track

-

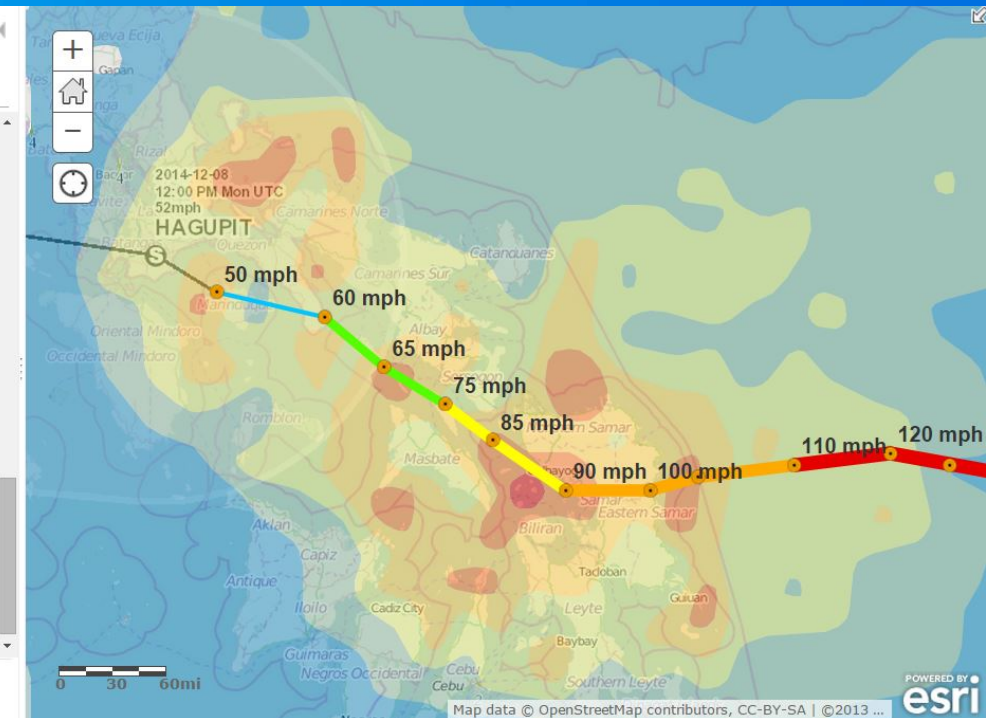
Forecast Error Cone

- 3 Day Cone
- 5 Day Cone

Watches and Warnings

- Hurricane Warning
- Tropical Storm Warning
- Hurricane Watch
- Tropical Storm Watch

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Esri Response: Disasters in 2014

Hagupit/Ruby PH Rainfall

for Typhoon Hagupit. Click on the map or the colored categories below to see how people live in the affected region.

Rainfall: NASA Tropical Rainfall Measuring (TRMM) [information](#) and [data source](#)

Population & Households: Esri Demographics, [information](#) and [data source](#)

This app was made using the [Impact Summary template](#) in ArcGIS Online.

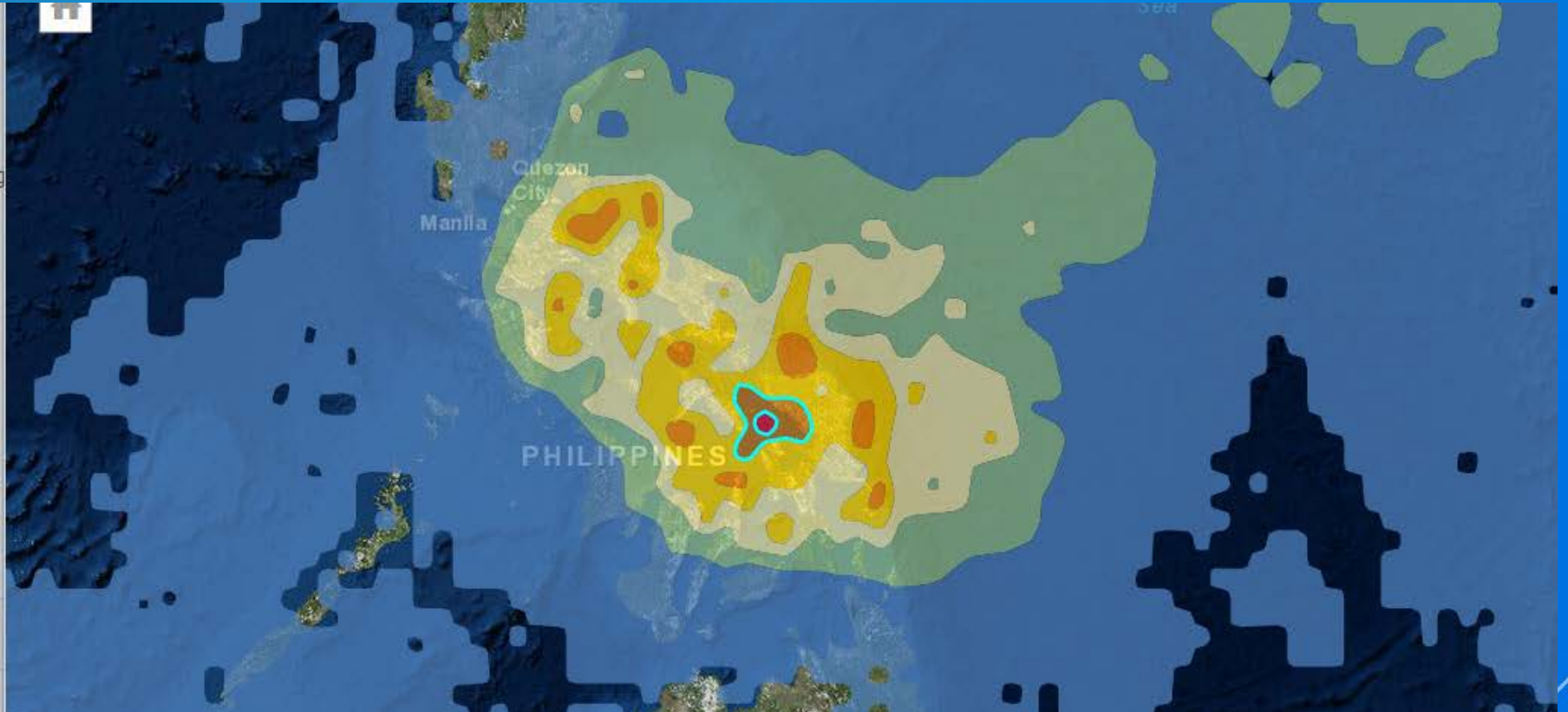
Modified 12/8/14, 3:51 PM

[Find out more](#)

Rainfall (inches)

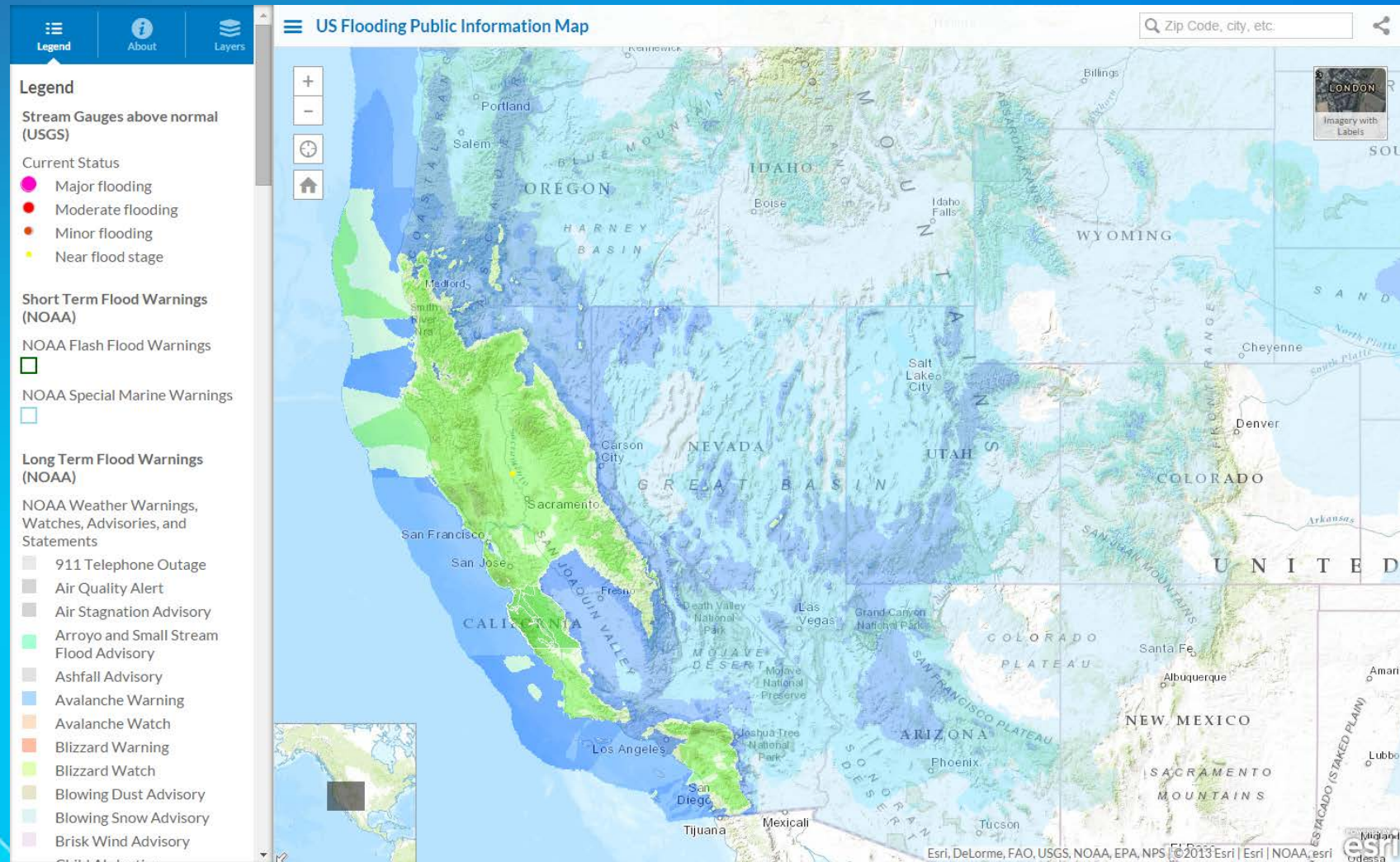
0 - 0.3"

3 - 6"



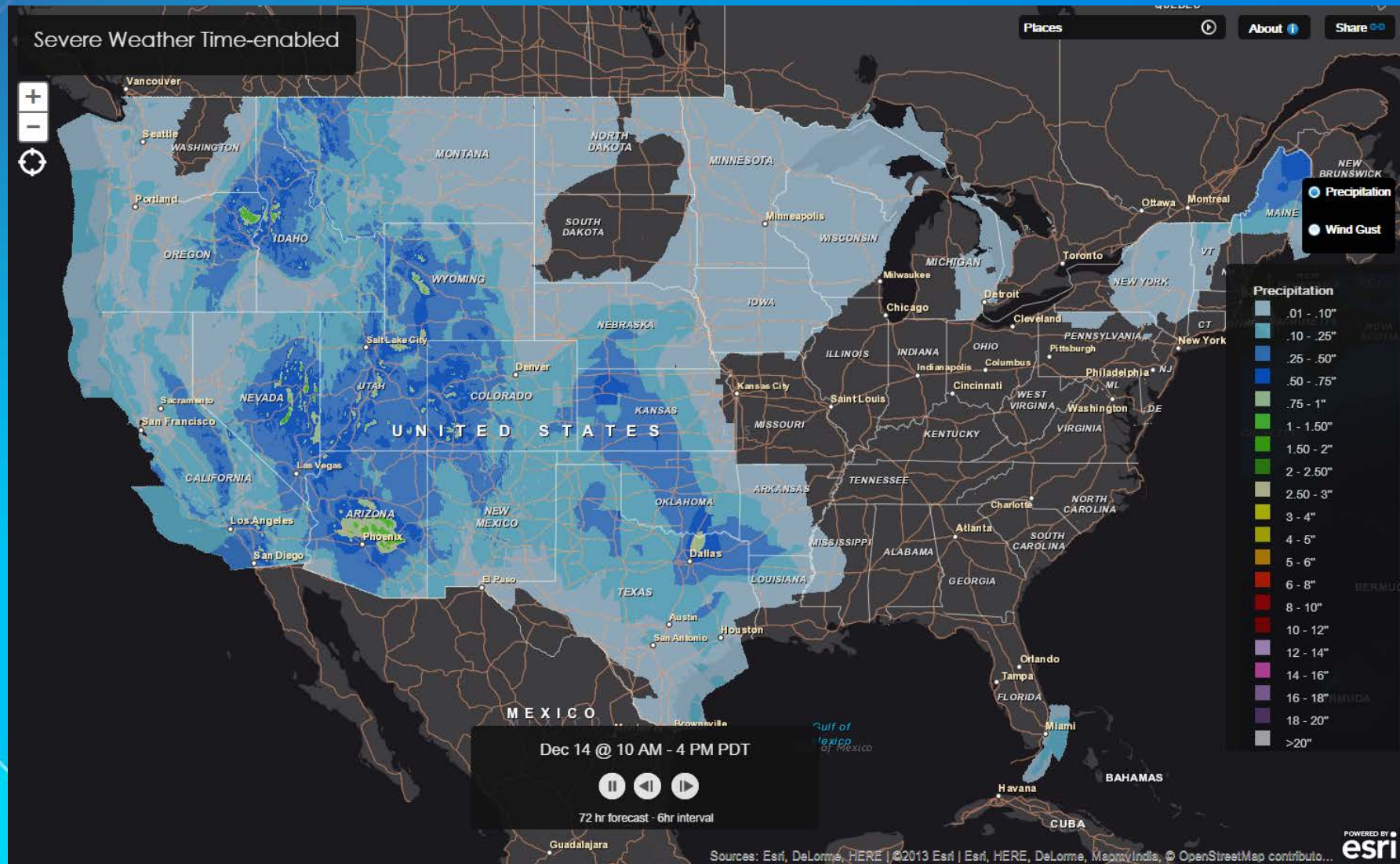
Esri Response: Disasters in 2014

CA Floods (December 2014) – Pineapple Express



Esri Response: Disasters in 2014

CA Floods (December 2014) – Pineapple Express



Esri Response: Disasters in 2014

CA Floods (December 2014) – Pineapple Express

Dunsmuir, CA

The screenshot displays the 'US Flooding Public Information Map' interface. On the left, there is a 'Layers' panel with the following options:

- Areas of interest
- 2014 Wildfires
- All Stream Gauges (USGS)
- Open Shelters
- Stream Gauges above normal (USGS)
- Short Term Flood Warnings (NOAA)
- Long Term Flood Warnings (NOAA)
- 72-hour Forecast Total Precipitation (NDFD)
- Radar

Below the layers panel is the 'Media Layers' section:

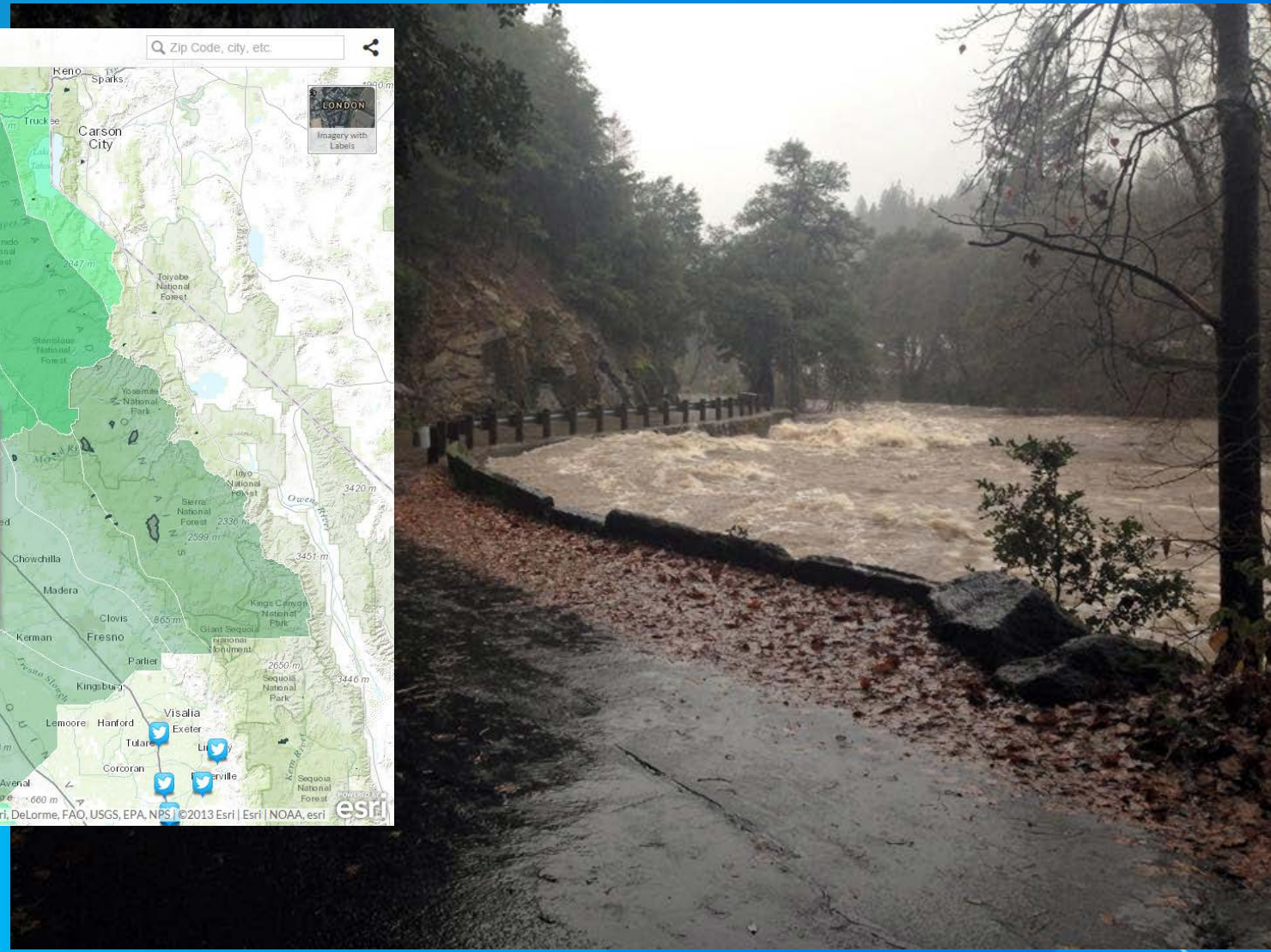
Show contributions from the public on the map.

- Instagram
- Flickr
- Twitter
- YouTube
- Webcams.travel

The main map area shows California with various flood zones highlighted in green. A search bar at the top right contains the text 'Zip Code, city, etc.'. A Twitter notification window is overlaid on the map, showing a tweet from @SanJoseCP:

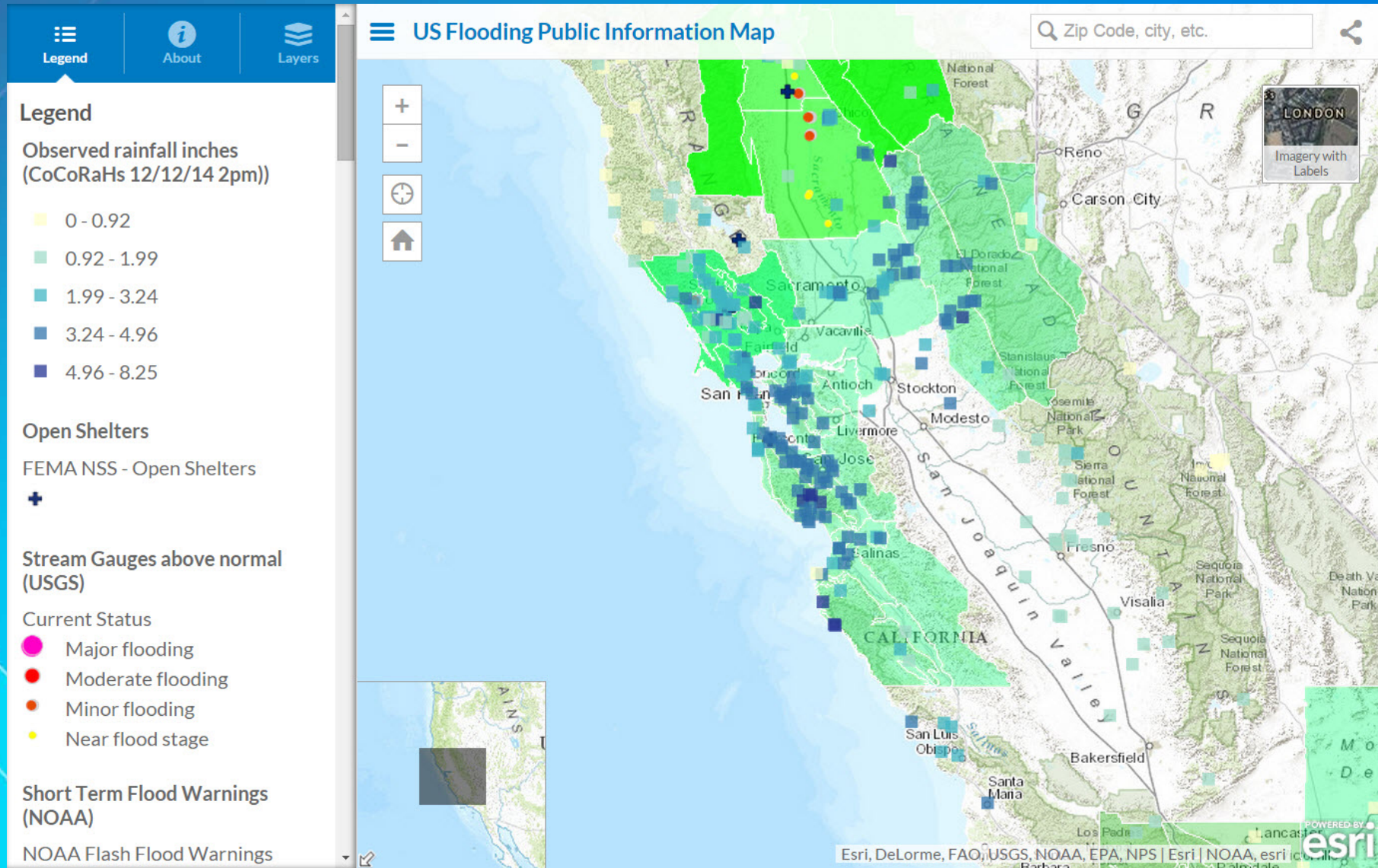
Twitter (1 of 7)
@SanJoseCP
Flooding in SF's Mission District: Significant flooding at 17th and Folsom Streets in the Mission District, the...
<http://t.co/r1Aaw9Ld6Y>
10:34pm · Dec 11, 2014

The map also shows various geographical features and cities across California, including Sacramento, San Francisco, and Fresno.



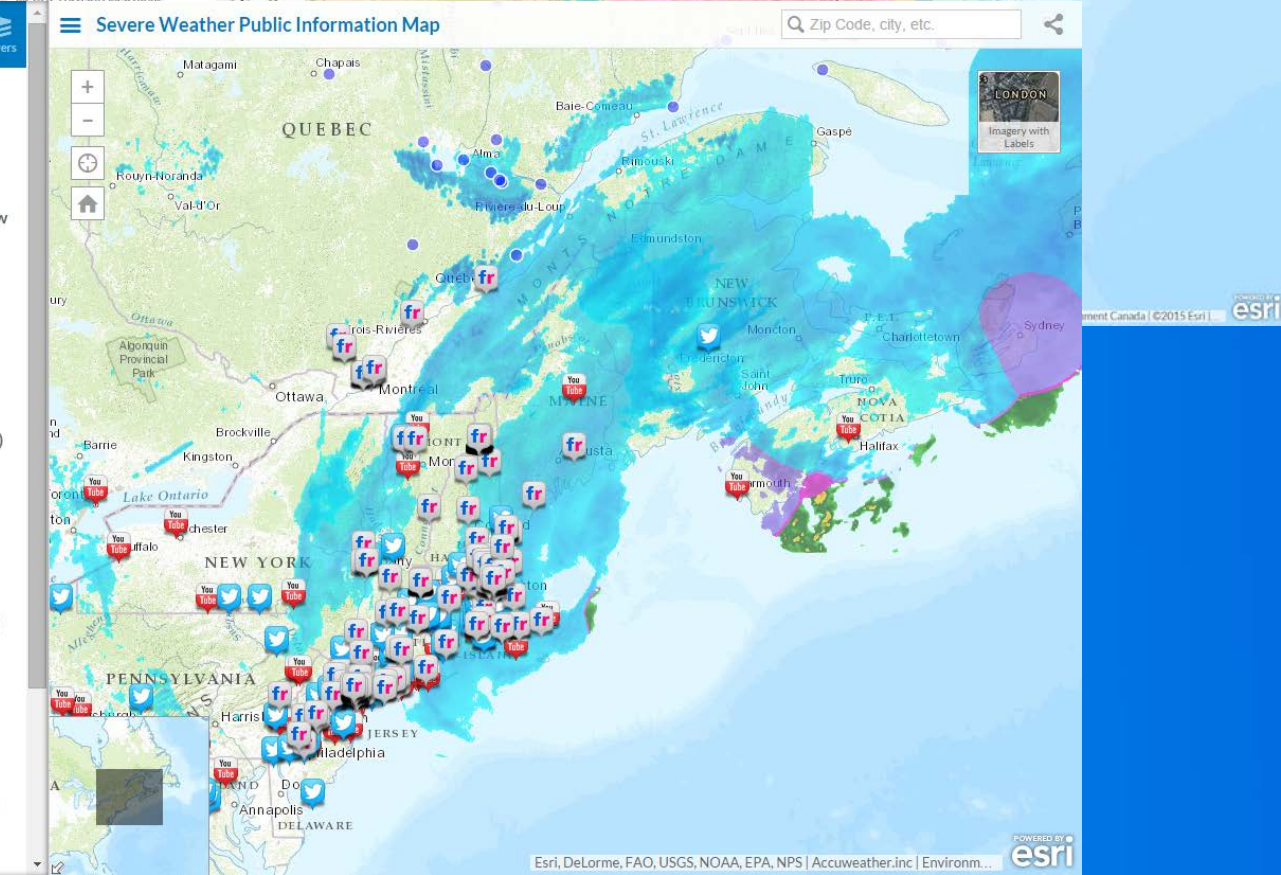
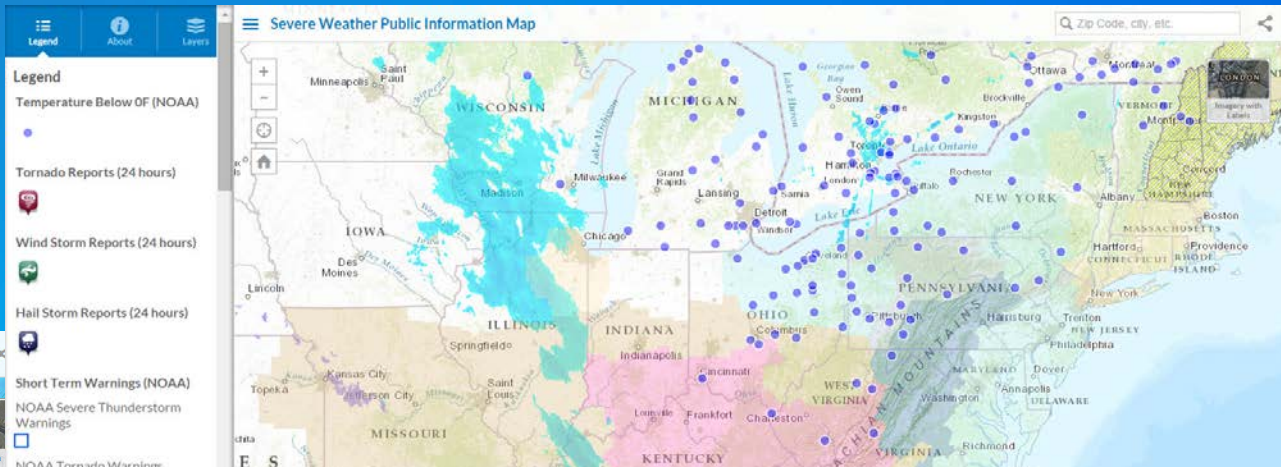
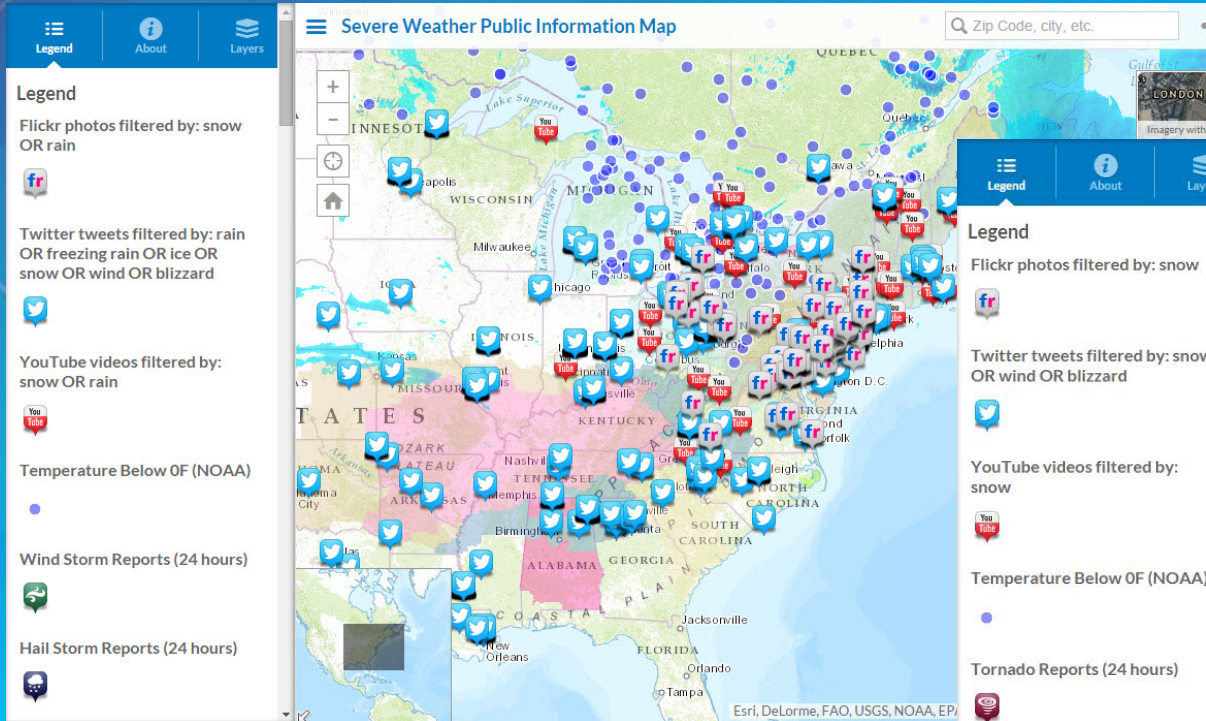
Esri Response: Disasters in 2014

CA Floods (December 2014) – Pineapple Express



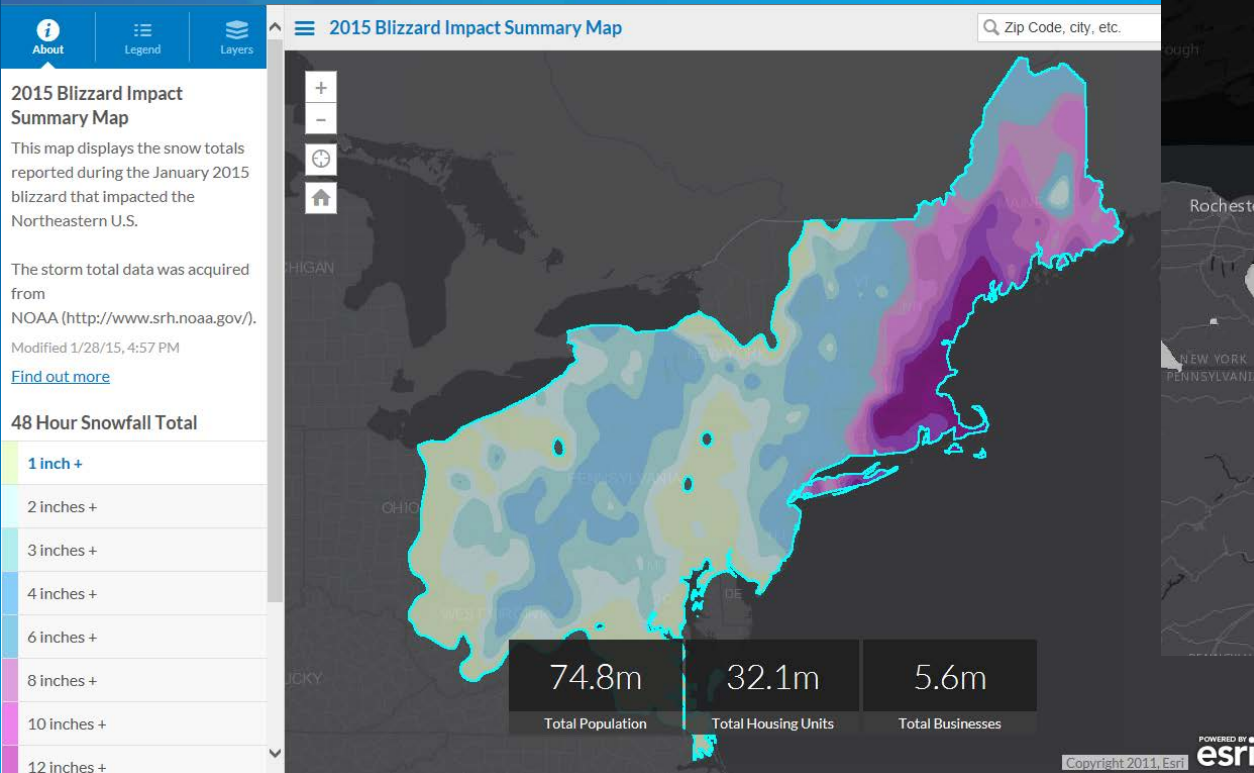
Esri Response: Disasters in 2015

Blizzard of 2015 (Jan. 26 – 27)

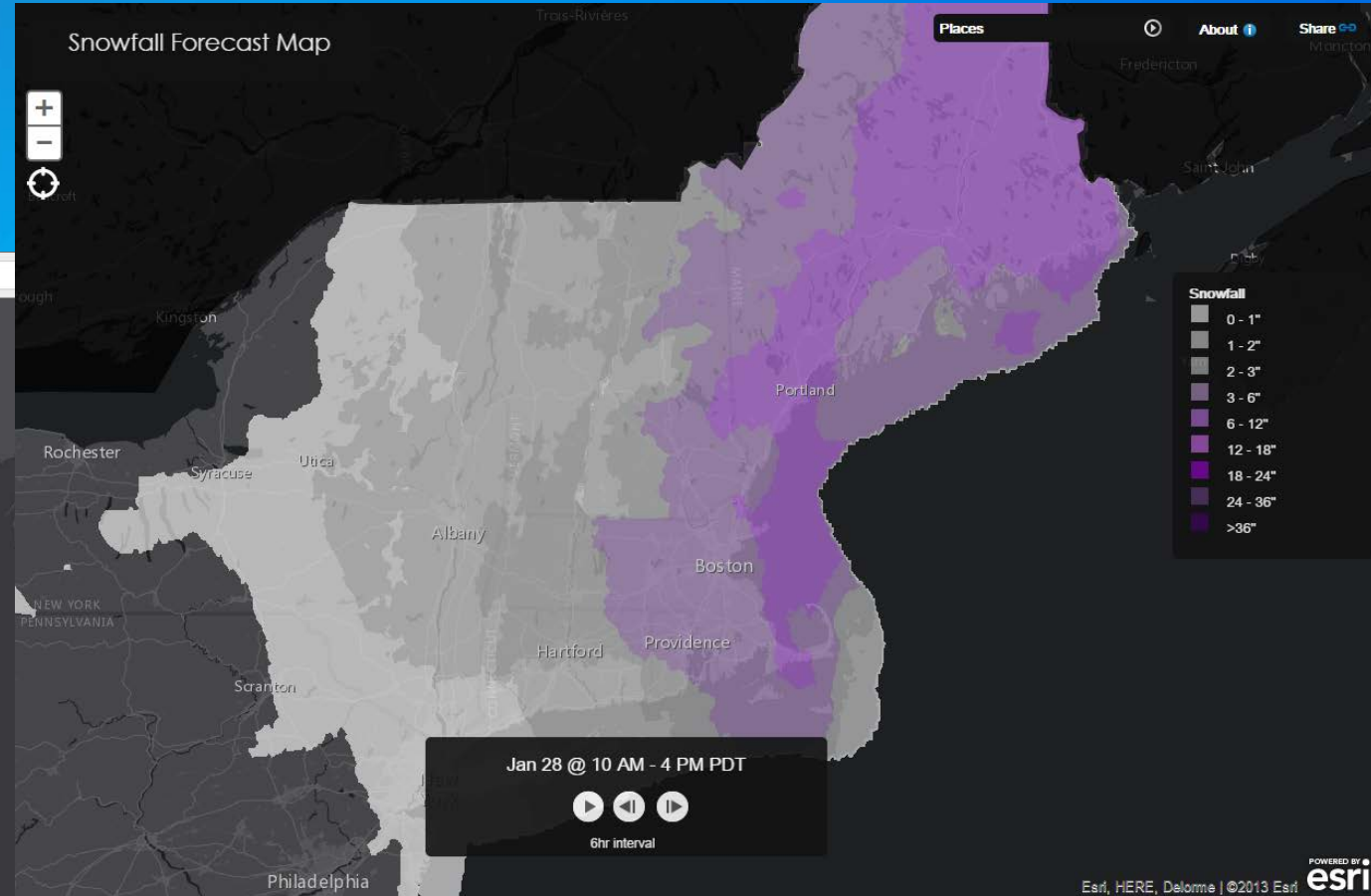


Esri Response: Disasters in 2015

Blizzard of 2015 (Jan. 26 – 27)



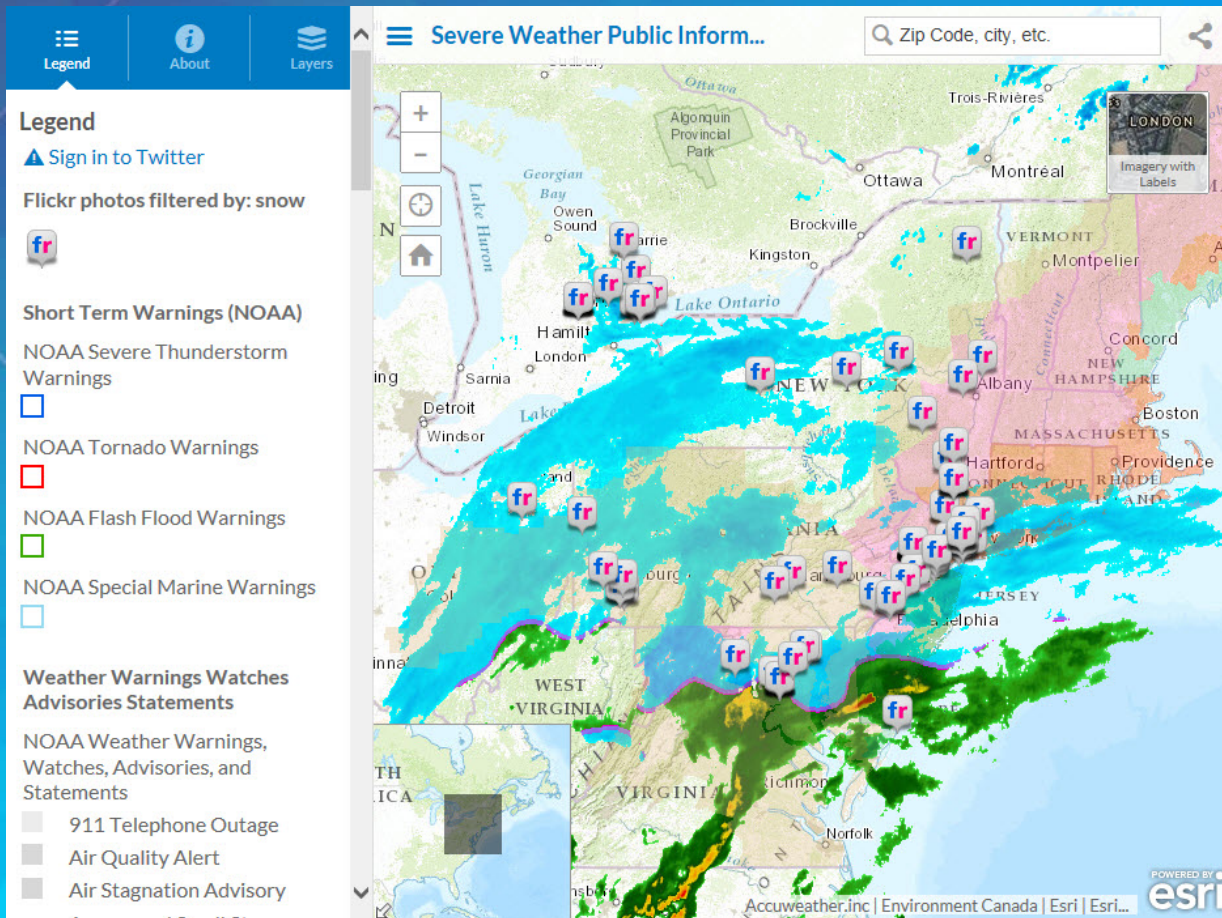
February 2015 – ISM



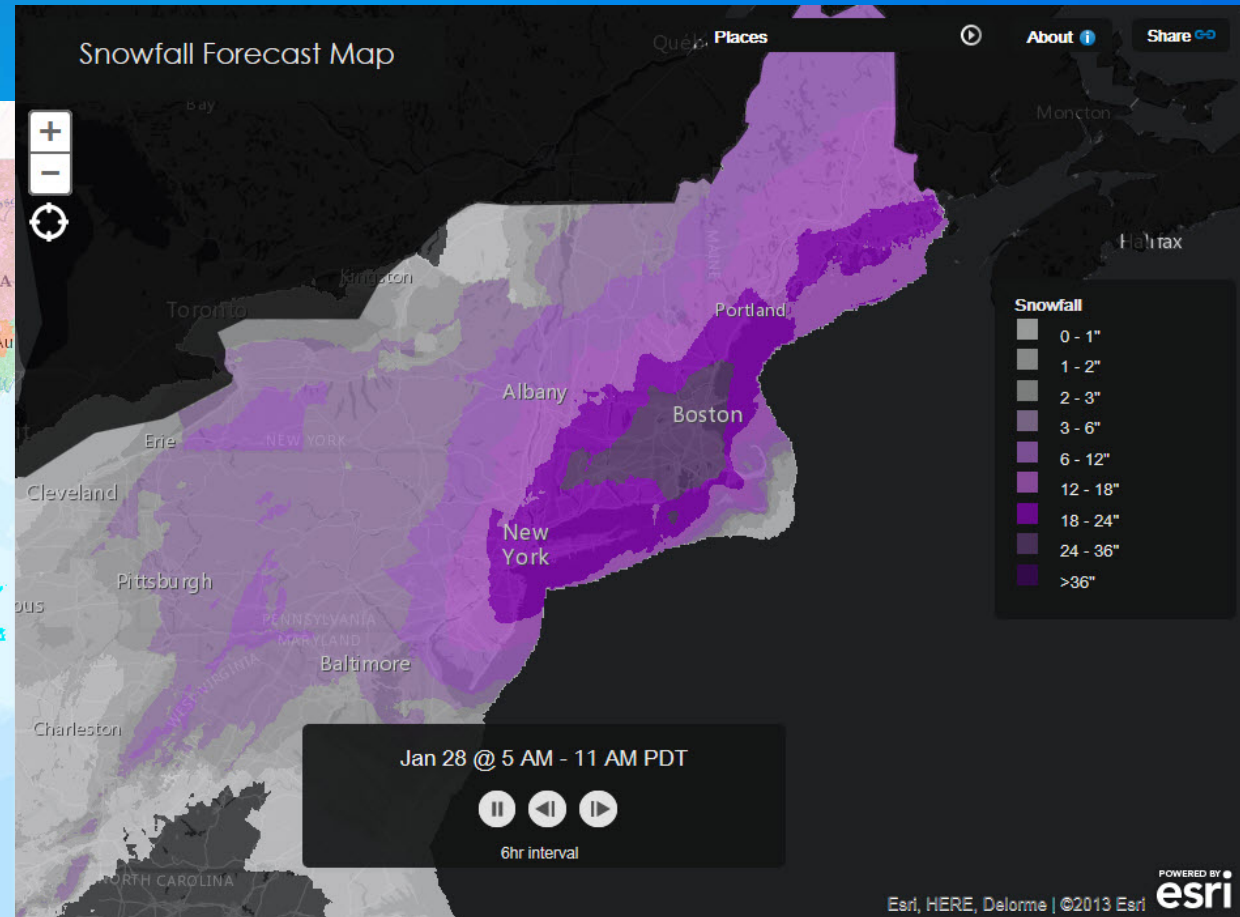
February 2015 – Forecast TIM

Esri Response: Disasters in 2015

Blizzard of 2015 (Jan. 26 – 27)



January 26, 2015 – Severe Weather PIM



January 26, 2015 – Forecast TIM

Esri Response: Disasters in 2015

Cyclone Pam

Standby Task Force: Cyclone Pam 2015



The Story of Pam

Kiribati

Tuvalu

Tanna




Tanna Island Map Tour

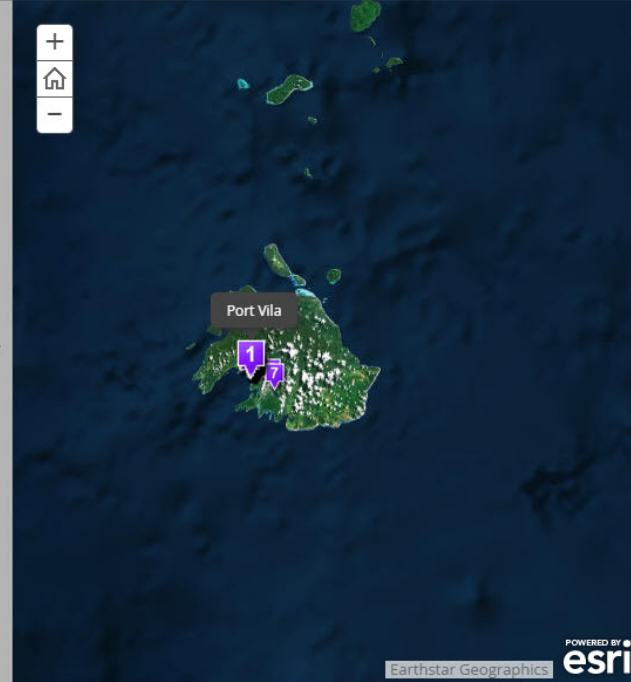
Efate


Port Vila map Tour

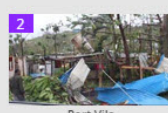
The Standby Task Force

Port Vila Map Tour

A story map   

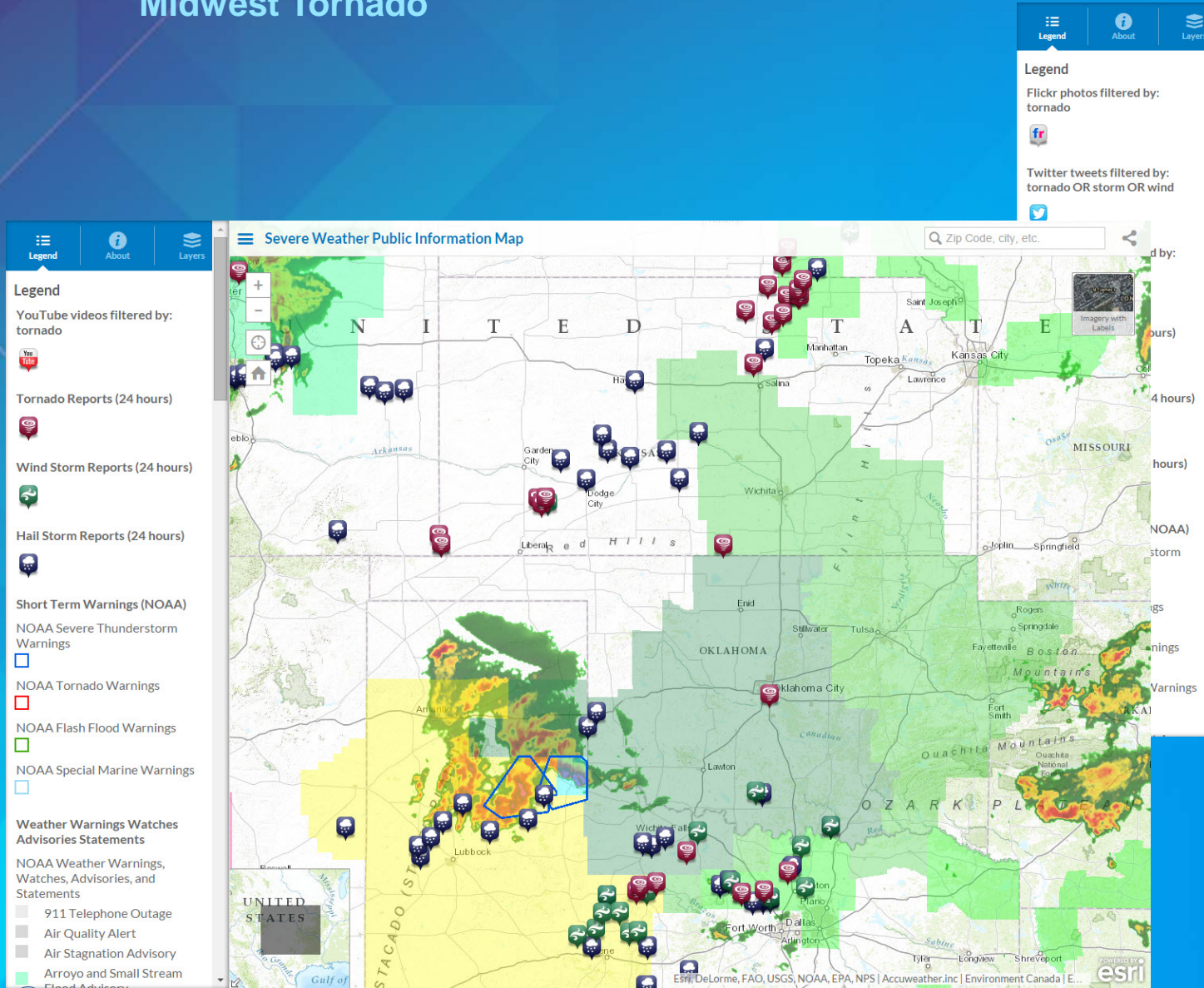


POWERED BY
Earthstar Geographics 



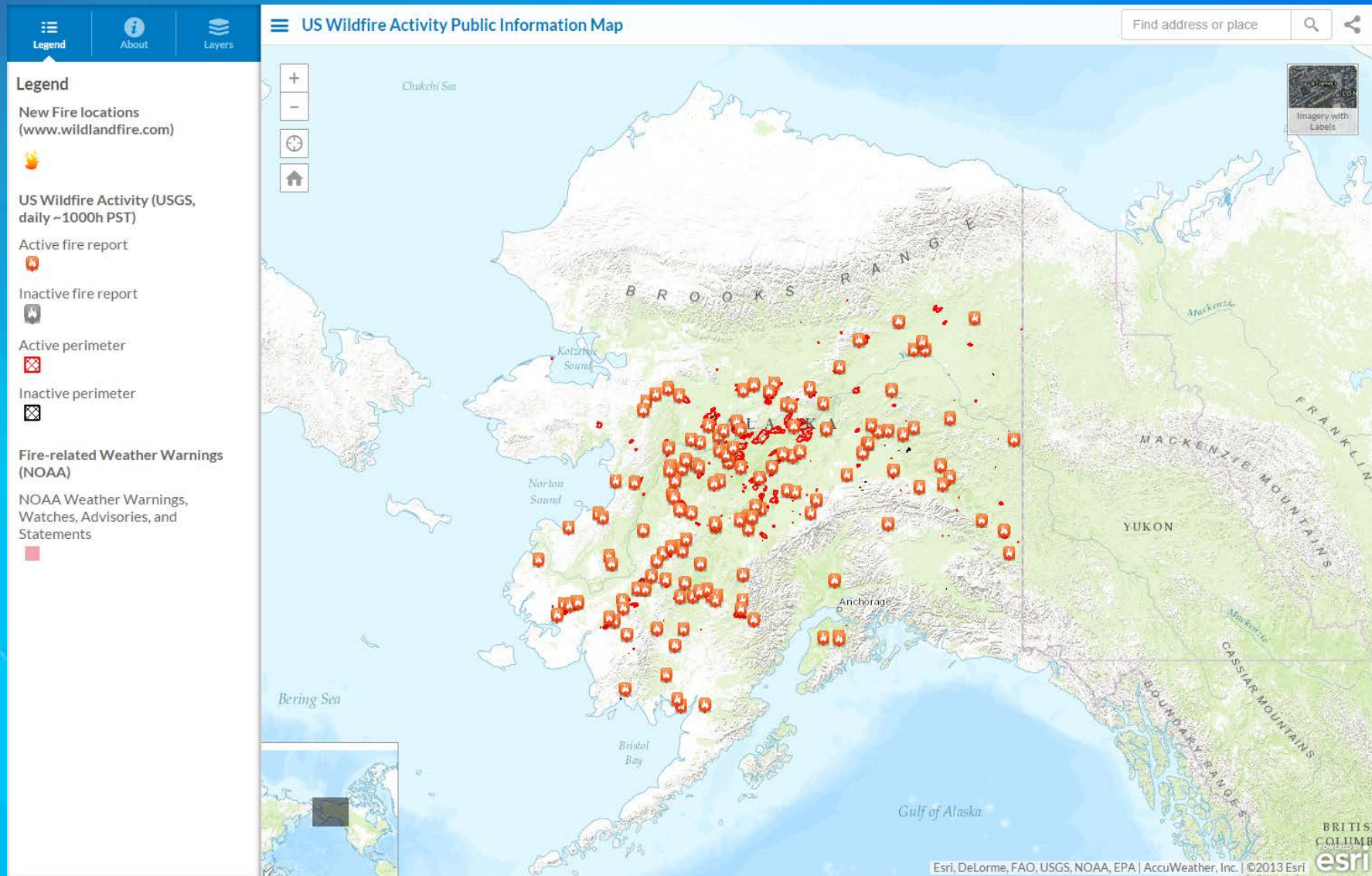
Esri Response: Disasters in 2015

Midwest Tornado



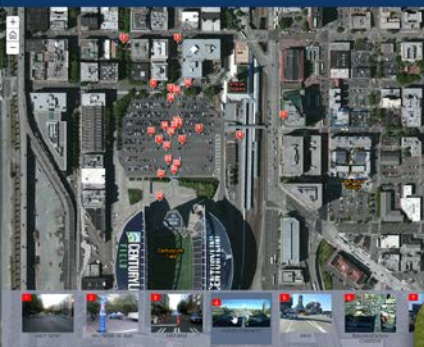
Esri Response: Disasters in 2015

Alaska Wildfires

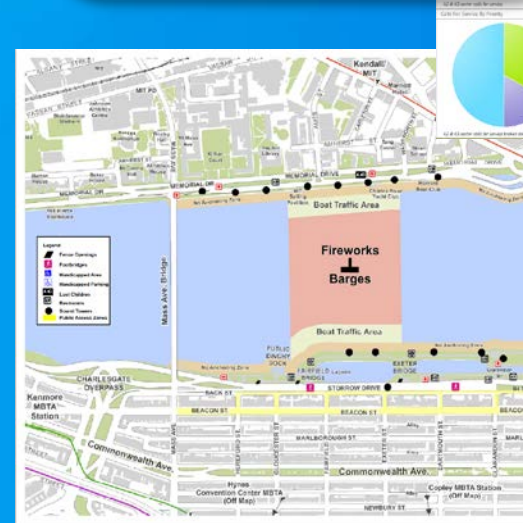
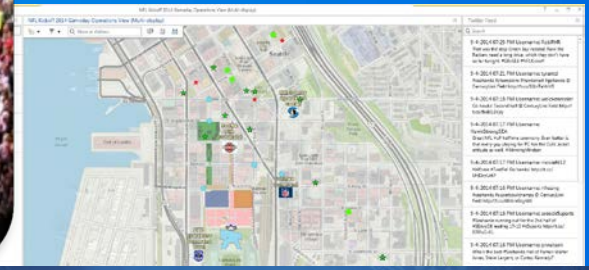


Supporting Special Events

Sporting Venues



Conferences/Conventions



Incidents/Events – A Common Problem

- **Sharing static, dynamic and other data across organizations and departments – shared situational awareness**
- **Integrating and analyzing data to provide actionable information**
- **Deploying mission-based (easy-to-use) applications**
- **Disseminating information to multiple devices**



Similar Patterns

- **Dissimilar events**
 - **Boston Marathon, 35,000 runners, 26.2 miles**
 - **Richmond Raceway (NASCAR), 400 acre site**



Boston Marathon 2015

- Shared situational awareness between multiple agencies
 - BRIC, MEMA, Boston City EOC
- True, real-time “common” operational data layers

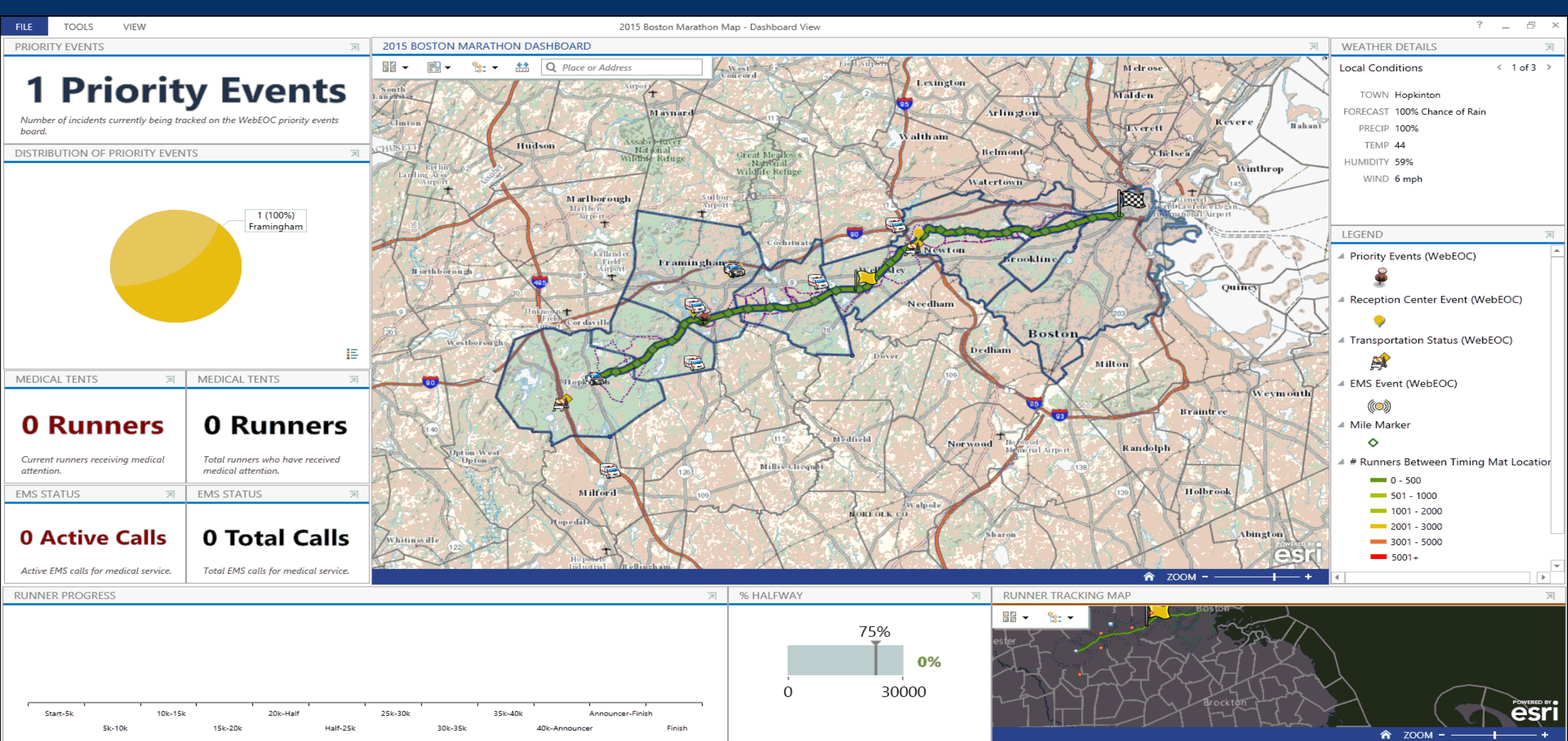


MARATHON COURSE MAP * SUNDAY, NOVEMBER 23, 2014



The Current State

- Critical information lost
- Hard to use
- Difficult to share and collaborate
- Not dynamic for current conditions



The Future State

- Critical information displayed
- Easy to use
- Easy to share and collaborate
- Dynamic



www.esri.com/disaster

Esri Disaster Response Program

When disaster strikes, Esri's Disaster Response Program (DRP) is there to support you around the clock, 24 x 7. Request Assistance now from the Esri experts, augment software, explore content, and monitor events online as part of our corporate citizenship. We're there when you need us most.

Featured Datasets



Incident Data

Data created or edited in support of an incident.



Base Data

Data layers that exist before the incident and that are used to provide the base features for mapping.



Live Data

Data that is constantly updated at the source and dynamically changes its geography and/or attributes.

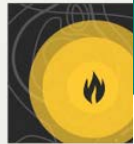
Help when you
When disaster strikes, Esri experts, augment software



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Esri Disaster Response Program

Main GIS for Emergency Management

Help when you need it most

When disaster strikes, Esri's Disaster Response Program (DRP) is there to support you around the clock, 24 x 7. Request assistance from Esri experts, augment software, explore content, and monitor events online as part of our corporate citizenship. We're there when you need us most.

Request assistance and monitor the following event types:



Hurricanes & Cyclones



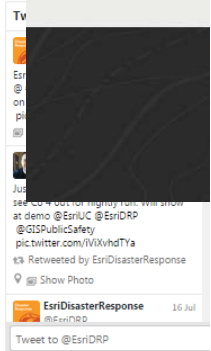
Earthquakes



Flooding



Severe Weather





Understanding our world.