



OnTheMap for Emergency Management

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Background

Emergencies Matter

- ❑ High number and variety of events across U.S.
- ❑ Increased impact
 - General population increase
 - Pop increase in vulnerable areas
 - Increase in wealth / assets

Interest in Economic Impacts

- Direct vs Indirect
- **Losses to Business** (inability to operate, revenue)
- **Losses due to Infrastructure, Transportation**
- **Losses to Govt's** (assets, revenue)

Limitations of Current Tools/ Approaches

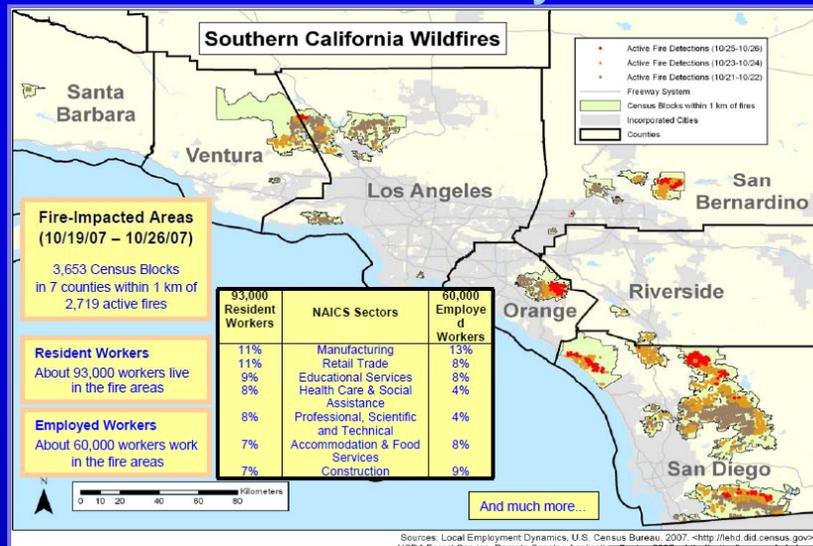
- **No National Reporting System** (multiple orgs, inconsistent coverage and focus)
- **Inadequate Geographic Scale** (need for sub-county level)
- **Lack of Real-time Data**

OnTheMap for Emergency Management Uses

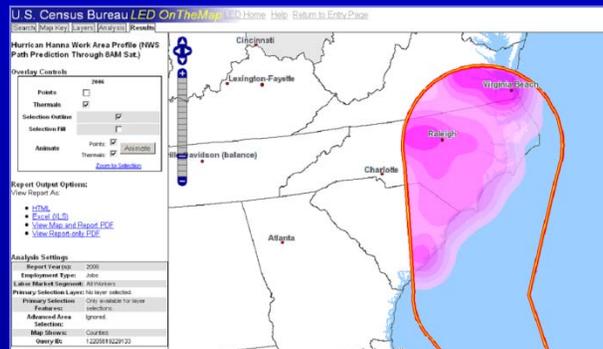
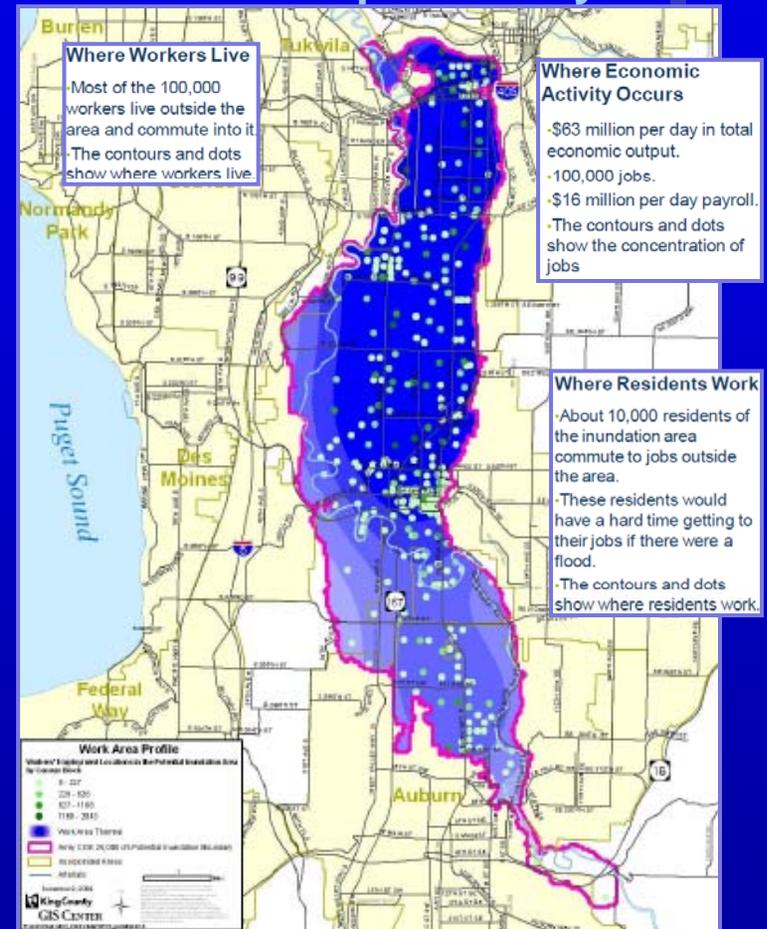
- **Assessment of Impact on Labor Market**
 - How many affected workers and employers?
 - Are they living or working in the affected area?
 - How are workers/employers geographically distributed within affected area?
 - What are the affected industries?
- **Emergency Preparedness & Response Planning**
 - Where should response efforts concentrate?
 - What are the major commuting & evacuation patterns?
 - How do different emergency scenarios compare?
 - How do future scenarios compare to historical events and measured impacts?

Emergency Management Examples: Floods & Fires

2008 California Wildfires Economic Analysis



2009 King County Washington Flood Impact Study



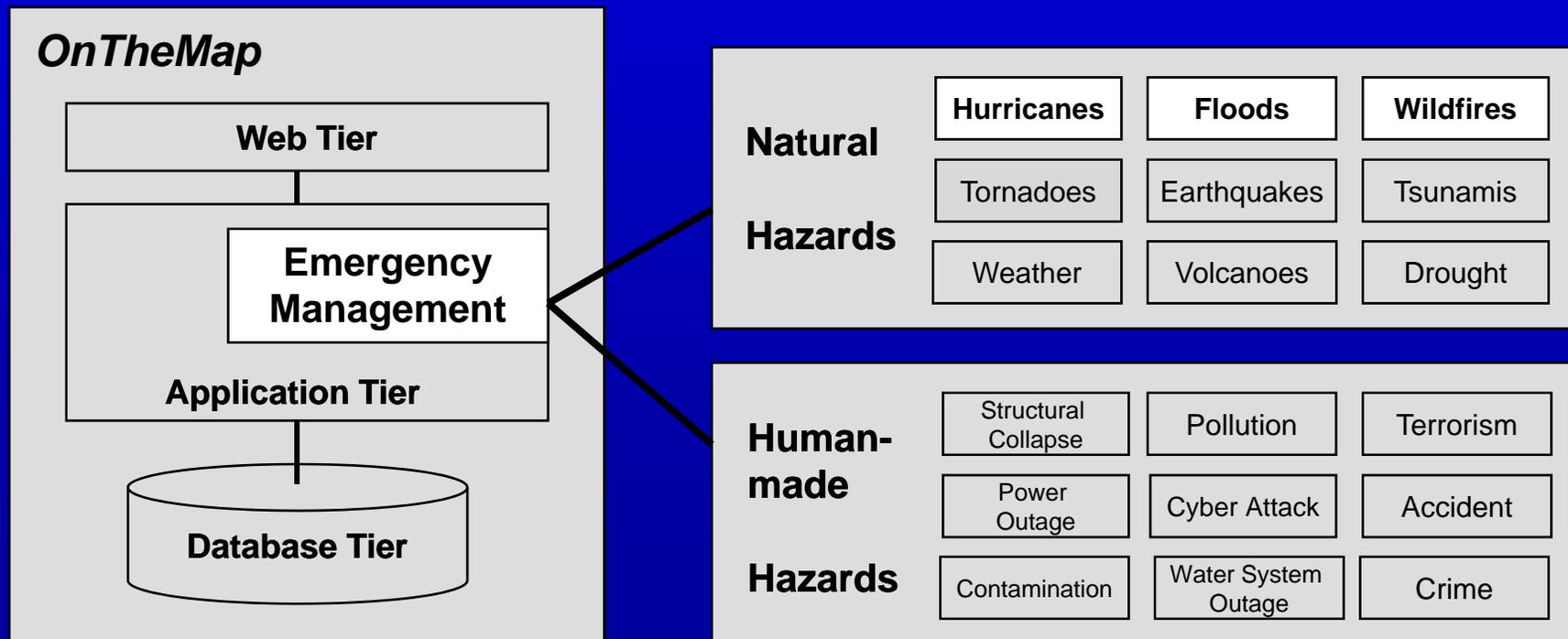
Work Area Profile Map

- Shows where workers are employed in the impact zone.
- Projected path of Hanna based on NWS data.
- Plume selection from 20 miles to 150 miles.
- Approx. 3.9 million jobs in this selection for 2006.

2008 Hurricane Hanna Impact on Work Area

Conceptual Application Overview

- ✓ Resides within existing architecture & technology environment
- ✓ Integrates compatible emergency management data
- ✓ Provides information in real time (or near real-time)
- ✓ Easy to understand and use
- ✓ Provides useful economic & demographic data for emergency management uses



Version 1 Timeline



Version 1 Review

OnTheMap for Emergency Management - Mozilla Firefox 4.0 Beta 11

File Edit View History Bookmarks Tools Help

OnTheMap for Emergency Management +

OnTheMap for Emergency Management
Hurricanes

Local Employment Dynamics Partnership

Getting Started Help LED Home

OnTheMap for Emergency Management provides rapid access to labor market information for local areas, affected by emergency events such as hurricanes, tornados, floods, earthquakes or fires. Currently limited to hurricanes, the application will provide an easy-to-use tool that provides a live feed from the National Hurricane Center. When a storm's leading winds make landfall, in the U.S., the application will allow users to view the characteristics of the local workforce, such as the affected industries, the ages of workers and workers' earnings with a simple click of the link.

Note: OnTheMap for Emergency Management computes storms' impact on jobs from 2008 data of 46 states. The eligible states and territories not yet in the system are Connecticut (CT), the District of Columbia (DC), Puerto Rico (PR), the U.S. Virgin Islands (VI), Massachusetts (MA), and New Hampshire (NH). North Carolina (NC) is missing [2008](#) data and is not included in the jobs computation.

To start, select a storm from the list to the right. Jobs data will only be available when the leading winds have made landfall. Click on "Getting Started" to learn about using the application.

Eastern Pacific **Atlantic**

Atlantic Tropical Cyclone Activity www.hurricanes.gov



10:06 AM EST
Dec 23, 2010

48-hour formation potential: ■ Low <30% ■ Medium 30-50% ■ High >50%

Map legend can be found [here](#). Map and data provided by the National Weather Service. Details can be found at the [National Hurricane Center](#).

Storm List

- 2010
 - Hurricane ALEX
 - Tropical Storm BONNIE
 - Tropical Storm COLIN
 - Hurricane DANIELLE
 - Hurricane EARL**
 - Tropical Storm FIONA
 - Tropical Storm GASTON
 - Tropical Storm HERMINE
 - Hurricane IGOR
 - Hurricane JULIA
 - Hurricane KARL
 - Hurricane LISA
 - Tropical Storm MATTHEW
 - Tropical Storm NICOLE
 - Hurricane OTTO
 - Hurricane PAULA
 - Hurricane RICHARD
 - Hurricane SHARY
 - Hurricane TOMAS
 - Tropical Storm ESTELLE

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Version 1 Review Cont'd

OnTheMap for Emergency Management - Mozilla Firefox

File Edit View History Bookmarks Tools Help

Back Forward Reload Stop Home [http://lehdmap4.did.census.gov/themap4/em/view.html?store=12839133226627085&name=Tropical Storm](http://lehdmap4.did.census.gov/themap4/em/view.html?store=12839133226627085&name=Tropical%20Storm) Google

OnTheMap **Hurricanes** for Emergency Management Local Employment Dynamics Partnership

Home Getting Started Help Download to XLS LED Home

U.S. Jobs Within Hurricane Wind Swath

Tropical Storm HERMINE	Jobs
Total	1,180,432
Jobs by State, County, Place	
Texas	1,180,432
Jobs by Characteristics	
Jobs by Worker Age	
Jobs by Worker Earnings	
Earning \$1,250 per month or less	361,904
Earning \$1,251 to \$3,333 per month	471,267
Earning More than \$3,333 per month	347,261
Jobs by Industry Type (2-digit NAICS)	
Agriculture, Forestry, Fishing and Hunting	7,336
Mining, Quarrying, and Oil and Gas Extraction	17,946
Utilities	11,913
Construction	79,110

Storm Information

Viewing Date/Time: 09/08/2010 02:35 (GMT)

Storm Name: Tropical Depression HERMINE

Storm Code: at102010

Storm Data Provided by the National Weather Service. The Hurricane Wind Swath is the area depicted by the orange outline in the map. The Job Density Overlay is represented by the blue color-shaded areas within the cumulative wind swath in the map. Darker areas represent higher concentrations of jobs per square mile.

No Jobs data is reported for storms that have not made landfall.

Job numbers refer to Total Primary Jobs in 2008 within the hurricane wind swath by location or characteristic.

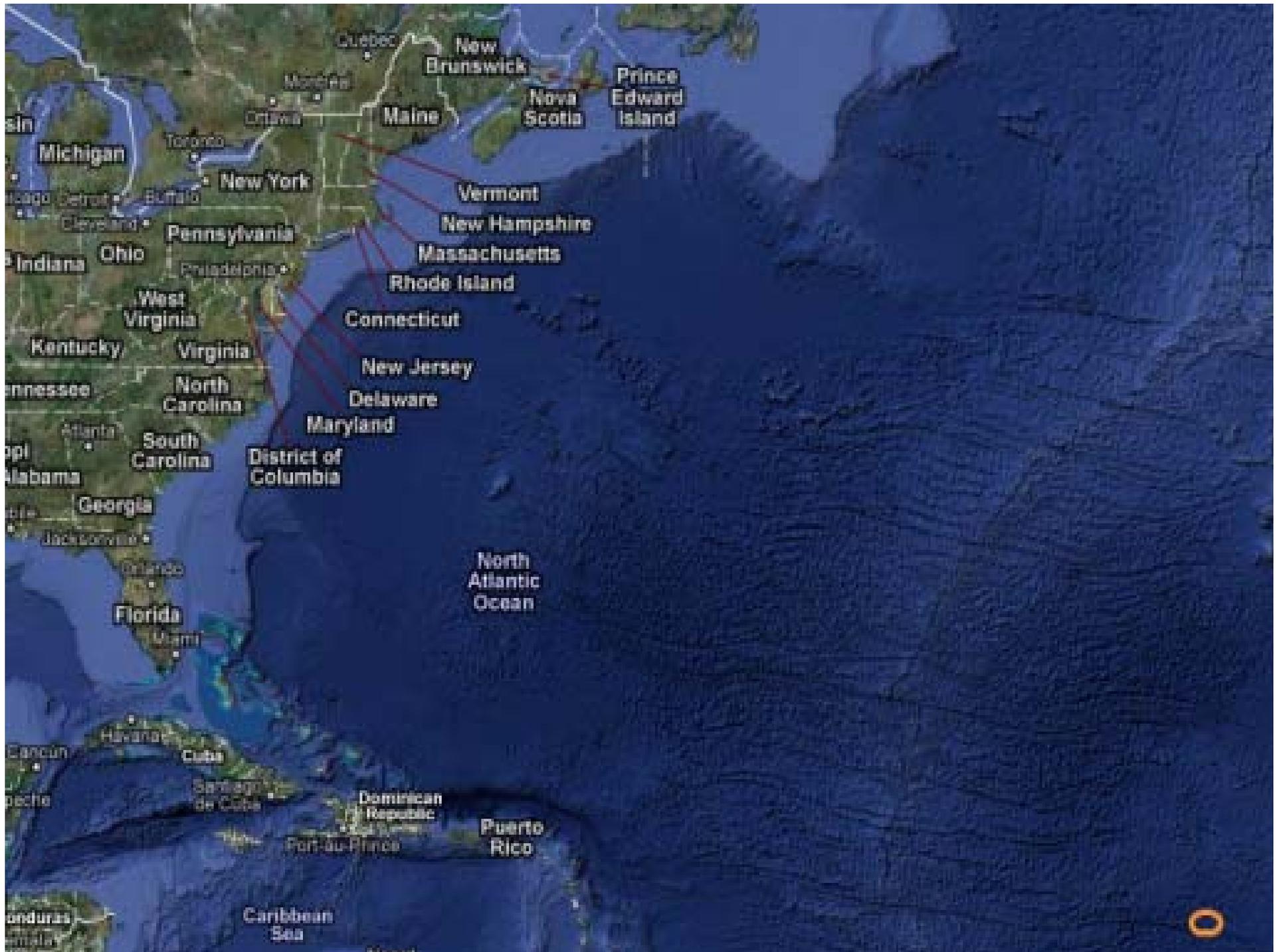
Job numbers reported by location correspond to those jobs within the portion of the state, county, or place that is also located within the hurricane wind swath. Job numbers for characteristics are reported for the total wind swath area- all locations together.

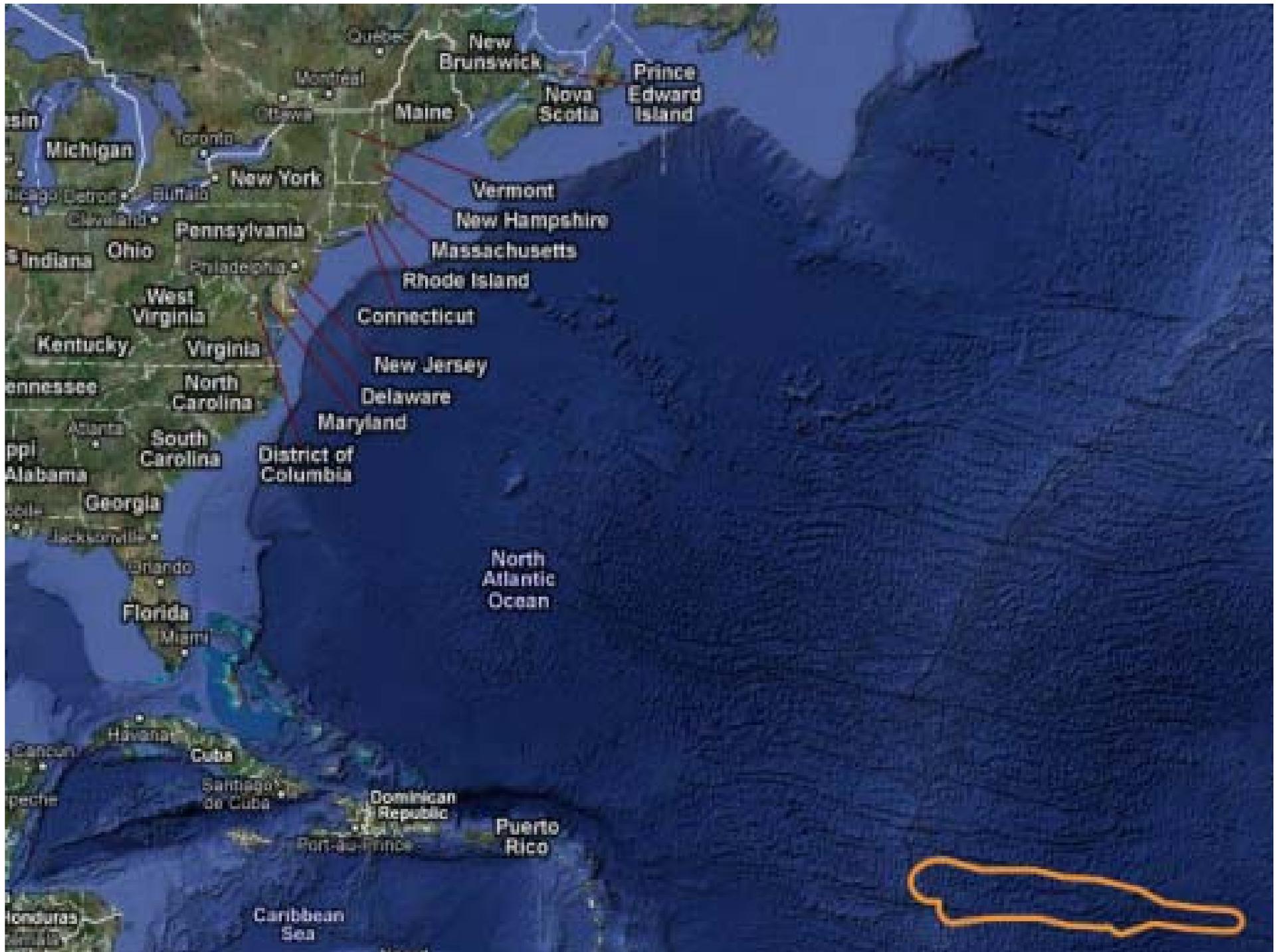
Job numbers reported do not include states where LED does not have 2008 local employment data (CT, DC, MA, NC, NH, PR, and VI).

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Done

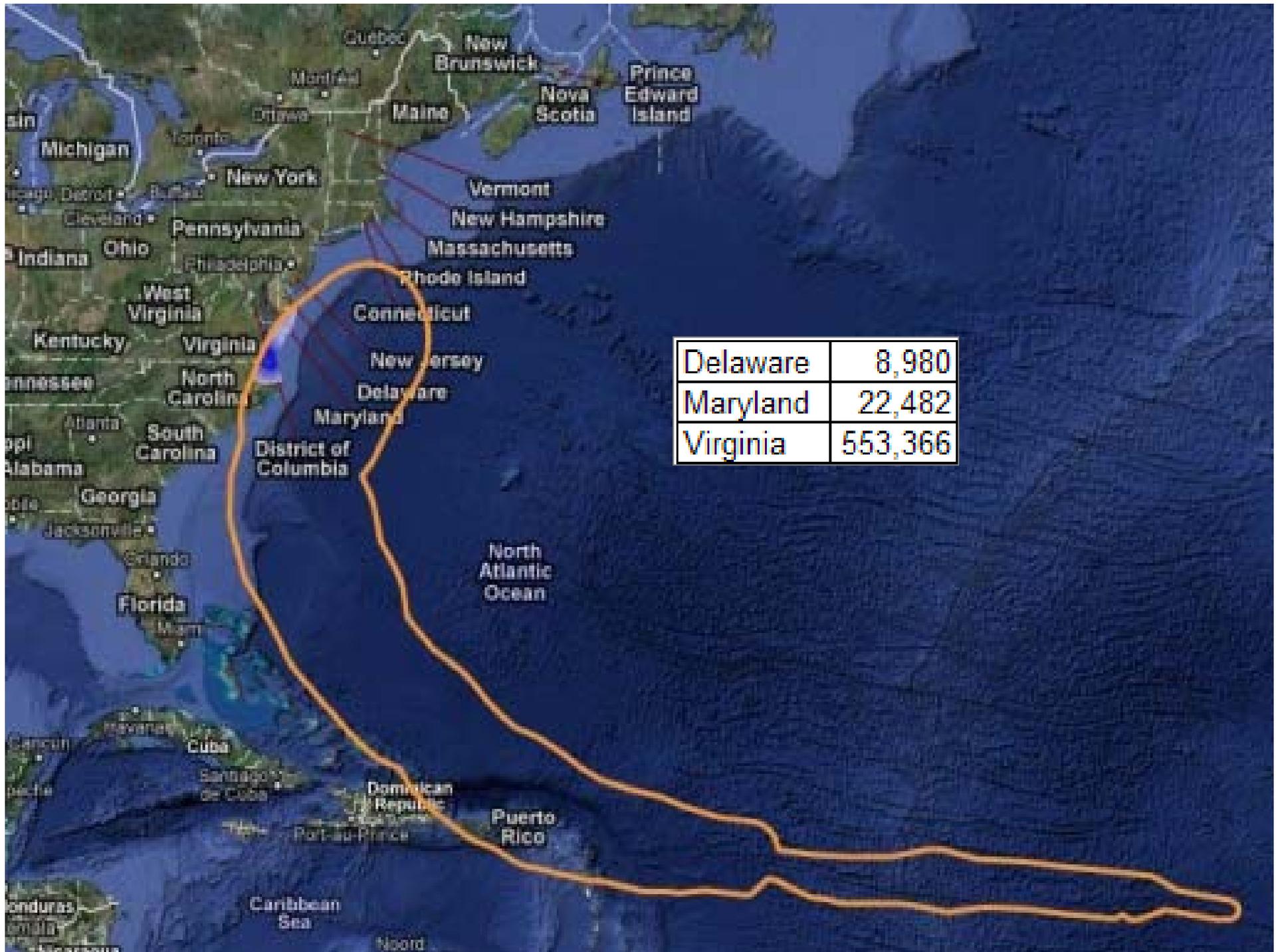


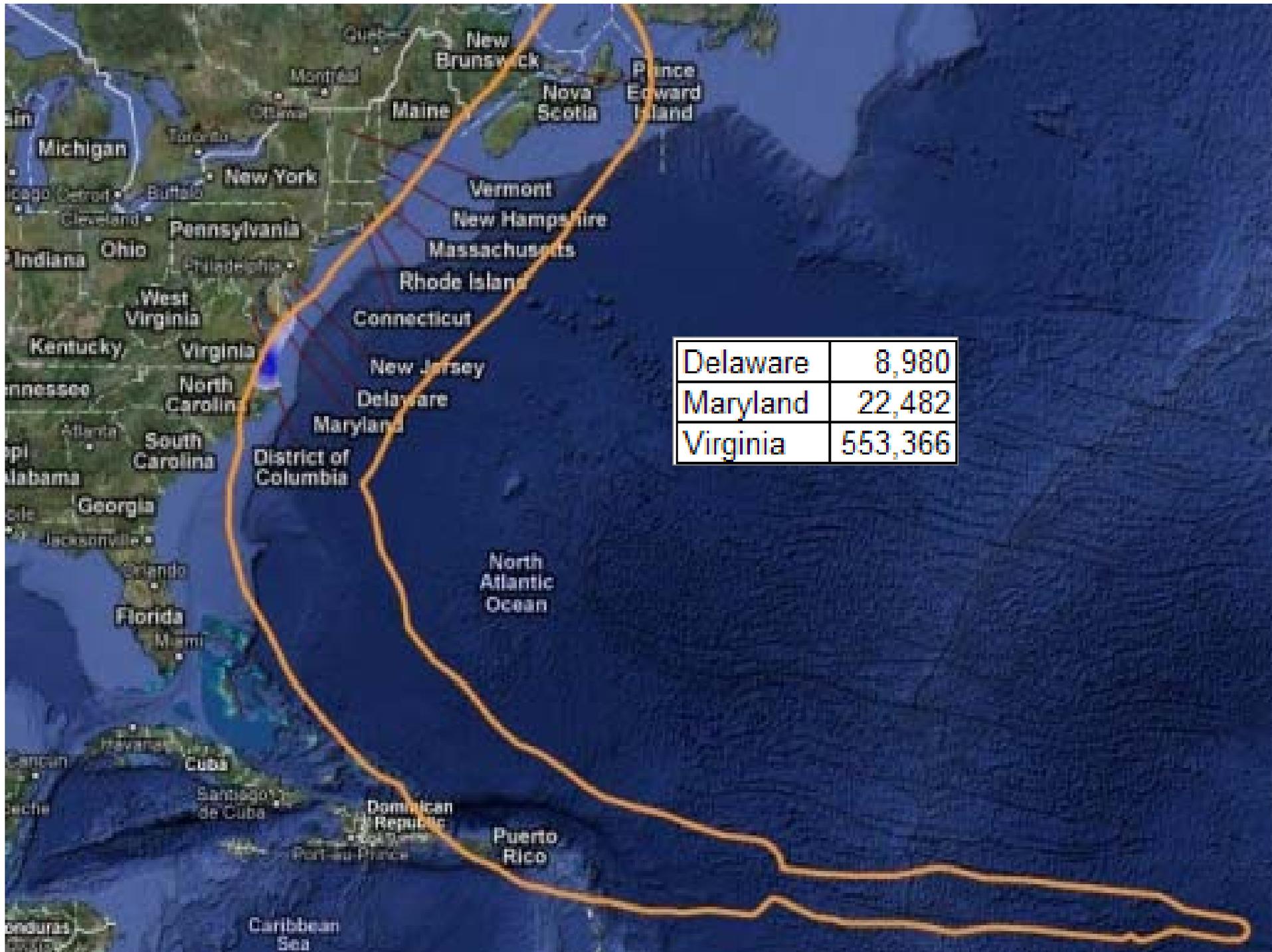












Version 2 Enhancements

New Data

❑ Emergency Management Data

- Floods – Flood Outlook areas
- Fires – Fire perimeters

❑ Demographic Information

- Expanded Characteristics - Race, Ethnicity, Education

❑ Improved Reports

- Detailed Reporting by Emergency Event Categories

Improved Map

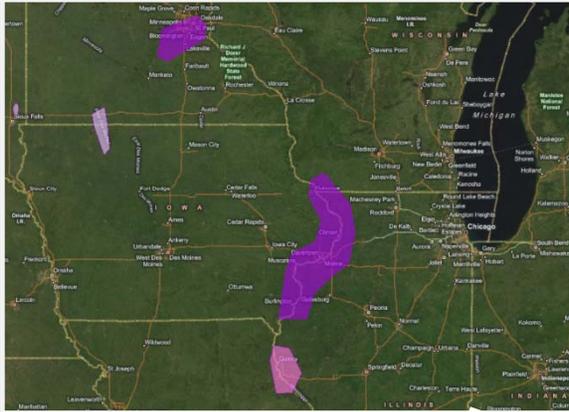
- Single Integrated Map
- New Basemap alternatives – Aerial, Streets, Terrain
- Layer Controls (On/Off, Identify, etc.)

New Tools

- Storm/Event History Animation
- Jump to OnTheMap

Version 2 Enhancements - New Data

Floods



Mozilla Firefox
Help
http://grunt.gritechnologies.com/themap5-duck/em.html
Emergency Management OnTheMap LED Home Help and Documentation Reload

Find Emergency Events Data Sources
This is some helpful text about how to use the application.
Start Date: 2/24/2011
End Date: 3/3/2011
Event Types:
 Major Fires
 Floods
 Hurricanes, Tropical Storms
Major Fires
Pariatur Excepteur
Dolore Magna
Voluptate Velit
Dolor Sit
Anim Id
Eu Fugiat
Qui Officia
Magna Aliqua
Floods
Exercitation Ullamco
Qui Officia
Vita E...

Fires



Hurricanes



Version 2 Enhancements - Hurricanes

OnTheMap for Emergency Management

Hurricane Alex
June 30 2010
24.8N, -96.4W
Max Wind 100
NW

Generate Report

Find Emergency Events

Start Date: 2/24/2011
End Date: 3/3/2011

Event Types:
 Major Fires
 Floods
 Hurricanes, Tropical Storms

Major Fires
 Pariatur Excepteur
 Dolore Magna
 Voluptate Velit
 Dolor Sit
 Anim Id
 Eu Fugiat
 Qui Officia
 Magna Aliqua

Floods
 Exercitation Ullamco
 Qui Officia
 Velit Esse
 Magna Aliqua
 Excepteur Sint

Hurricanes and Tropical Storms
 Minim Veniam
 Ipsum Dolor

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U.S. Jobs within Hurricane Areas					
Hurricane Alex	Past		Current		Future
	Tropical Storm Force Wind Area	Hurricane Force Wind Area	Tropical Storm Force Wind Area	Hurricane Force Wind Area	
Total					
Jobs by State, County, Place					
State					
County					
Place					
Jobs by Characteristics					
Age					
Earnings					
Industry					
Race					
Ethnicity					
Education					

Version 2 Enhancements - Flood Outlook Areas

U.S. Jobs within Flood Areas

	Total	Occurring	Likely	Possible
Jobs by State, County, Place				
State				
County				
Place				
Jobs by Characteristics				
Age				
Earnings				
Industry				
Race				
Ethnicity				
Education				

Version 2 Enhancements - Fire Perimeters

OnTheMap for Emergency Management - Mozilla Firefox

http://grunt.grittechnologies.com/themap5-duck/em.html

OnTheMap for Emergency Management OnTheMap LED Home Help and Documentation Reload

Return To National View

July 30 2010
34.5N, -118.5W
9700 Acres

Generate Report

Find Emergency Events Data Sources

This is some helpful text about how to use the application.

Start Date: 2/24/2011
End Date: 3/3/2011

Types: Major Fires Floods Hurricanes, Tropical Storms

Major Fires

- Pariatur Excepteur
- Dolore Magna
- Voluptate Velit
- Dolor Sit
- Anim Id
- Eu Fugiat
- Qui Officia
- Magna Aliqua

Floods

- Exercitation Ullamco
- Qui Officia
- Velit Esse
- Magna Aliqua
- Excepteur Sint

Hurricanes and Tropical Storms

- Minim Veniam
- Ipsum Dolor

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Source: U.S. Census Bureau, Center for Economic Studies | e-mail: esp.local.employment.dpa@uscensus.gov

U.S. Jobs within Fire Areas	
	Total
Jobs by State, County, Place	
State	
County	
Place	
Jobs by Characteristics	
Age	
Earnings	
Industry	
Race	
Ethnicity	
Education	

Version 2 Enhancements - Google Maps

Satellite



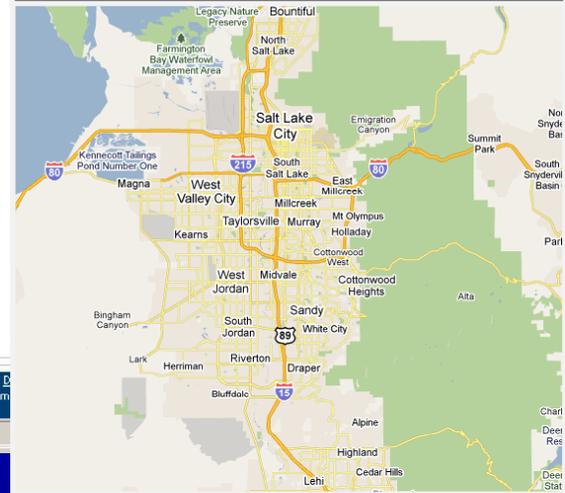
Hybrid



Terrain



Road



efox

<http://grunt.grittechnologies.com/themap5-duck/em.html>

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Base Layer

- Google Hybrid Map
- Google Road Map
- Google Satellite Imagery
- Google Terrain Map

Map data ©2011 Tele Atlas Imagery ©2011 NASA, TerraMetrics - Terms of Use

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Source: U.S.Census Bureau, Center for Economic and Census Data

What's Next?

- ❖ Release of Version 2 Hurricanes for upcoming season
- ❖ If interested in getting involved, sharing experiences, or providing feedback...please contact:

CES.Local.Employment.Dynamics@census.gov