Homeland Security

Geospatial Capabilities for Homeland Security

Brief for USTTI

DHS Geospatial Management Office

Agenda

- GMO Overview
- GMO Activities
- Real World Use Cases
- Questions

Geospatial Management Office (GMO): Overview

Authorities

- Established by the Intelligence Reform and Terrorism Prevention act of 2004 TITLE VII, Subtitle B, Section 8201, HOMELAND SECURITY GEOSPATIAL INFORMATION
- Implemented through DHS Management Directive 4030

Structure

- Reports to the DHS Chief Information Officer
- Internal & external governance
  - Open Geospatial Consortium
  - Federal Geographic Data Committee
  - INCITS L3
  - Internal DHS Executive Steering Committees
- Liaisons with
  - DHS Science and Technology
  - Program Manager for Information Sharing Environment
  - National Protection and Programs Directorate
  - National Geospatial-Intelligence Agency

Activities to support Homeland Security

Area	Description	Outcomes

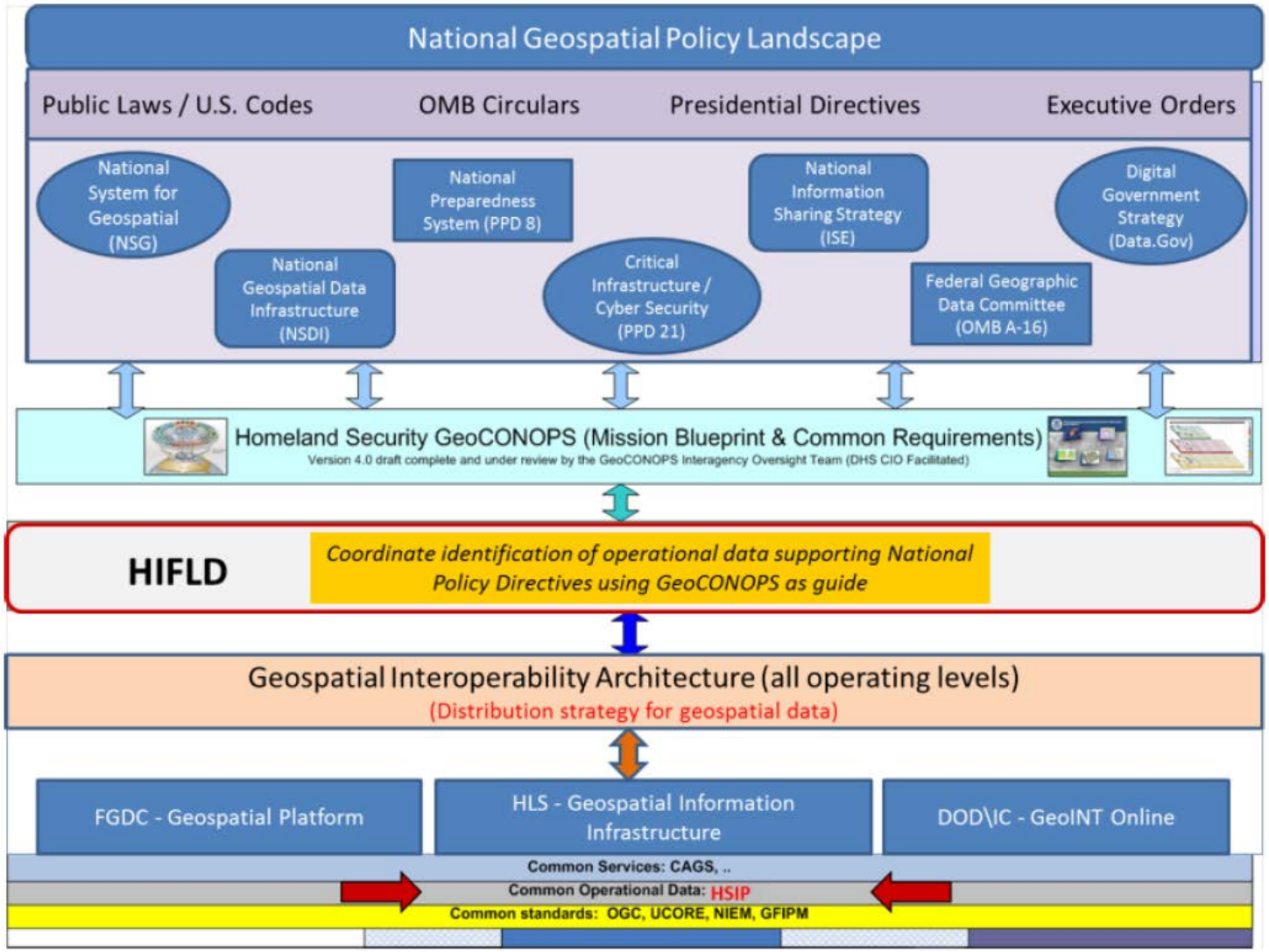
Coordination	Work with all mission partners to establish trusted / authoritative sources of geospatial data, assure interoperability, provide best practices, and mission coordination	• Homeland Security Geospatial Concept of Operations developed
		  • Incorporated under PPD-8 National Preparedness framework
		  • Supports Section 515 of the Homeland Security Act
		• Developing DHS unclassified capability on the Federal GeoPlatform
		• Working with the National System for Geospatial Intelligence, the Federal Geographic Data Committee and the White House Information Sharing Environment Office to define the architecture for CUI / SBU geospatial information sharing

Geospatial Data Provisioning	Provide access to common operating data and event / mission data to homeland security partners	• Developed agreed-on set of common operating data (COD)
		  • Homeland Security Infrastructure Protection Gold data set
		  • 450+ layers of information
		• Divested or consolidated other data investments to ***avoid costs of over $10M per year since 2007***
		• Ongoing development of standards-based shared data services with mission partners
		• Incident Imagery service (May, 2012)

Shared Geospatial Infrastructure	Establish shared geospatial infrastructure that can be leveraged by homeland security mission partners	• DHS Geospatial Information Infrastructure established
		  • Data services **(*top ten services have been called 3 million times in FY2012!!*)**
		  • Geoanalytics
		  • Visualization tools
		  • Re-use of Homeland Security Information Network Identity and Access Management controls

Geospatial Software Provisioning	Establish enterprise license agreements for geospatial software to support rapid deployment for incident response and reduce costs	• Agreements in place with ESRI, Google, MS Bing Maps • ***Over $30M in savings over GSA schedule since 2006***

Coordination: GEOCONOPS



Coordination: GeoCONOPS

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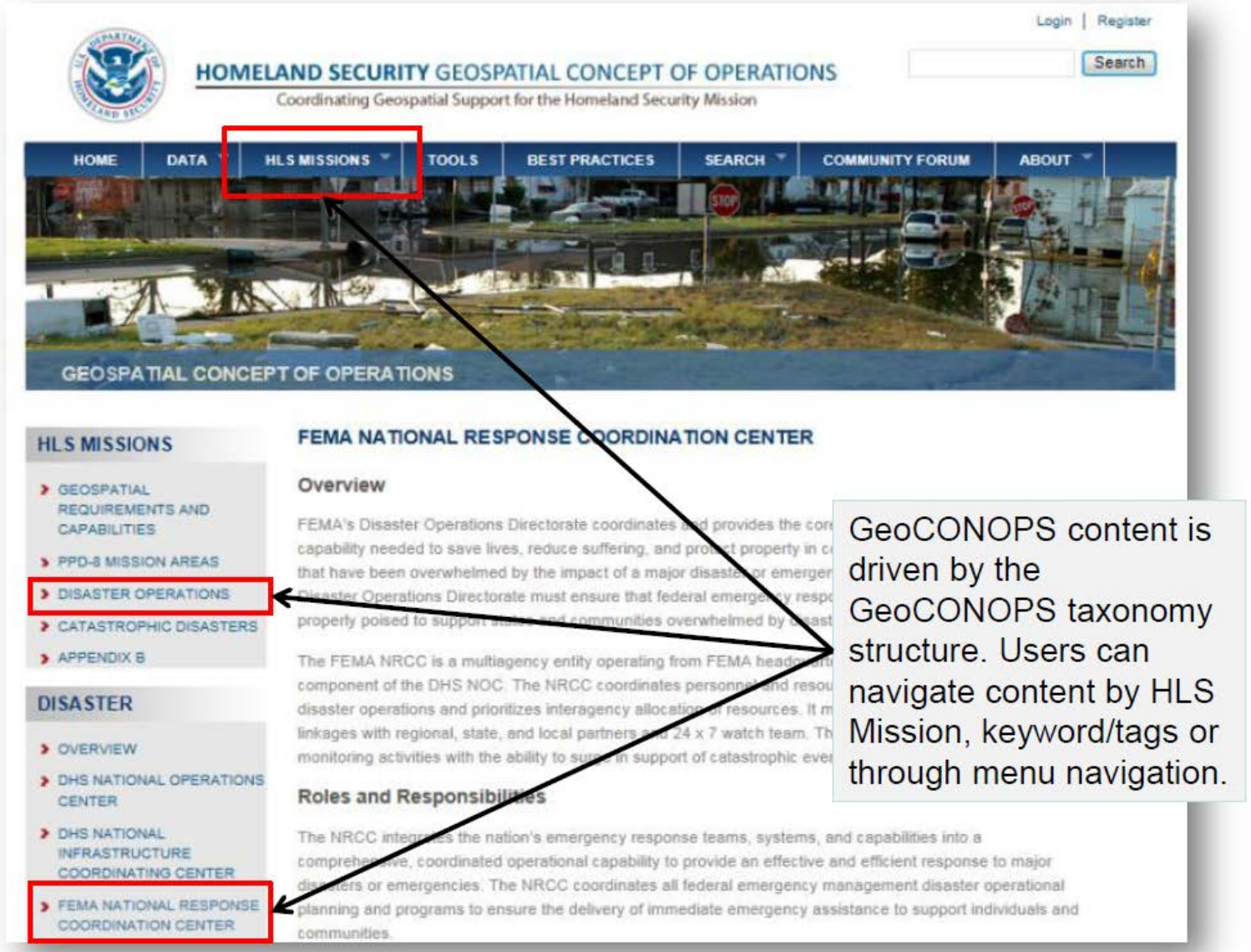

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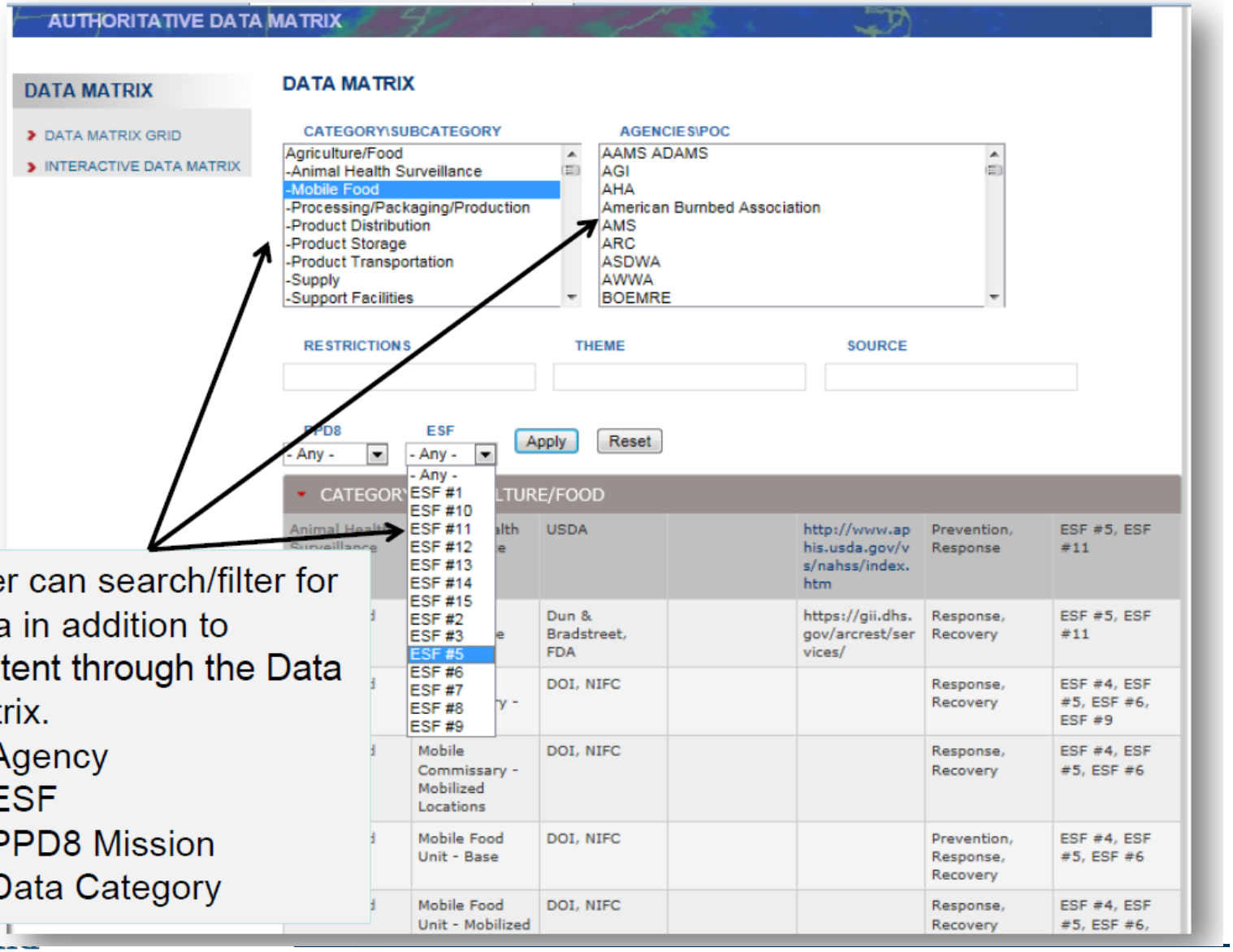
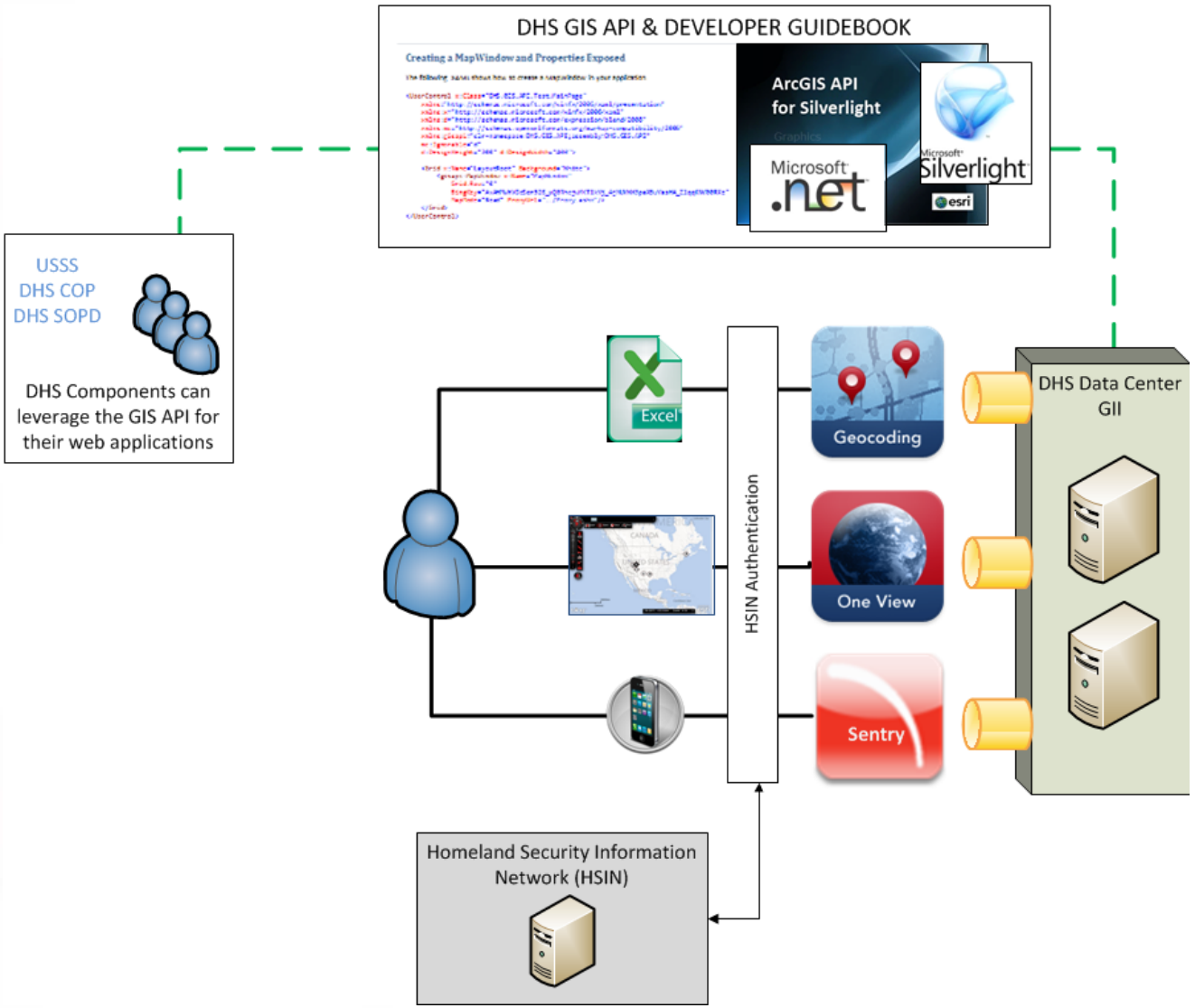


User can search/filter for data in addition to content through the Data Matrix.

- Agency
- ESF
- PPD8 Mission
- Data Category

Geospatial Data Provisioning: GII



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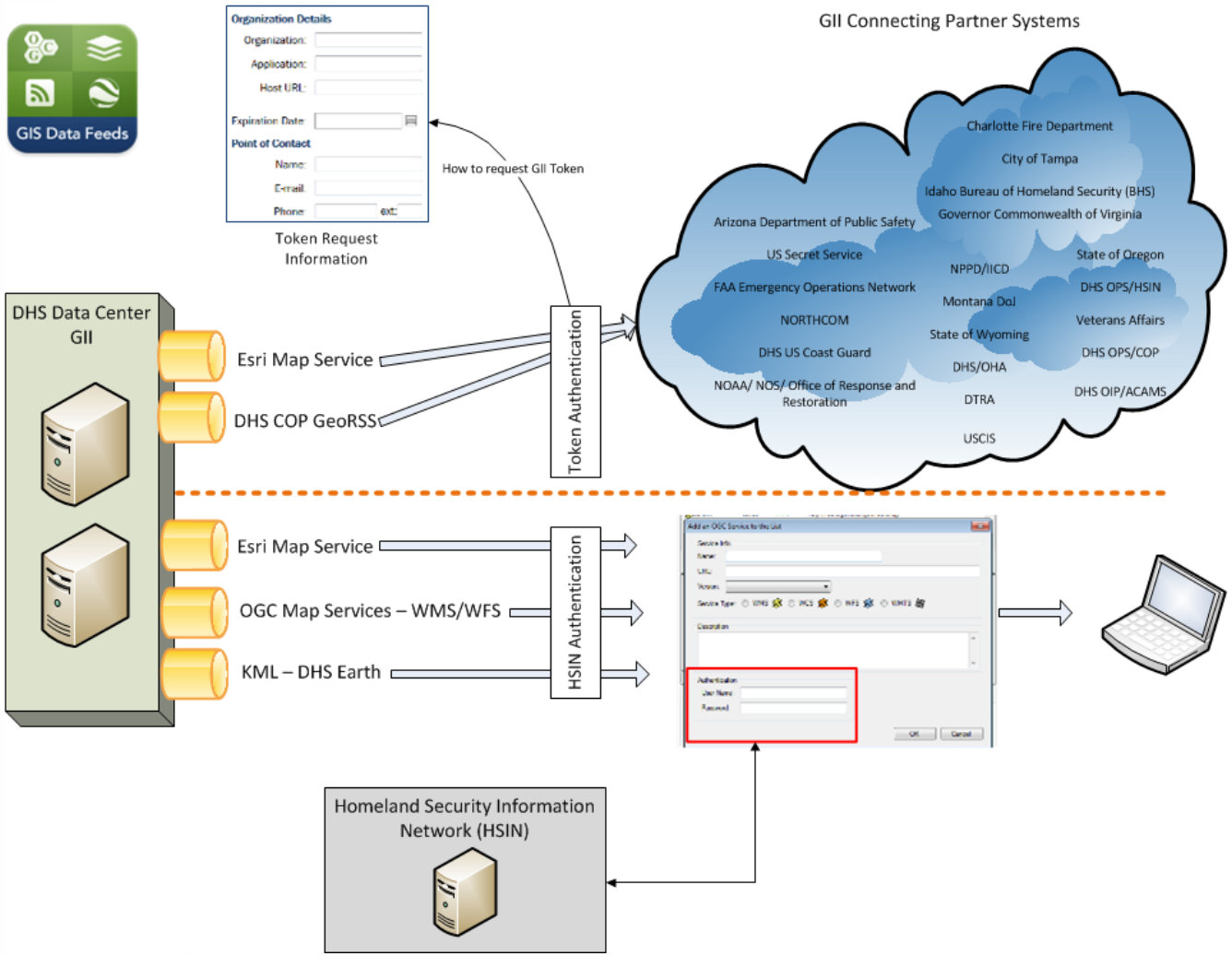

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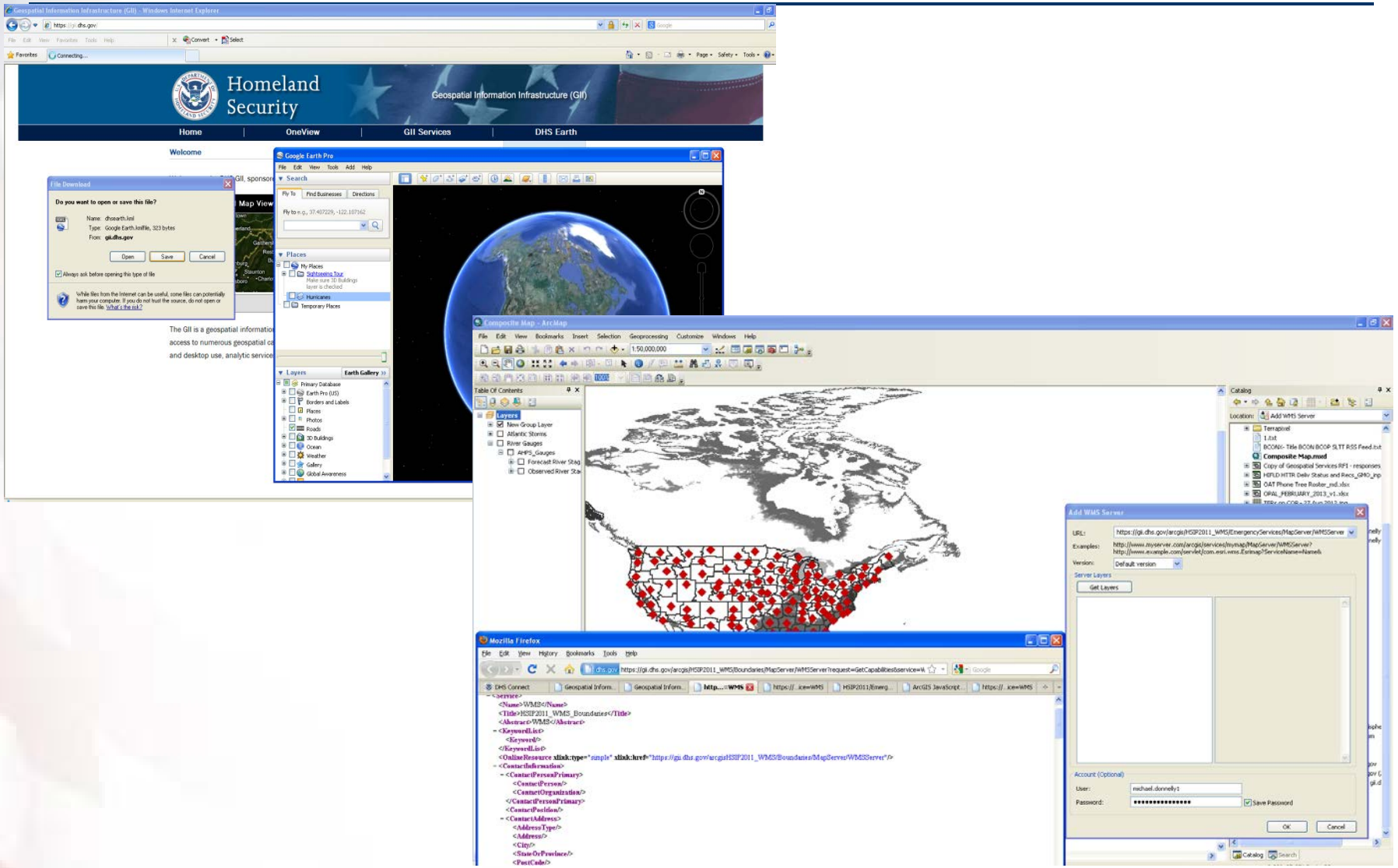


Shared Geospatial Infrastructure: Delivery Architecture

Key Points:

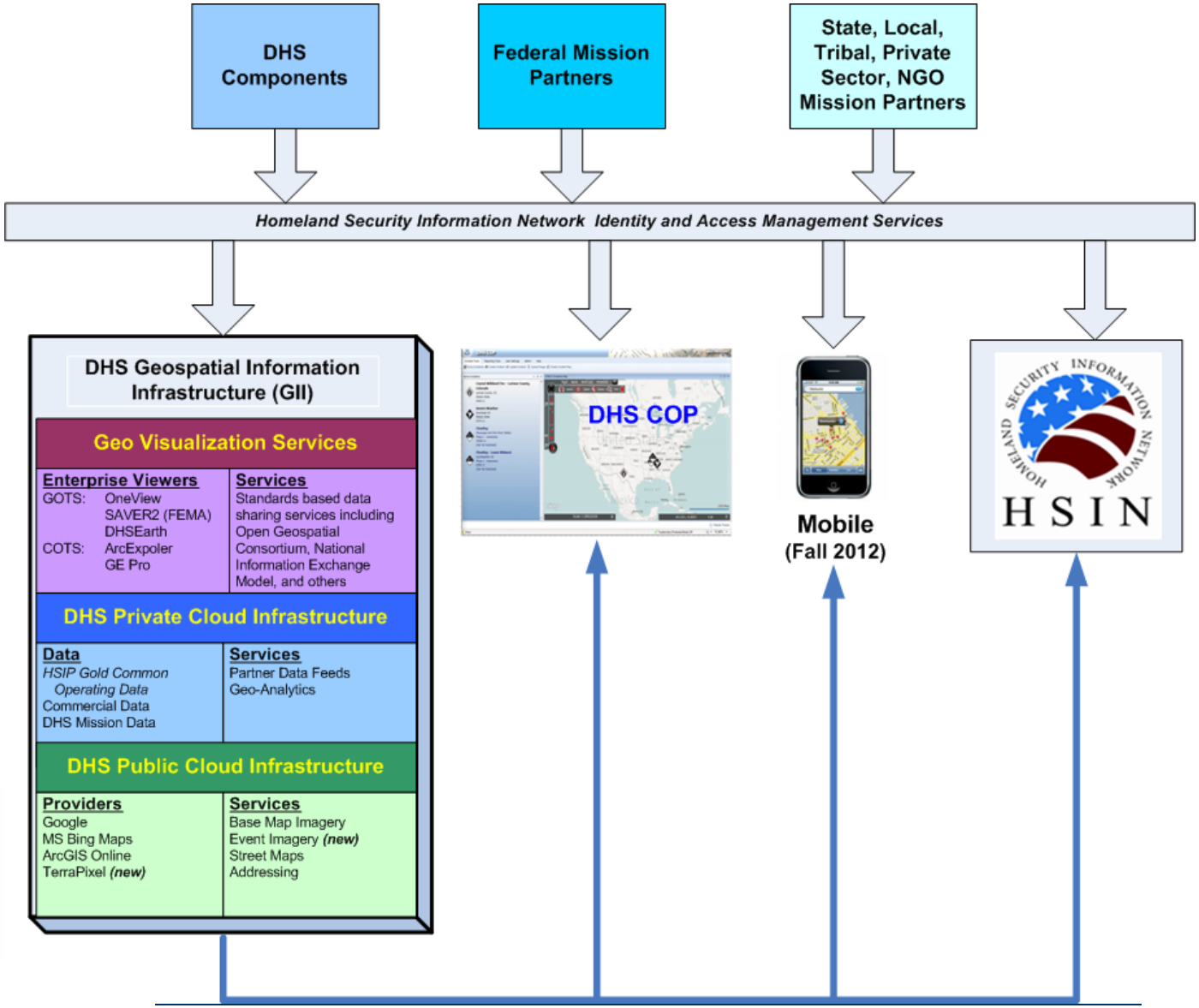
The GII is physically located in the DHS Data Centers

Accessible through the HSIN identity service

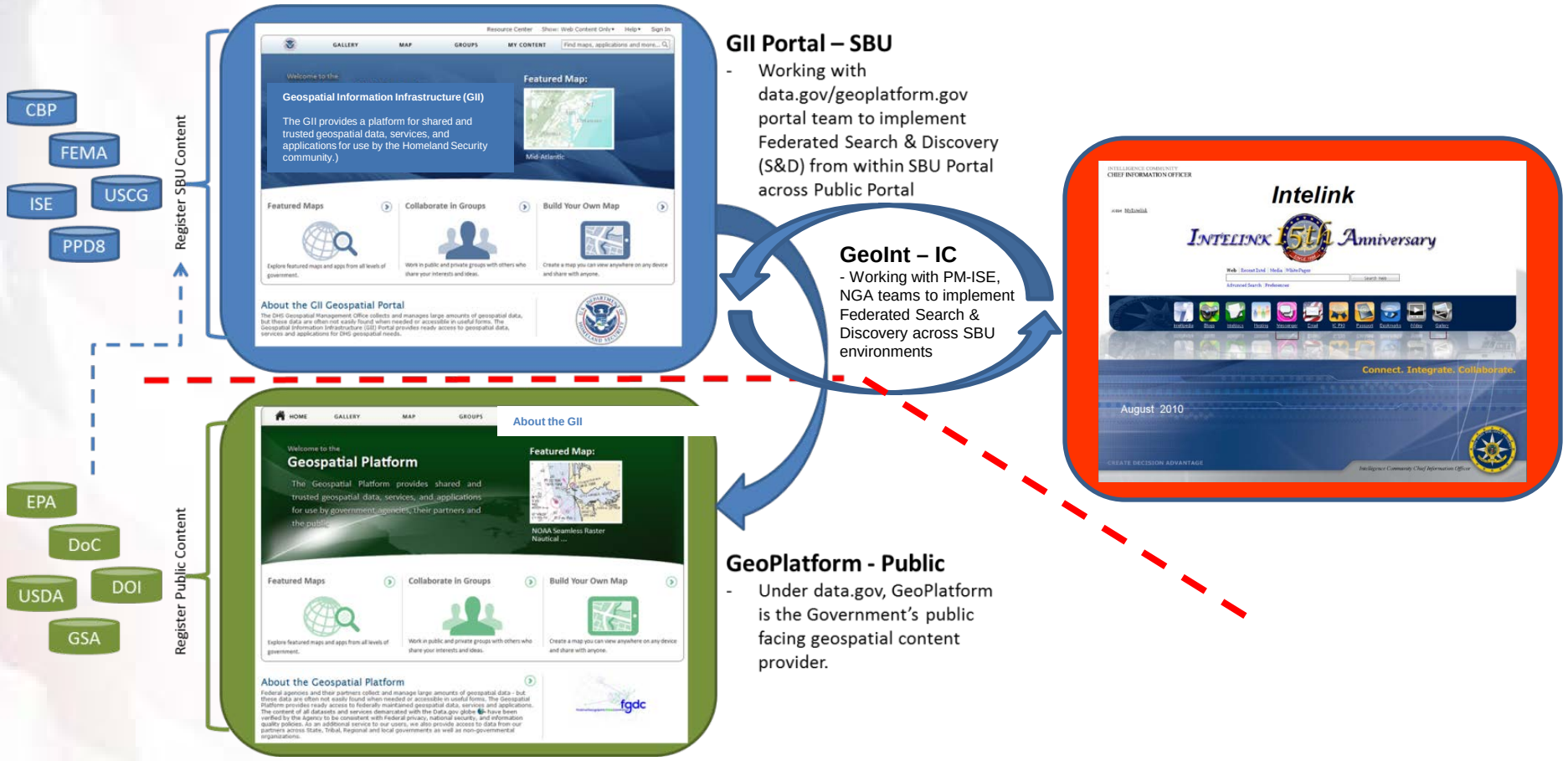
Provides viewing tools, data and analytical services

Supports the DHS COP and HSIN

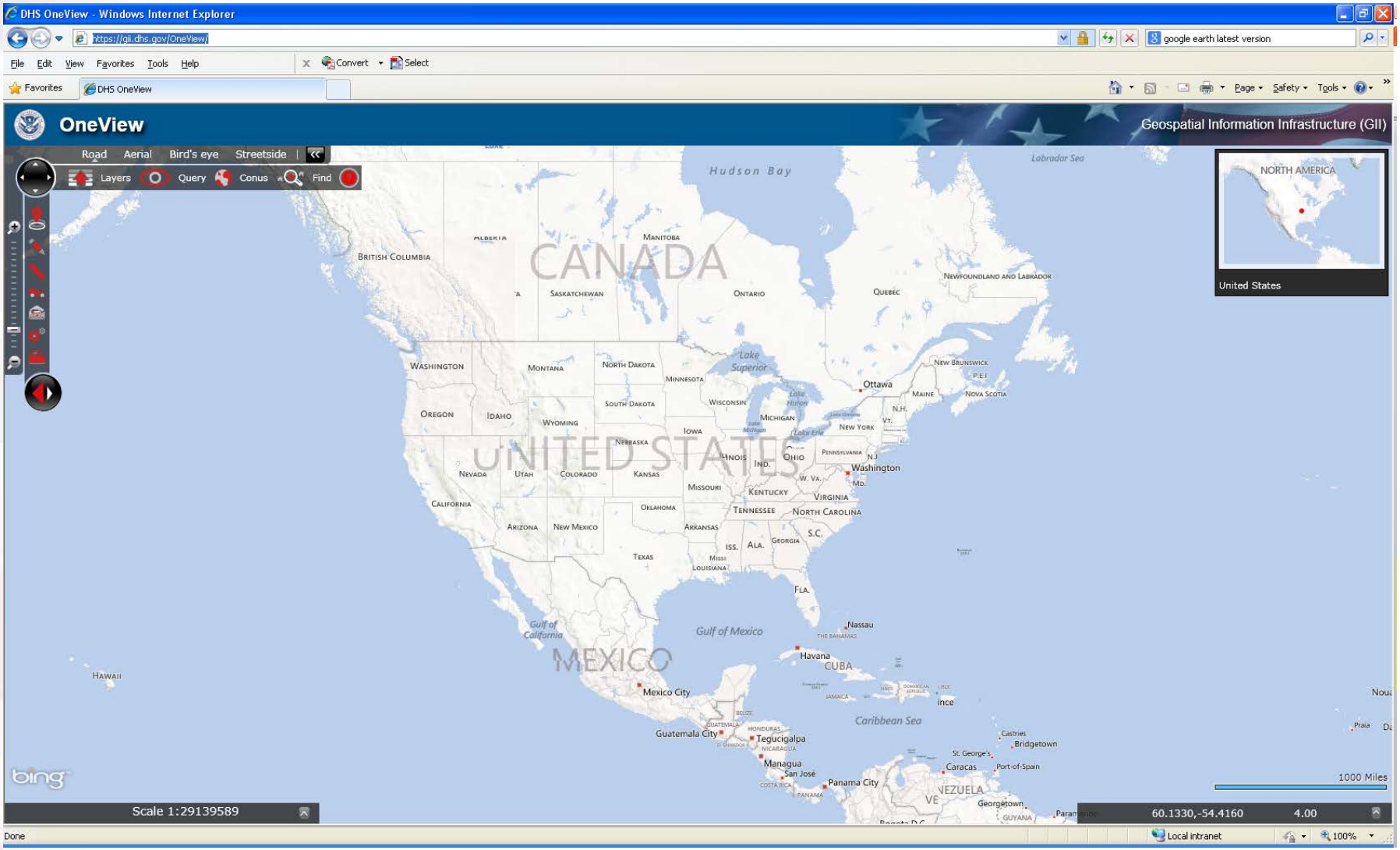
Supports User Defined Operating Pictures (UDOP) across the Homeland Security Enterprise



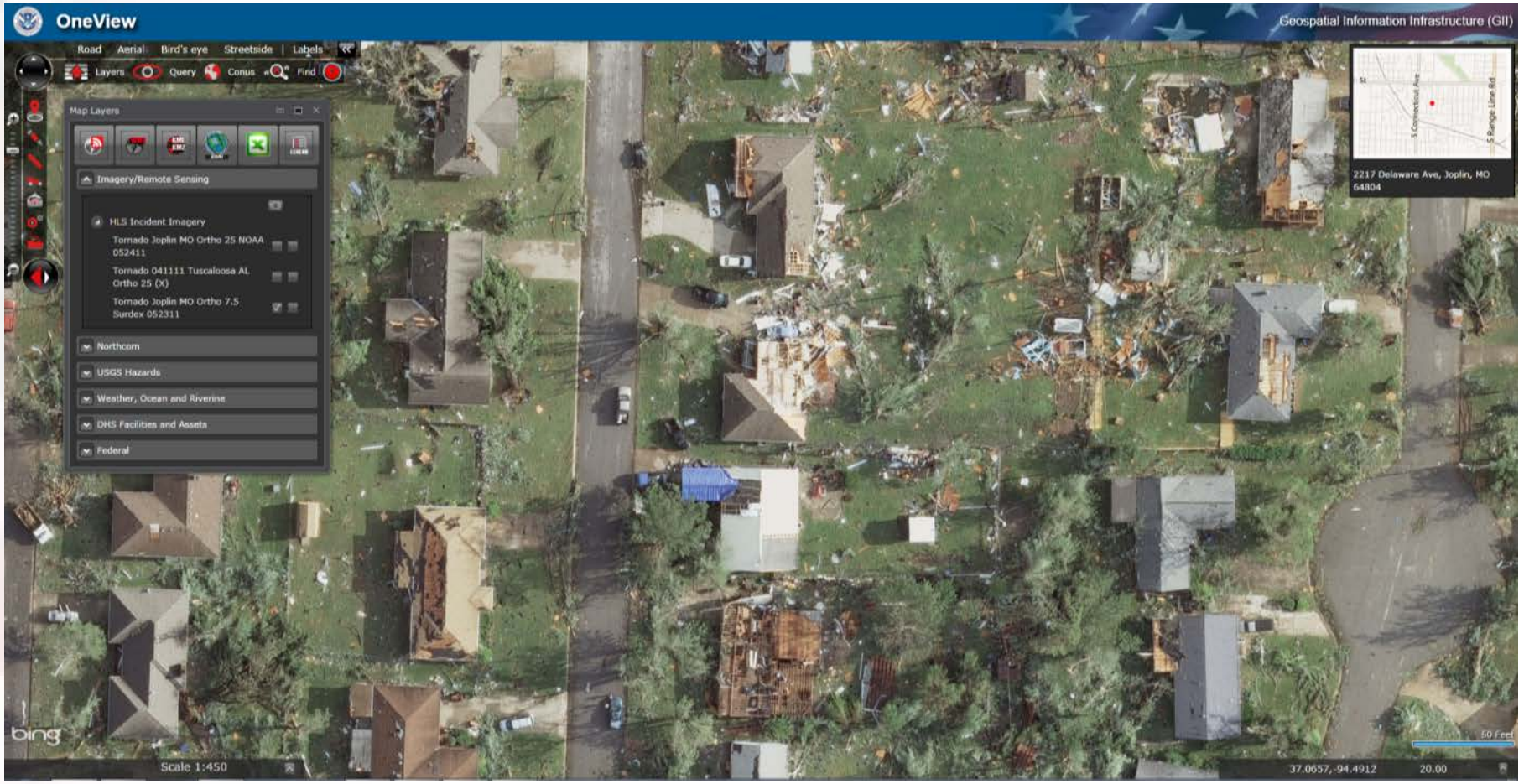
Shared Geospatial Infrastructure: Interoperability



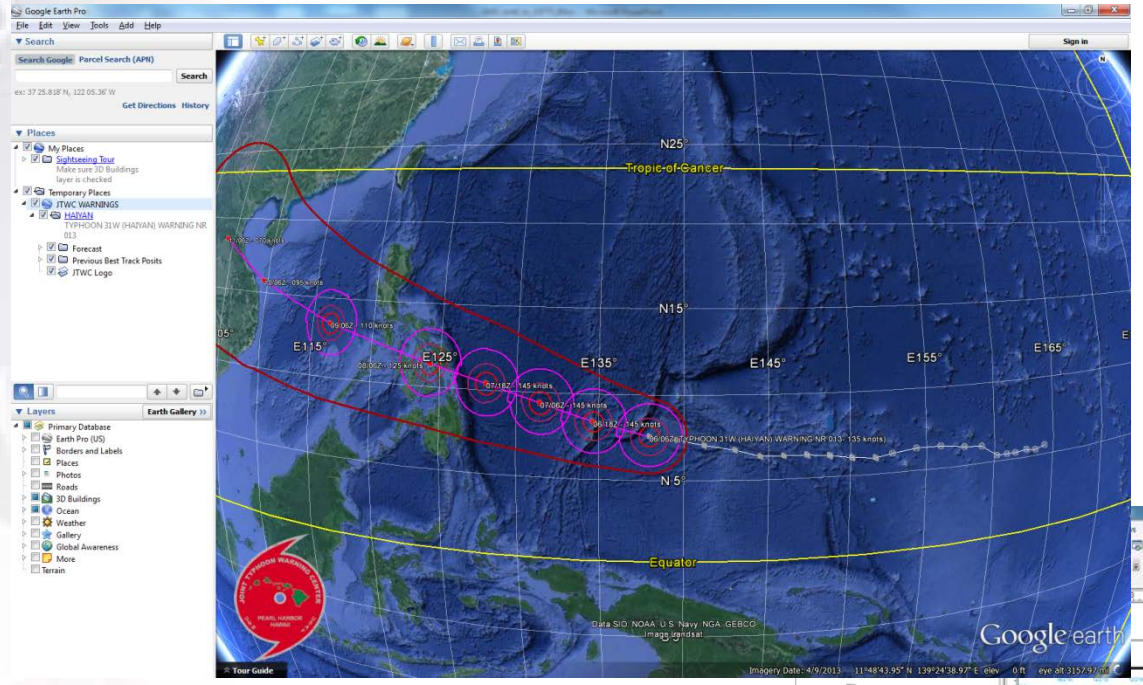
Shared Geospatial Infrastructure: GII and APIs

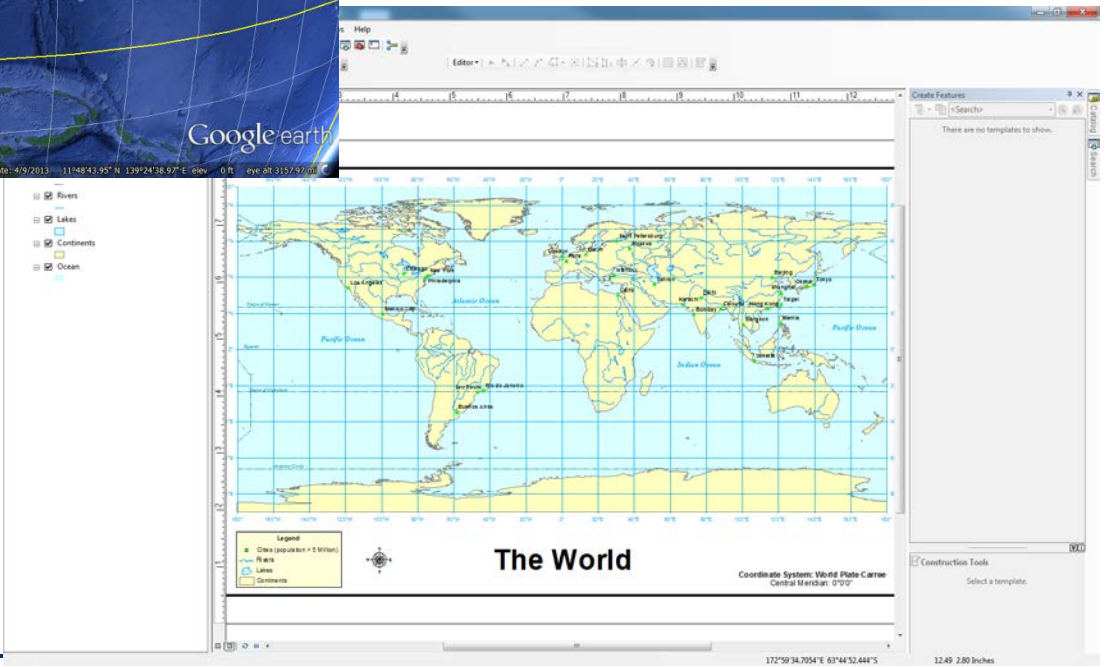


Shared Geospatial Infrastructure: Remote Sensing

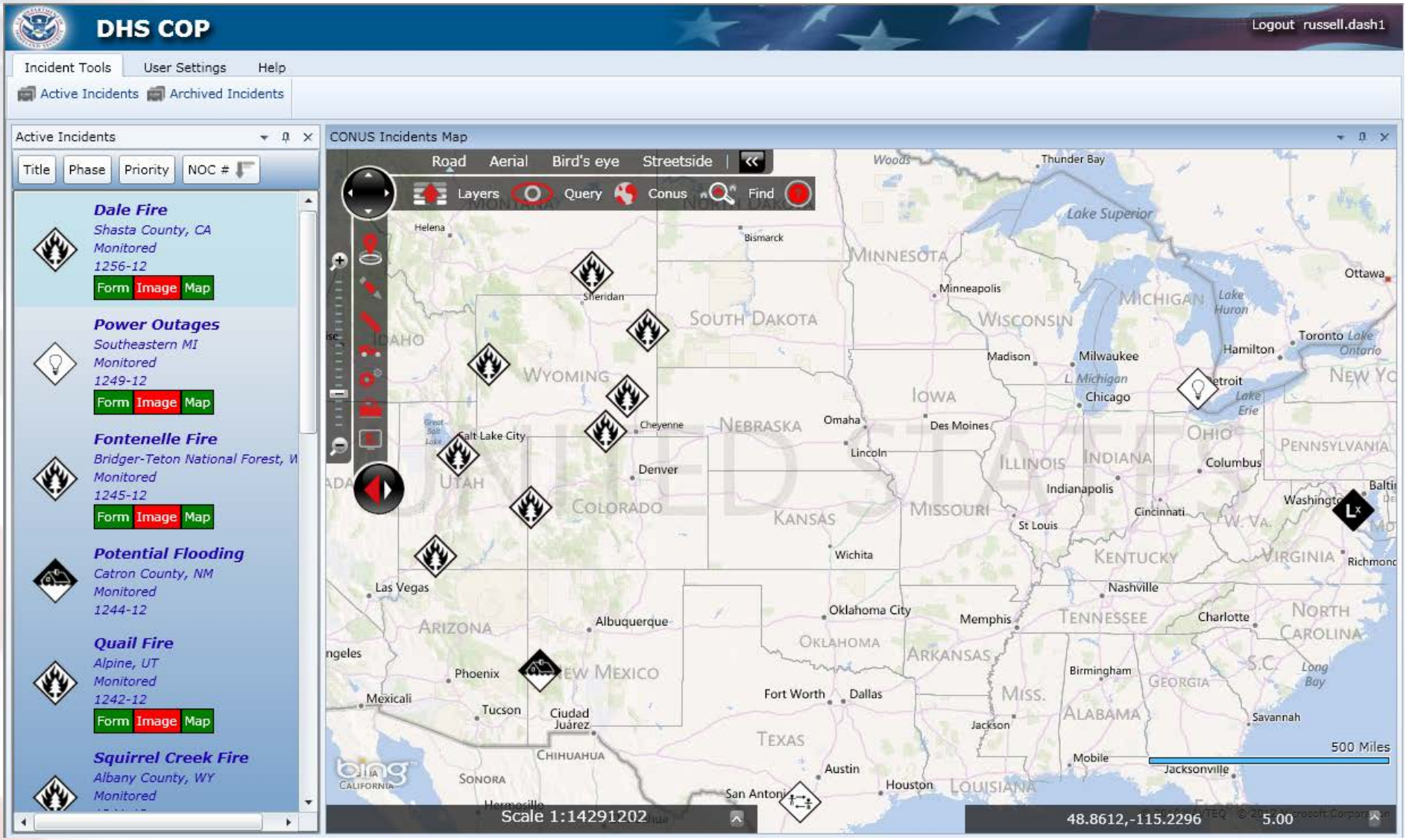


Software Provisioning: ESRI ArcGIS, Google Earth





Real World Use Cases: Situational Awareness



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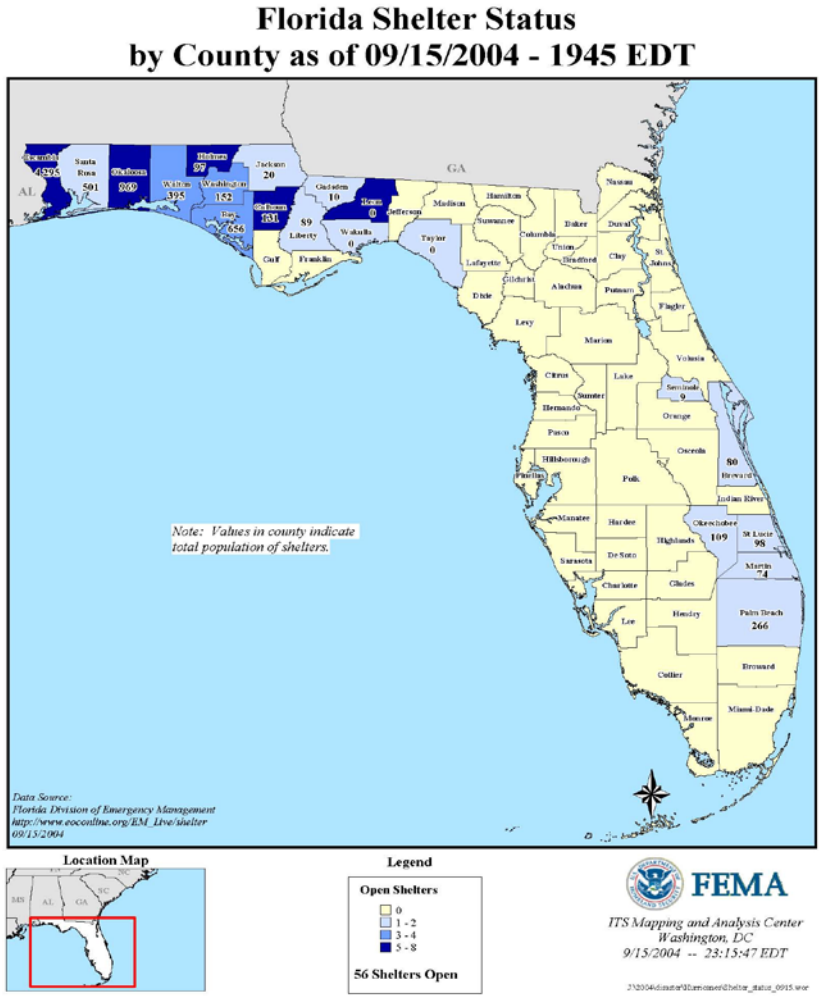
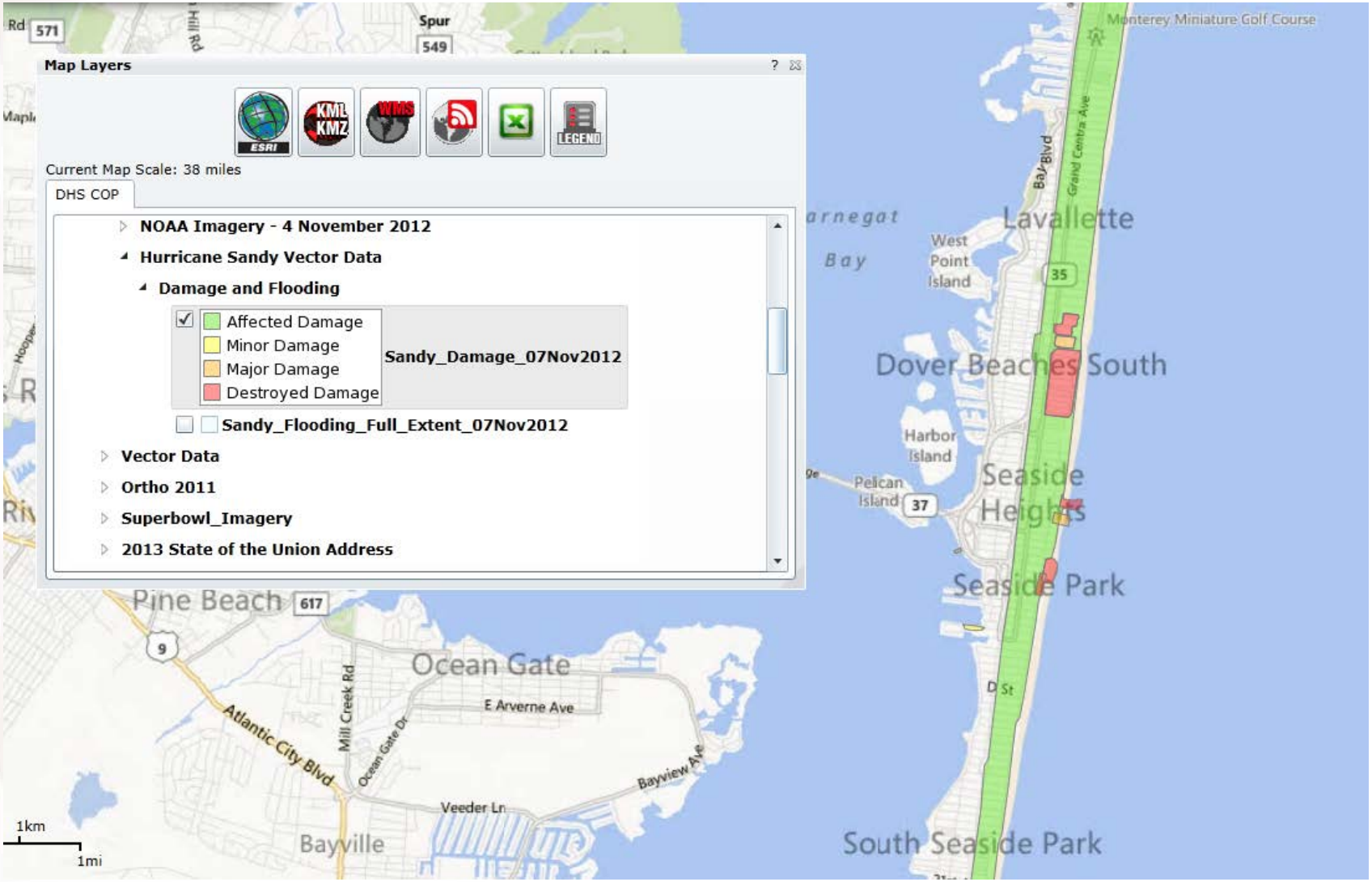
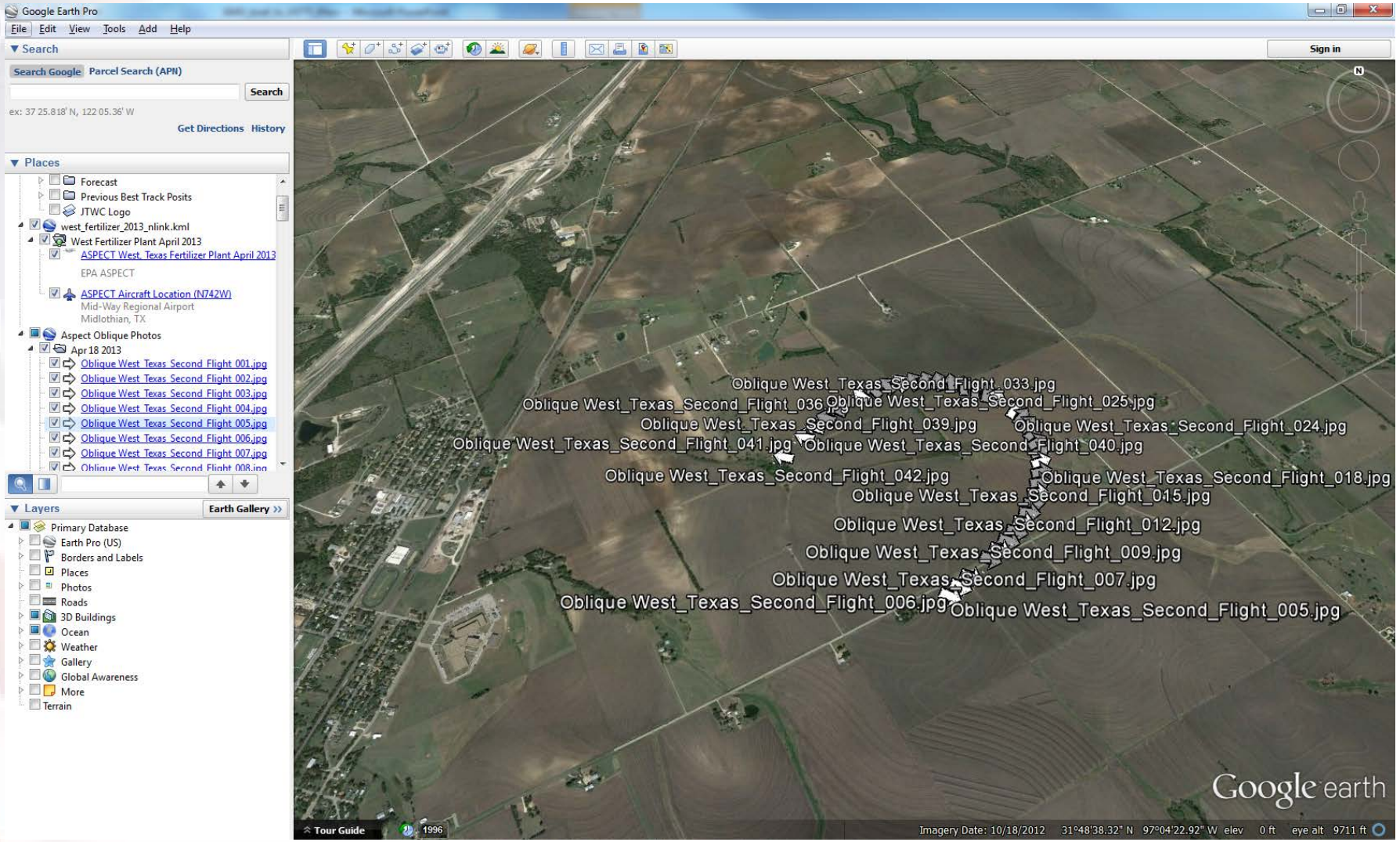


Real World Use Cases: Damage Assessments

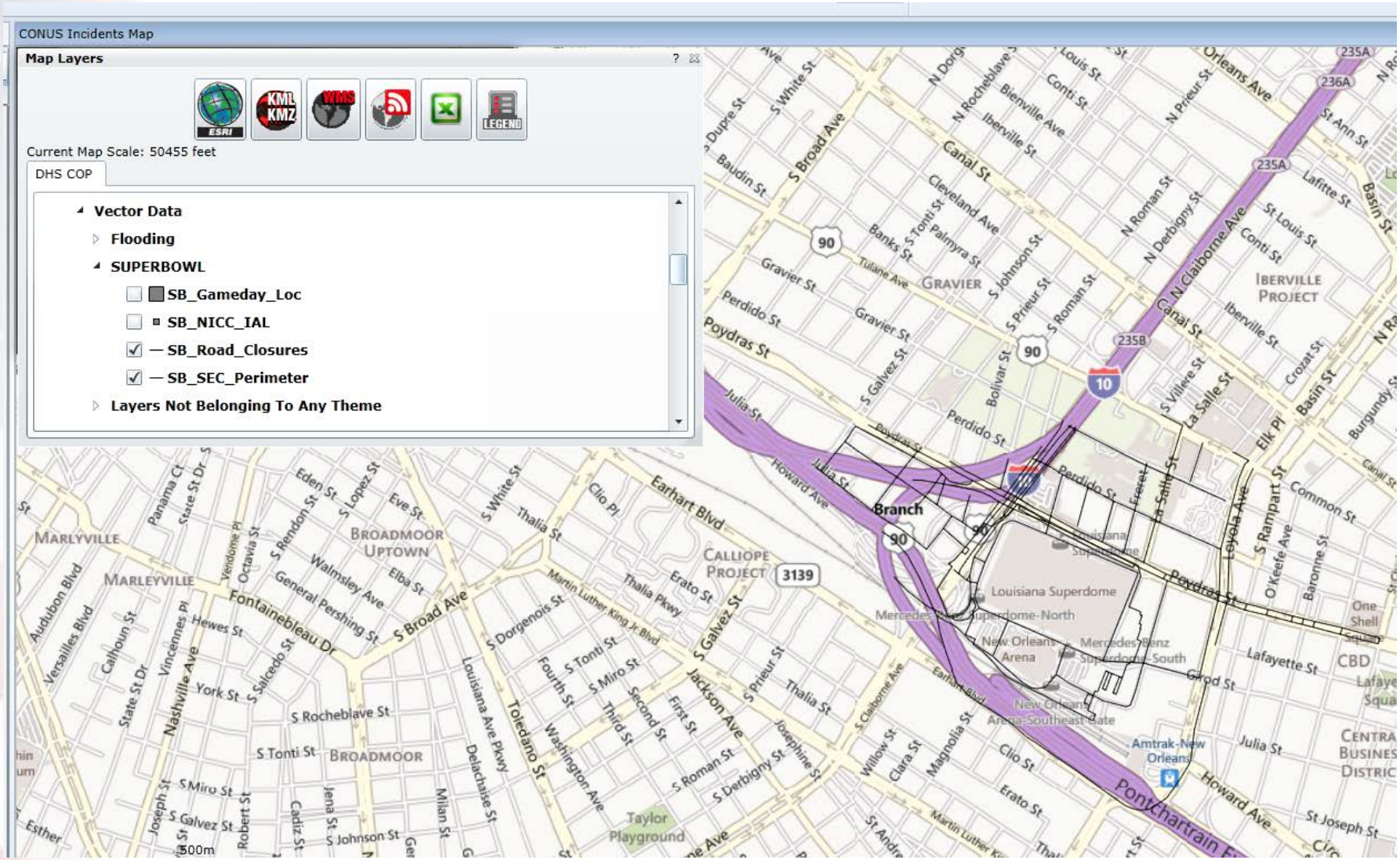


Real World Use Cases: Disaster Response

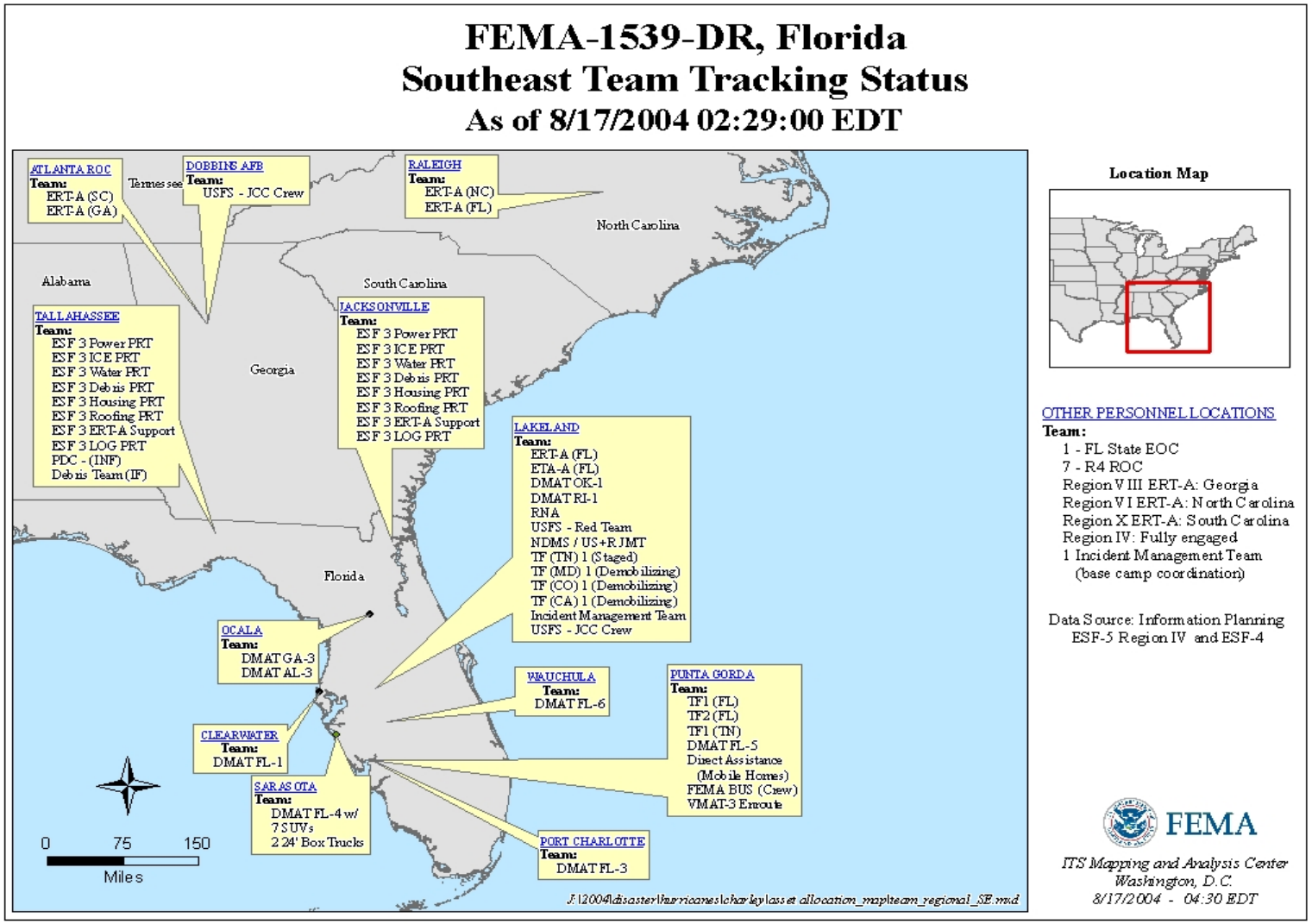


Real World Use Cases: Disaster Response

Real World Use Cases: Event Planning



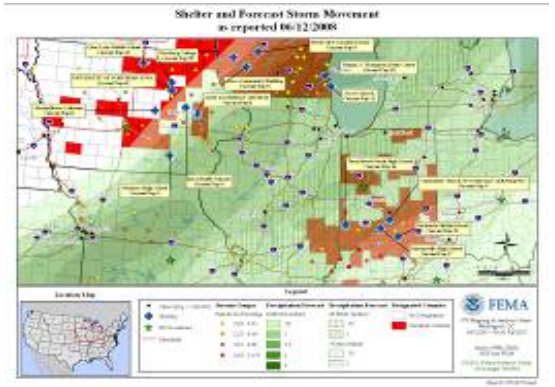
Real World Use Cases: Event Planning



Summary

- **GIS is essential to Emergency Management business, functions, and missions from response and recovery to mitigation and preparedness.**
  - GIS is the cornerstone of situational awareness.
  - GIS provides the foundation for disaster modeling.
  - GIS technology is critical to locating, sizing, and understanding an emergency and/or disaster
  - GIS provides the capability to evaluate the consequences of a disaster.
- **Geospatial capabilities enhance situational aware and enable core missions**
  - To ensure the right data are available
  - To ensure the right tools are used
  - To ensure the right information is communicated, consistently

Proximity Analysis



Shelter Management

Questions

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