

Current and Future State of the Union on Preparedness Data



November 14, 2019

Hosted by National Alliance for Public Safety GIS (NAPSG) Foundation

napsgfoundation.org | [@napsgfoundation](https://twitter.com/napsgfoundation)

Welcome & Introductions

Lead Facilitator: Julie Eckert, HIFLD Sub-Committee Secretariat/Ardent MC

Support Facilitators: Tricia Lawson, NAPSG Foundation
Noah Goodman, Ardent MC

Session Overview:

This session will weave together a series of lightning briefings, providing a baseline on the current and future state of preparedness data, and breakout discussions to define high priority unmet needs and requirements in preparedness data nationwide.

Agenda

Opening of Session

9:00 – 9:05 Introductions and Welcome

National Data Assets

9:05 – 9:25 HIFLD (20 min)

9:25 – 9:45 Transportation Data: Cliff Allison, HERE (20 min)

9:45 – 10:00 Census Data for Disaster Planning: Jim Castagneri & Lacey Loftin, US Census Bureau (15 min)

10:00 – 10:30 Group Discussions (30 min)

10:30-10:45 Break (15 min)

Hazard/Disaster Data, Coordination, and Dissemination

10:45 -11:00 Maureen Kelly, National Risk Index, FEMA (15 min)

11:00 – 11:15 Disasters.GeoPlatform: Chris Vaughn (15 min)

11:15 – 11:30 MDWG: Siddharth Panday, Modeling & Data Working Group/Dewberry (15 min)

11:30 – 11:45 Geospatial Coordination: Rebecca Kollmeyer, New Light Technologies (15 min)

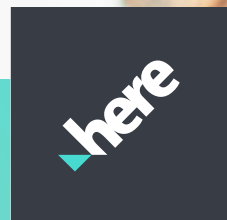
11:45 – 12:25 Group Discussions (40 min)

12:25 – 12:30 Wrap-Up Discussion on Next Steps and Key Actions

HIFLD

Transportation Data

Cliff Allison, HERE



HERE Technologies presentation to NAPSG

Cliff Allison – Sr. Account Executive, Public Sector Sales

Mobile : +1 703 217 9267

cliff.allison@here.com



Agenda

1 | HERE Update

2 | HERE Places

3 | HERE LIDAR

4 | HERE Data
for HIFLD

5 | State and Local
Access

6 | Summary

HERE in numbers



200
countries mapped



4 of 5
in-car navigation systems in Europe and North America use HERE maps



9,000+
employees in 56 countries



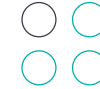
400+
HERE cars collecting data for maps



30+
years of experience transforming location technology



15,000
venues mapped globally



700,000
3D data points per second per car



HD Live Map covering
600,000+
kilometers for autonomous driving



1,600
cities with transit routing in over 50 countries



HERE USA public sector customers

Government & enterprise

Federal		State and local		
• Department of Homeland Security (DHS) • Federal Emergency Management Agency (FEMA) • National Geospatial Intelligence Agency (NGA) • FBI • US Customs and Border Protection • DEA • USGS • National Labs	• EPA • HHS • CDC • Forest Service • National Guard • US Army Northern Command • Census • USGS • US Army • DoD	• NYNJ Port Authority (includes all NY Metro Airports) • Dept. of Homeland Security NYC • NYC Emergency Management • Alabama DOT • Iowa DOT • Kentucky Transportation Cabinet • Missouri DOT • Oklahoma DOT	• Utah DOT • Virginia DOT • DC DOT • Tennessee DOT • North Carolina DOT • Georgia DOT • Maryland DOT • Oregon DOT • Caltrans D3 • Caltrans D8 • Through Partners (IBI Group, Iteris,	• GIS Solutions and Transcom) • Minnesota DOT • Arizona DOT • Wisconsin DOT • Massachusetts DOT • Louisiana DOT • Florida DOT • New York DOT • Connecticut DOT • South Carolina DOT • Illinois DOT

Why the HERE Map?

The 4 dimensions of map differentiation



Map making process

4 ▶ Publish

The database is updated every day and fuels various HERE services and solutions. Every year, HERE tests the map against reality to ensure the highest accuracy

Everyday updates 900+ attributes 200 countries

50+ product & components

Use cases
Automotive
Transport & Logistics
Public Sector
Internet & Media
Telco

Delivery*
Daily
Weekly
Bi-weekly
Monthly
Quarterly

* varies by product

3 ▶ Process

Data is ingested and processed through a combination of automated and manual methods. Before publishing, the map edits run through >2000 validations to ensure consistency of the database

2 ▶ Extract

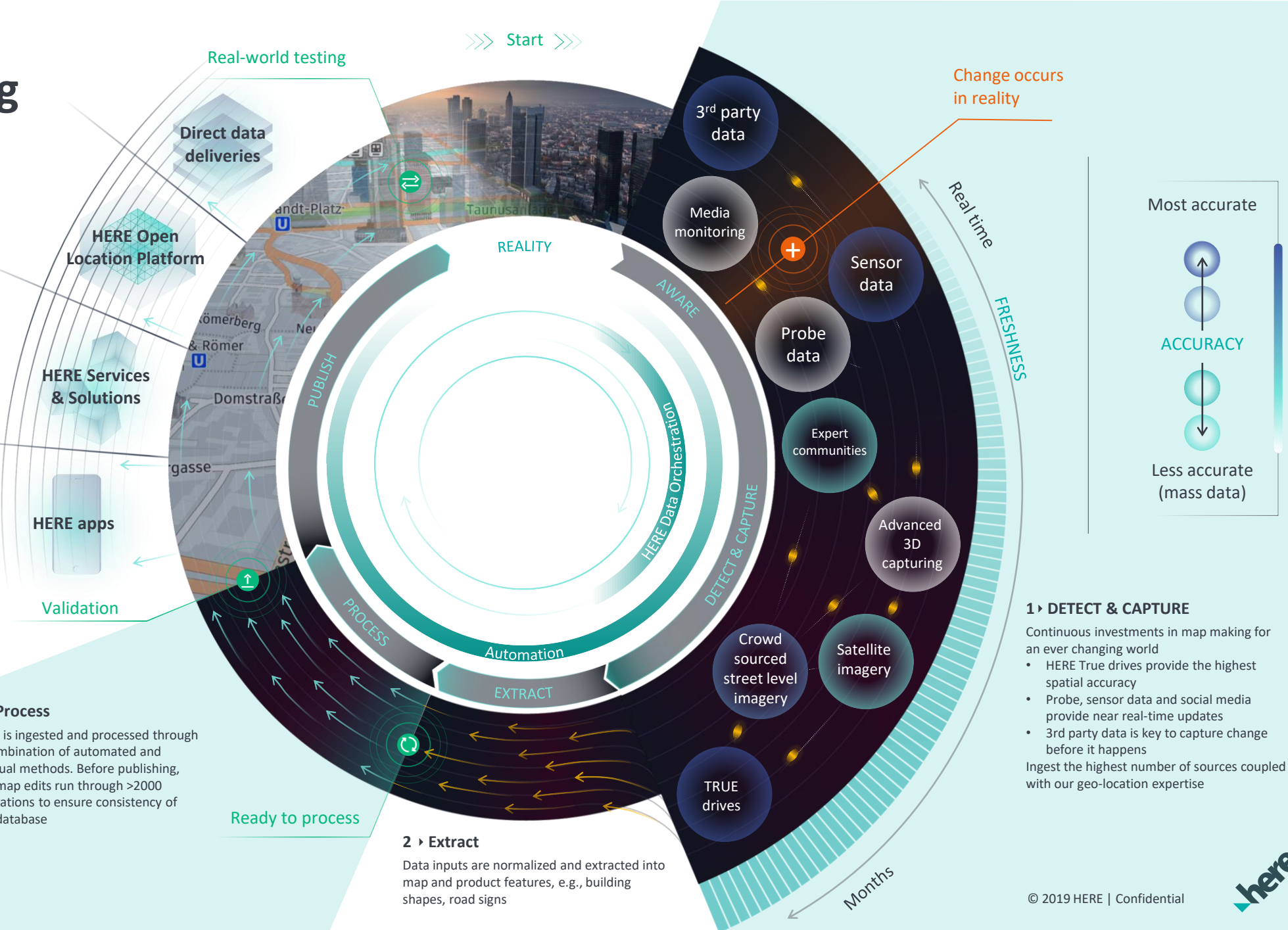
Data inputs are normalized and extracted into map and product features, e.g., building shapes, road signs

1 ▶ DETECT & CAPTURE

Continuous investments in map making for an ever changing world

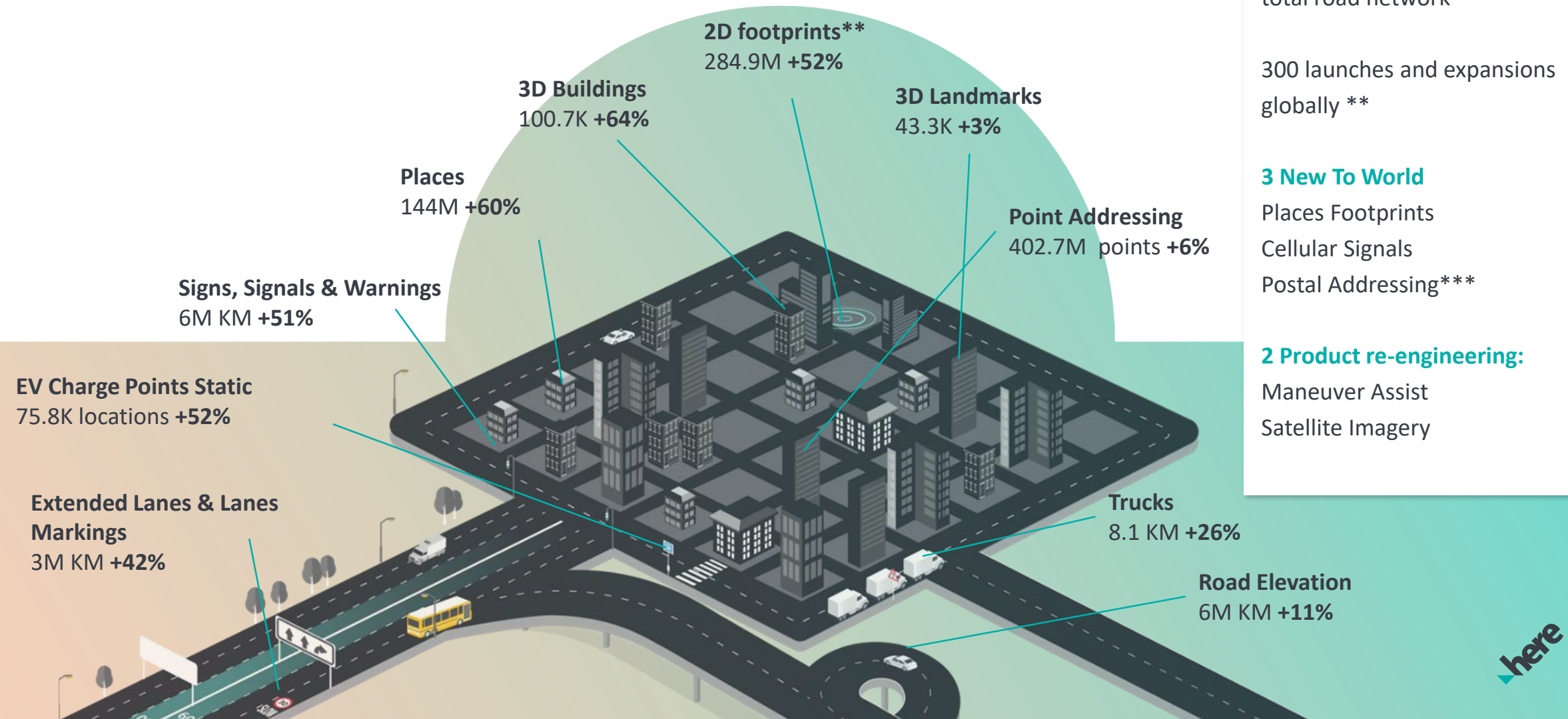
- HERE True drives provide the highest spatial accuracy
- Probe, sensor data and social media provide near real-time updates
- 3rd party data is key to capture change before it happens

Ingest the highest number of sources coupled with our geo-location expertise



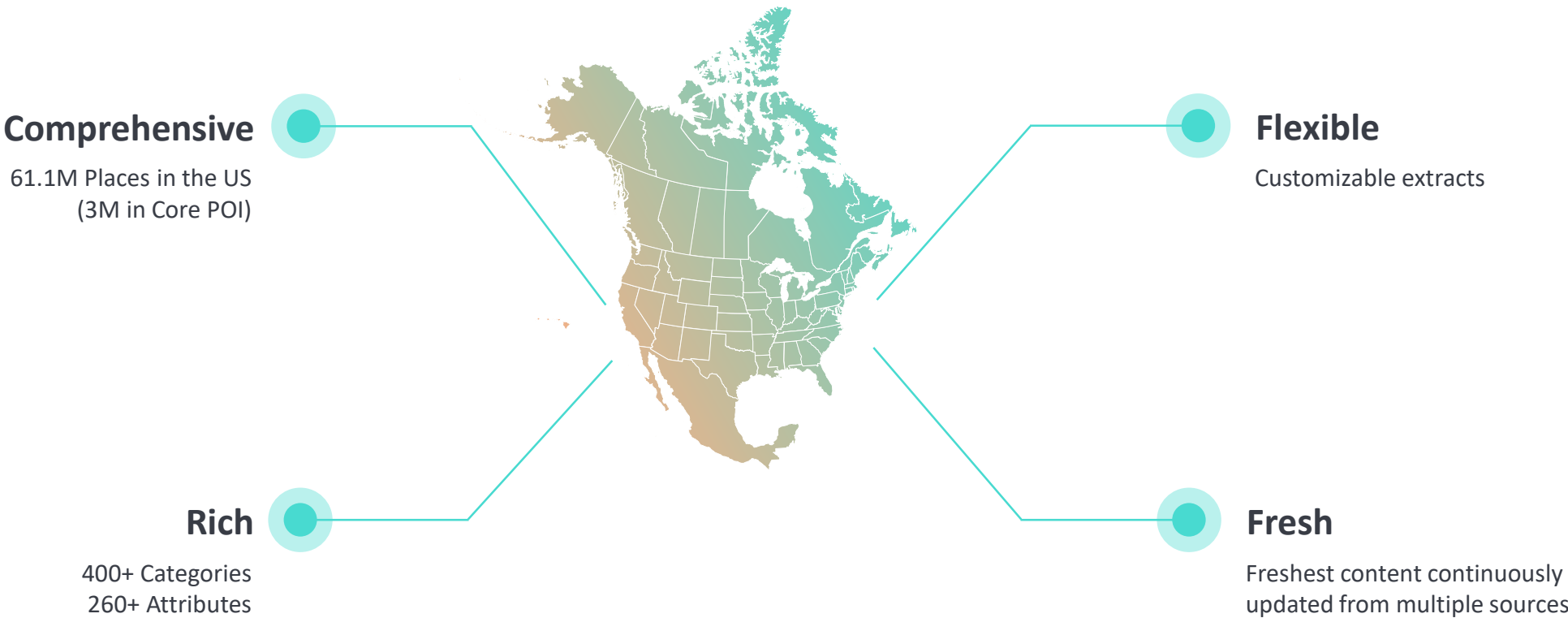
Richness

Significant attribute expansion



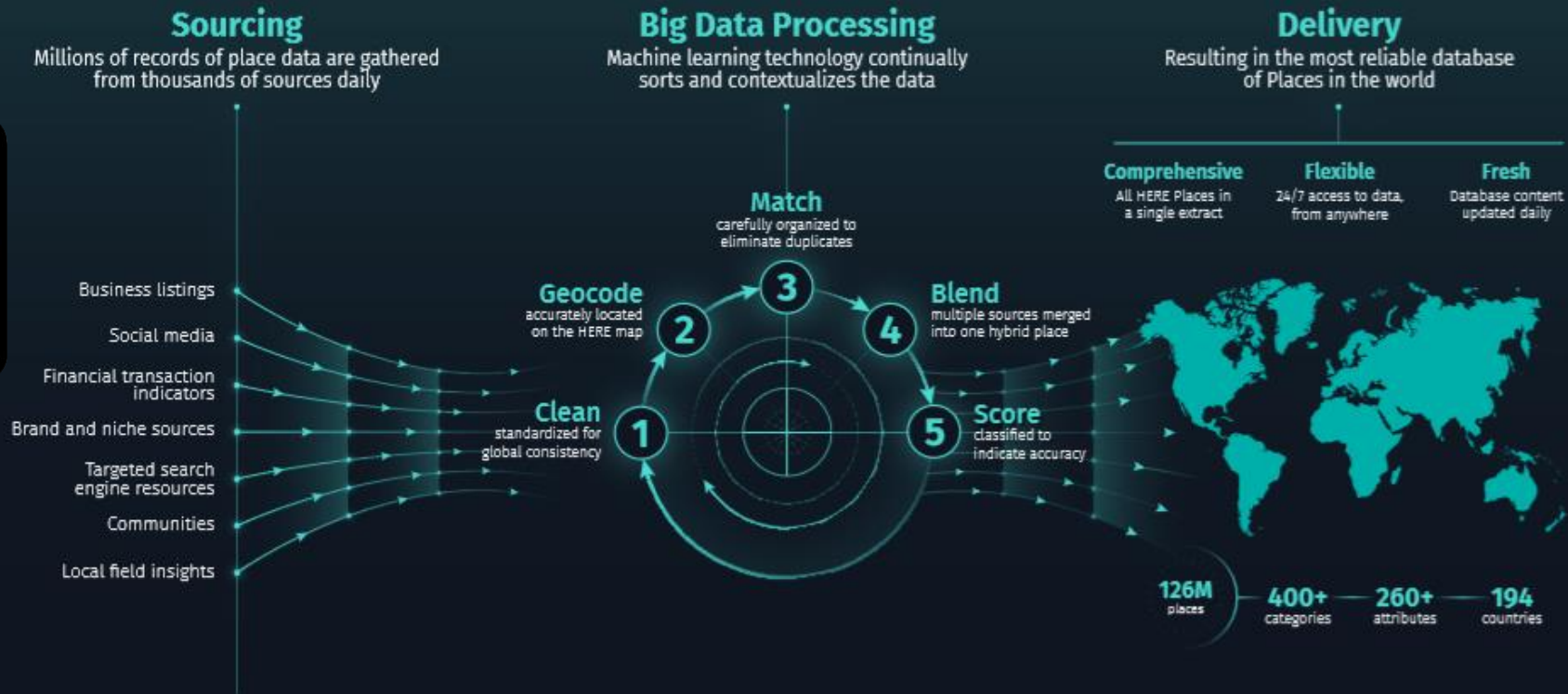
HERE Places in the US

Extensive coverage and richness

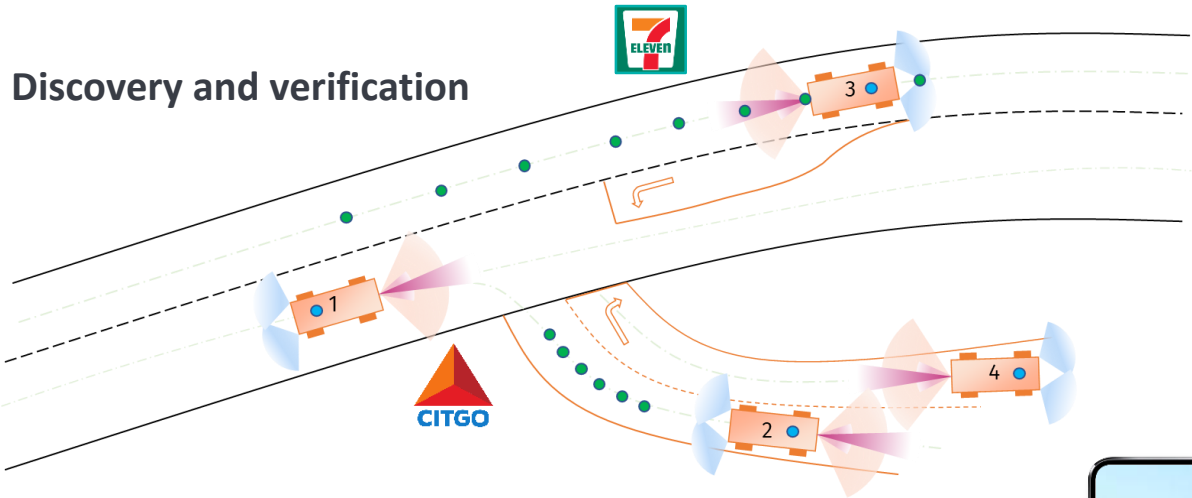


Places Extract

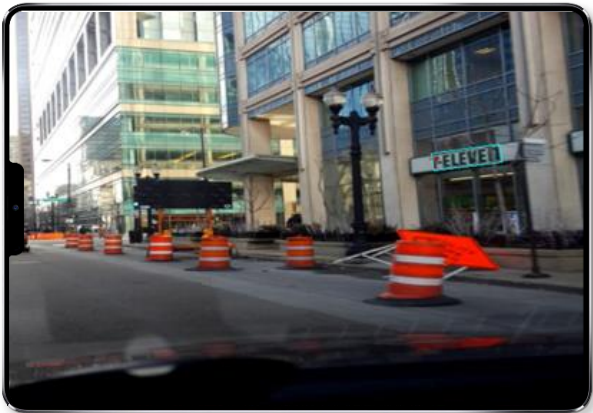
How HERE is building the most comprehensive database of Places in the world



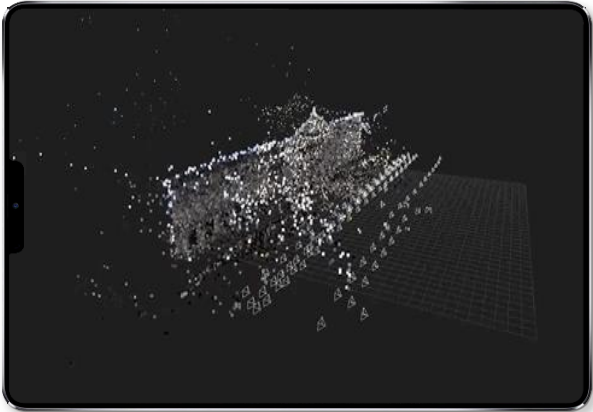
Street level capture capabilities



Imagery

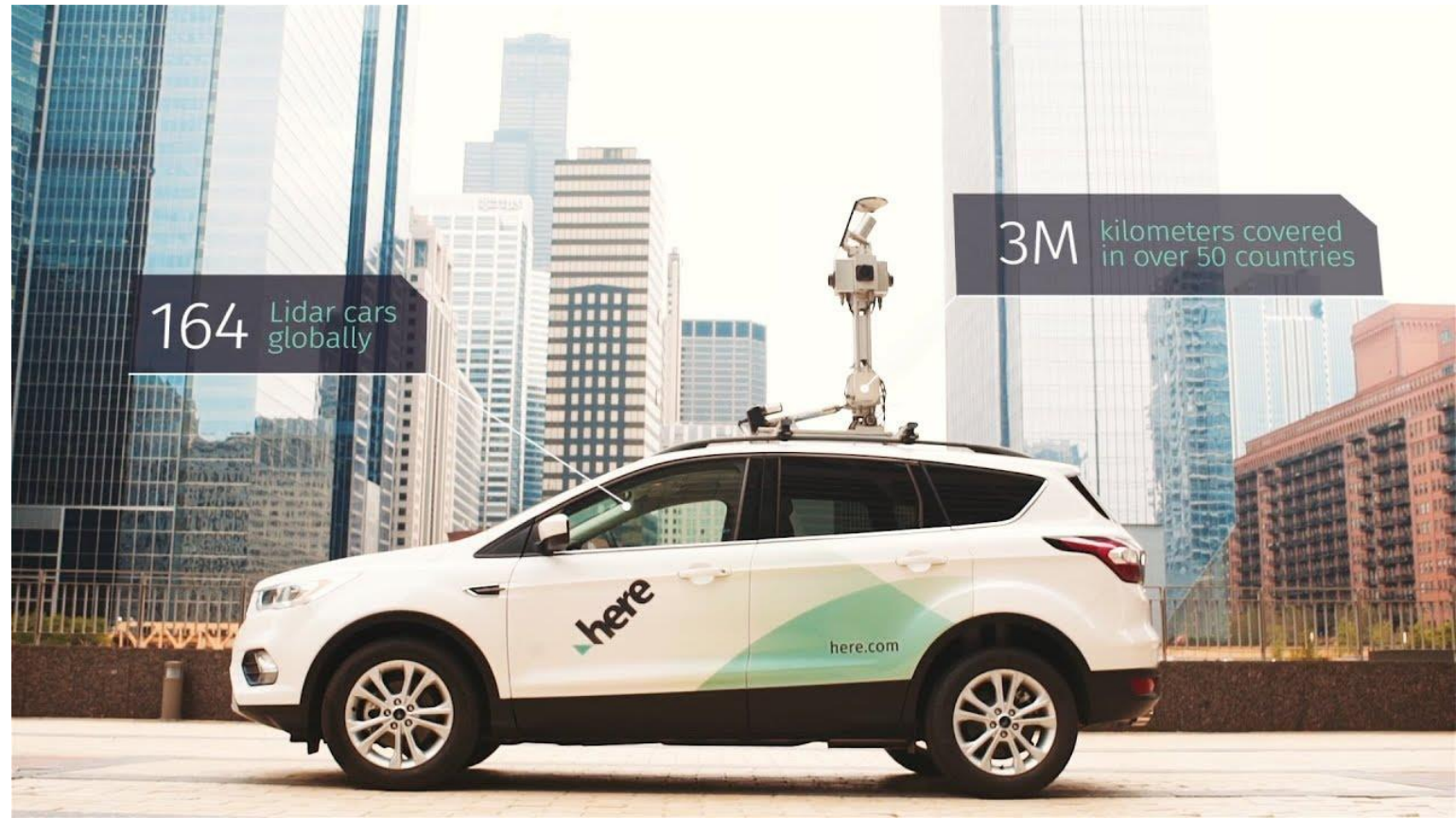
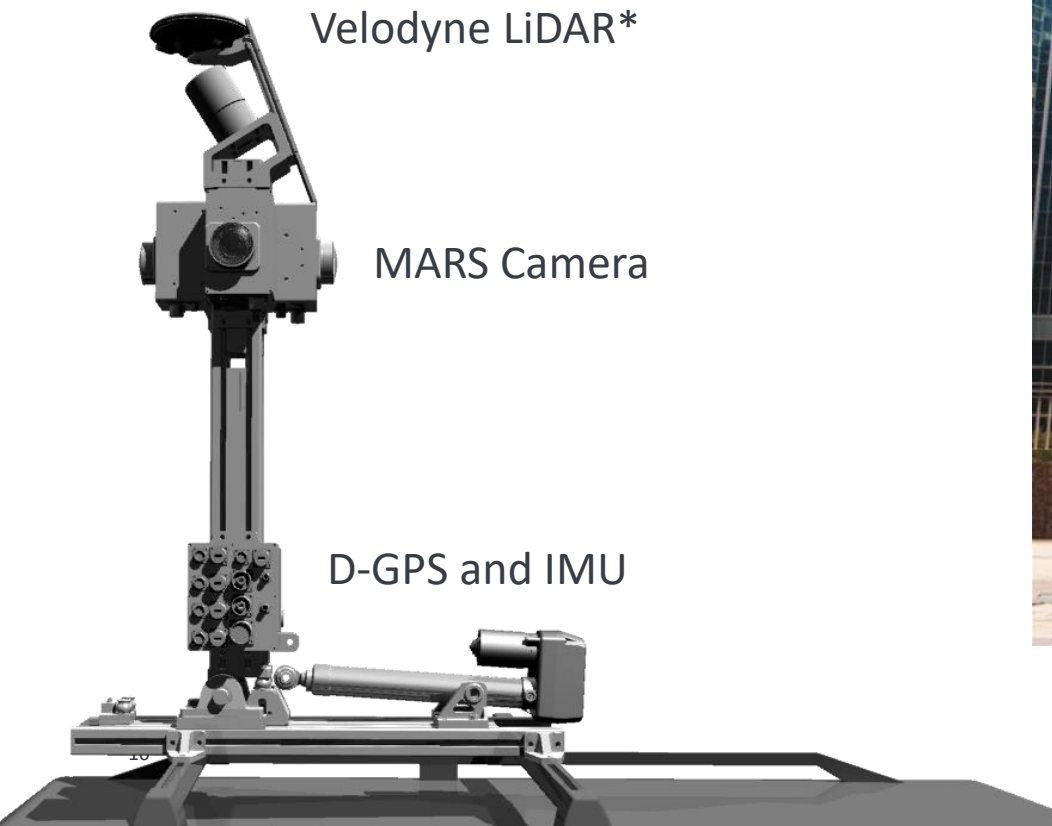


LiDAR, too!



Introducing HERE LiDAR

How is it collected and what does the LiDAR look like



HERE validation and change detection

Automated probe detection

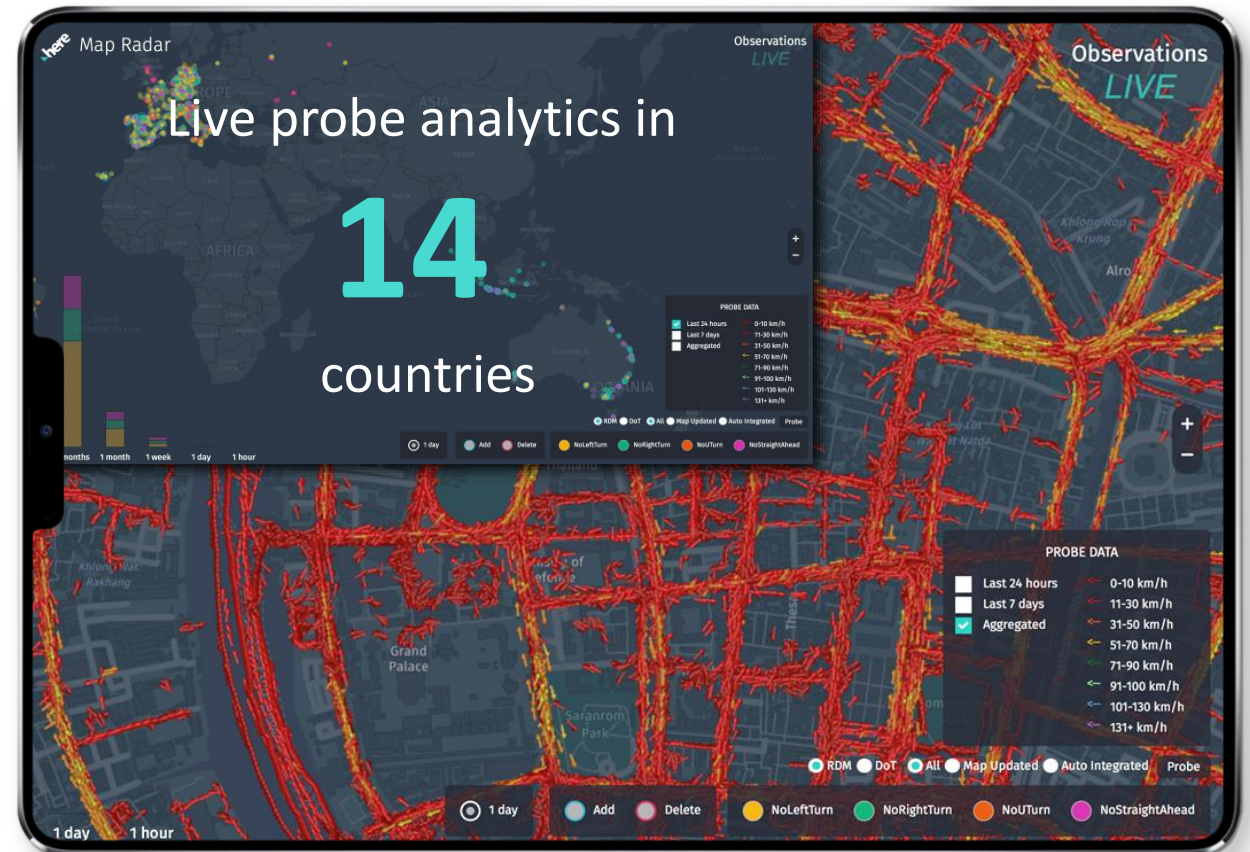
example



**Massive amounts of anonymized
probe data
to detect map changes**

8 features supported by probes:

Turn Restriction, Direction of Travel (DOT), Lane Count, New Geometry, Missing Roundabout, Speed Limit/Category change, Traffic Signal/Stop Sign, Access Characteristics



HERE automation

Automation of building footprints from satellite imagery

example



Fully automated

detection, extraction, shaping
and enhancement of buildings
from satellite imagery



85% of precision

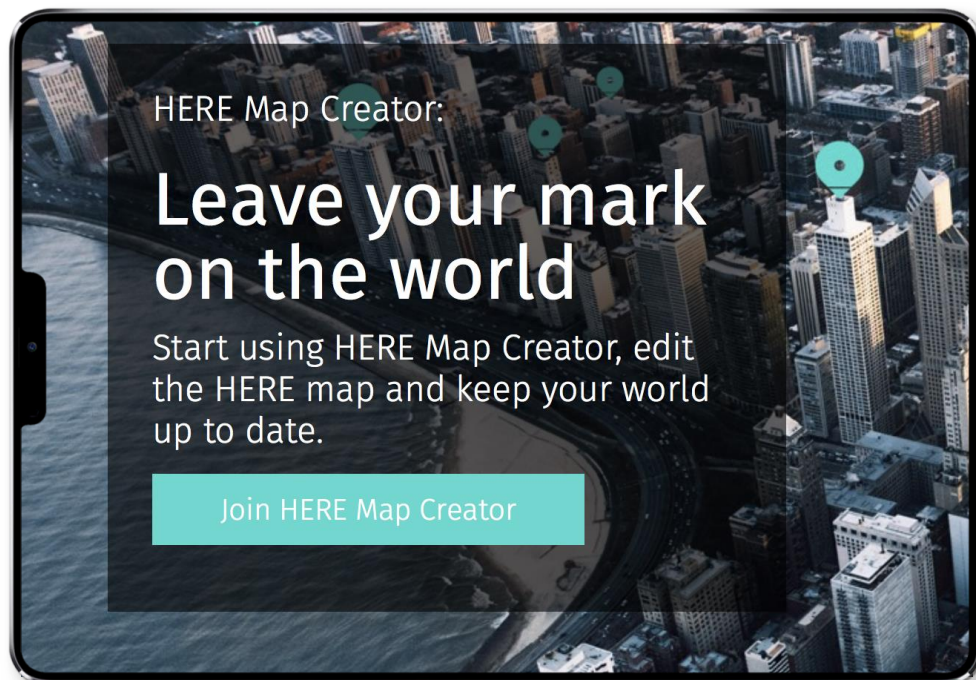
through machine learning
and improving continuously



HERE validation and change detection

Community edits

example



Q4-2018:
11.2M edits
+97% YoY



Please check out the [Map Making story deck](#) for more information.

HERE data for HIFLD

HERE 2018 Release Fully Funded

Federal Government:

- Homeland Security Mission/ National Guard

State and Local “Big 5:”

- State Fusion Centers
- State Emergency Operations Centers (EOCs)
- State GIS Coordinators
- State National Guard Joint Operations Centers
- State Emergency Management Coordinators

State, Local, Territorial, Tribal:

- Data Disclosure: View Access
- Release

HERE 2019 Release Partially Funded

Federal Government:

- FULLY FUNDED

State and Local “Big 5:”

- FULLY FUNDED

State, Local, Territorial, Tribal:

- Data Disclosure: View Access – **FULLY FUNDED**
- Release: **Not Funded 2019**; NGA/DHS request community to voice concern
- New HERE Places:
Community needs to voice need / requirements

Call to Action !

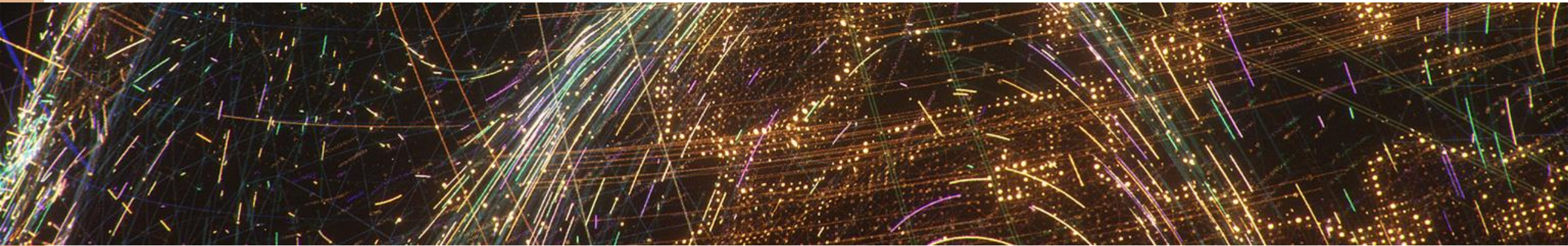
1) Request Fully Fund: HERE 2019 Release: State and Local / Tribal – Data Release

- NGA / DHS Requests NAPSG USER Community Feedback (i.e. Request) to Prioritize Budget and Allocate Funding.
- **Why ?** If not funded some NAPSG users will use 2018 release and some will use 2019 release which will generate confusion and inconsistent response !

2) Request HERE Places is added to solution; Provides significant increase in Places / POI information !



Enabling an autonomous world for everyone



Thank you

Census Data for Disaster Planning

Jim Castagneri & Lacey Loftin, US Census Bureau

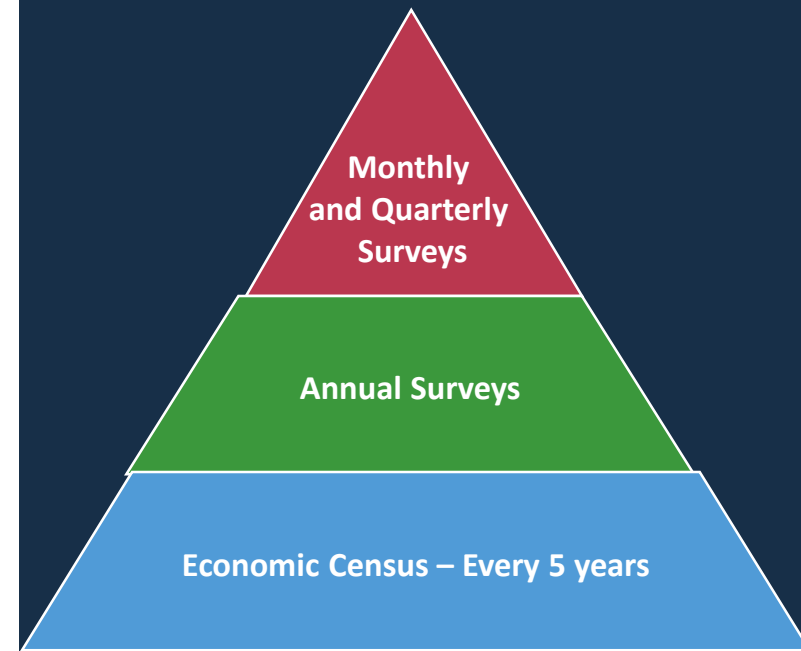
Emergency Preparedness

NAPSG Conference
Galveston, TX
Thursday
November 14,
2019

Census Data and Tools for Emergency Management

About the Census Bureau

- The U.S. Census Bureau is the federal government's largest statistical agency.
- We conduct more than 100 censuses and surveys each year, including
 - **The Decennial Census** – the once-a-decade population and housing count of all 50 states and U.S. territories
 - **The American Community Survey** – the ongoing annual survey of the nation's population
 - **The Economic Census** – the official five-year measure of American businesses



Census Bureau Economic Surveys are a key source for official statistics companies can use:

- Monthly and Quarterly are small sample surveys that provide the most **TIMELY** data available
- Annual surveys have larger samples and provide the most up-to-date **TREND** data available
- Every 5 years, the Economic Census measures all businesses and provides the most **COMPREHENSIVE** data available

These surveys set the standard for U.S. economic statistics, and are fueled by the data provided by individual businesses

The Decennial Census

Purpose:

To conduct a census of population and housing and disseminate the results to the President, the States, and the American People



Apportion representation among states as mandated by Article 1, Section 2 of the U.S. Constitution:

*“The actual Enumeration shall be made within three Years after the first Meeting of the Congress of the United States, and **within every subsequent Term of ten years**, in such Manner as they shall by Law direct”.*

Primary Uses of Decennial Census Data:

- Apportion representation among states as mandated by Article 1, Section 2 of the U.S. Constitution
- Draw congressional and state legislative districts, school districts, and voting precincts
- Distribute more than \$675 billion federal dollars annually to states

Census Data for Preparedness, Response, and Recovery

- Preparedness
 - Identifying vulnerable communities
 - Doing “What If” analysis
- Response
 - Prioritizing response efforts to most vulnerable communities
 - Identifying materials and services needed for potentially affected areas
- Recovery
 - Prioritizing recovery efforts to most affected and vulnerable communities
 - Identifying materials and services needed for potentially affected areas
 - Measuring impact of event

Emergency Planning with the American Community Survey

The American Community Survey (ACS)

- The nation's most current, reliable, and accessible data source for local statistics on critical planning topics such as age, children, veterans, commuting, education, income, and employment
- Surveys **3.5 million** addresses and informs over **\$675 billion** of Federal government spending each year
- Covers **40+ topics**, supports over **300** evidence-based Federal government uses, and produces **11 billion** estimates each year
- Three key annual data releases:
 - 1-year Estimates (for geographies with populations 65,000+)
 - 1-year Supplemental Estimates (for geographies with populations 20,000+)
 - 5-year Estimates (for all available levels of geography)

Key Estimates from the ACS for Emergency Management:

Social

Civilian noninstitutionalized
population with a disability: **12.6%**

Demographic:

Population age 65+ living alone:
12,510,531

Economic

Households receiving food stamps:
15,029,498

Housing:

Median year structure built: **1977**

(Source: 2013-2017 ACS 5-Year Estimates)

The American Community Survey

Content Overview

POPULATION		HOUSING
SOCIAL Ancestry Citizenship Disability Educational Attainment Fertility Grandparents Language Marital Status Migration School Enrollment Veterans	DEMOGRAPHIC Age Hispanic Origin Race Relationship Sex	Computer & Internet Use Costs (Mortgage, Rent, Taxes, Insurance) Heating Fuel Home Value Occupancy Plumbing/Kitchen Facilities Structure Tenure (Own/Rent) Utilities Vehicles Year Built/ Year Moved In
	ECONOMIC Class of Worker Commuting Employment Status Food Stamps (SNAP) Health Insurance Hours/Week, Weeks/Year Income Industry & Occupation	

The American Community Survey

ACS Data in Action: Evacuteer



OnTheMap for Emergency Management

OnTheMap for Emergency Management is a free online tool that

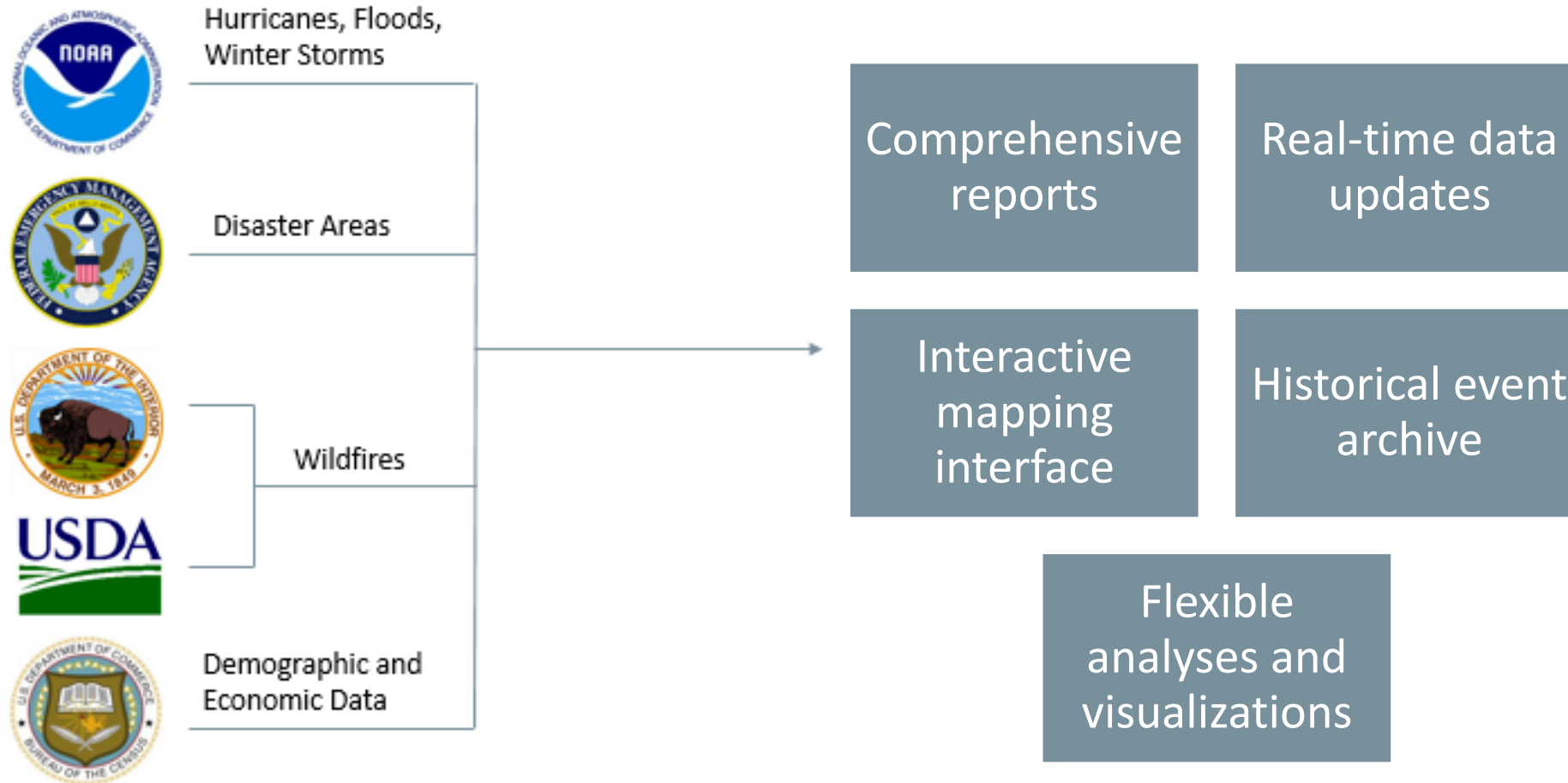
- Provides access to U.S. population and workforce statistics for areas being affected by natural disasters to support local area response and recovery
- Includes American Community Survey (ACS), Longitudinal Employer-Household Dynamics Origin-Destination Employment Statistics (LODES), and 2010 Census data to help identify potential physical, economic, and social vulnerabilities of areas affected by a disaster

These reports allow you to analyze the affected area's potential:

- Physical vulnerabilities – year structure built, mobile homes, etc.
- Economic vulnerabilities – total workers, industry sectors, earnings, etc.
- Social vulnerabilities – disability status, age, vehicle access, etc.

OnTheMap for Emergency Management

Overview and Data Sources



Datasets

- 2010 Decennial Census (2020 data in 2021)
- American Community Survey (ACS)
- LODES – Longitudinal Employer-Household Dynamics (LEHD) Origin-Destination Employment Statistics
- Local Update of Census Addresses Count List

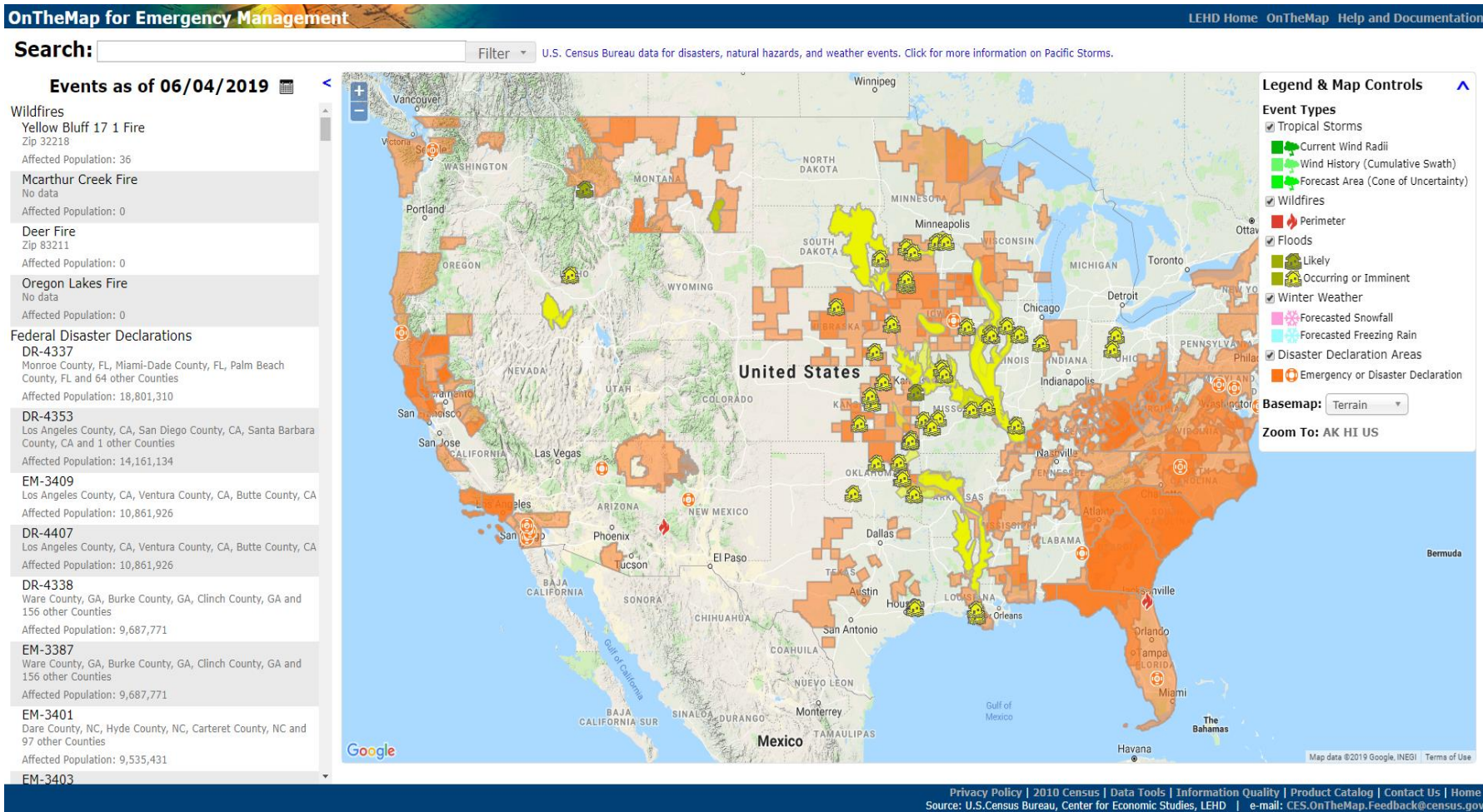
OnTheMap for Emergency Management

Worker, Population and Housing Impacts

- Worker impacts
 - Number and location of affected workers
 - Workforce demographics
 - Affected industries
 - Where affected workers live
- Population and Housing impacts
 - Number and location of affected residents
 - Population demographics of affected areas
 - Identify vulnerable population groups
 - Housing characteristics of affected areas

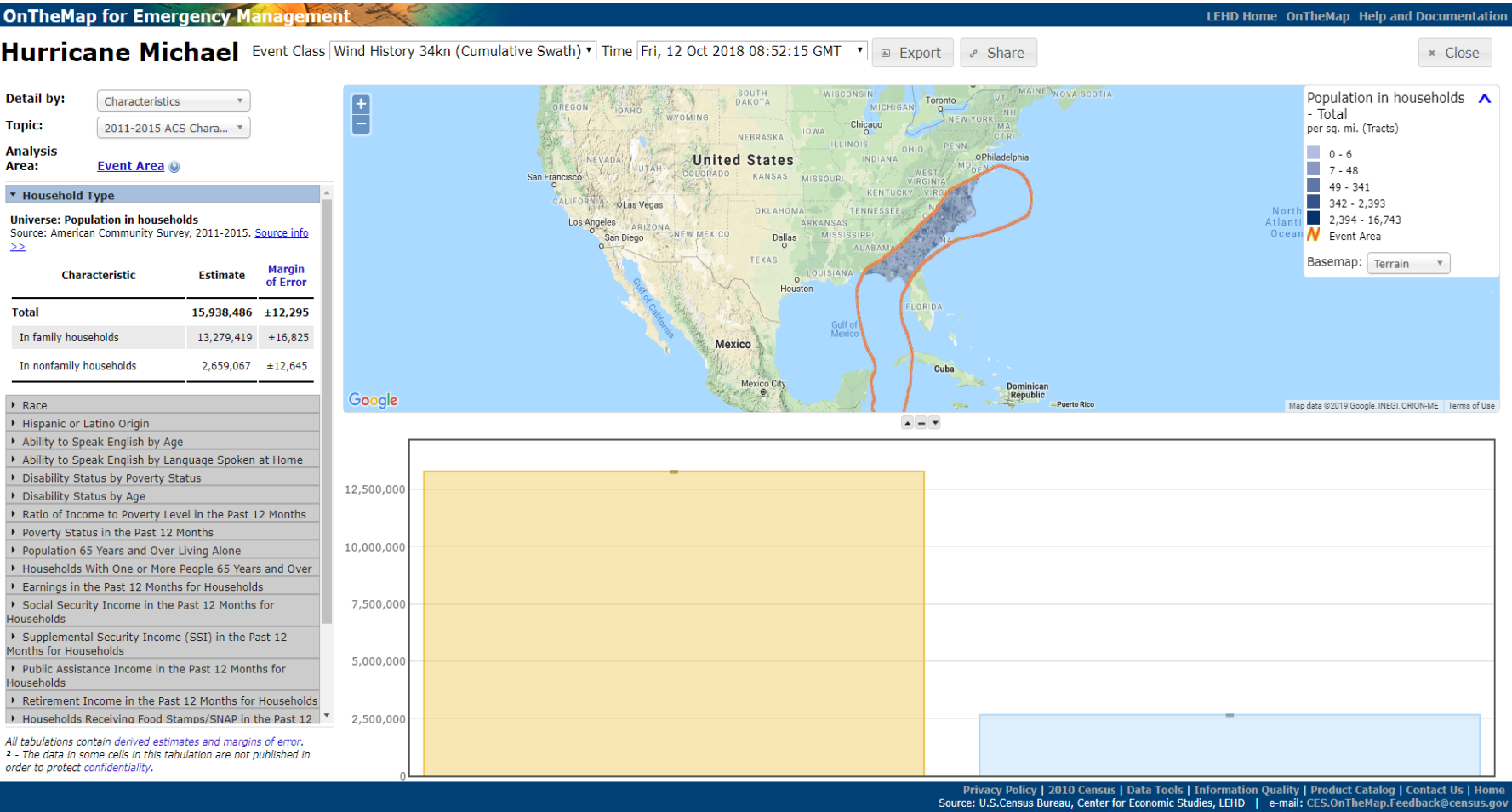
OnTheMap for Emergency Management

Real-Time Data Updates



OnTheMap for Emergency Management

Historical Event Archive



onthemap.ces.census.gov/em/

Search:

Filter

U.S. Census Bureau data for disasters, natural hazards, and weather events. Click for more information on Pacific Storms.

Events as of 06/04/2019

Wildfires

Yellow Bluff 17 1 Fire

Zip 32218

Affected Population: 36

Oregon Lakes Fire

No data

Affected Population: 0

Maroon Fire

Zip 97541

Affected Population: 0

Mcarthur Creek Fire

No data

Affected Population: 0

Smith Still Fire

No data

Affected Population: 0

360G Fire

Leon County, FL

Affected Population: 0

Deer Fire

Zip 83211

Affected Population: 0

Federal Disaster Declarations

DR-4337

Monroe County, FL, Miami-Dade County, FL, Palm Beach County, FL and 64 other Counties

Affected Population: 18,801,310

DR-4353

Los Angeles County, CA, San Diego County, CA, Santa Barbara County, CA and 1 other Counties

Affected Population: 14,161,134

EM-3409

Los Angeles County, CA, Ventura County, CA, Butte County, CA

Affected Population: 10,861,926

DR-4407

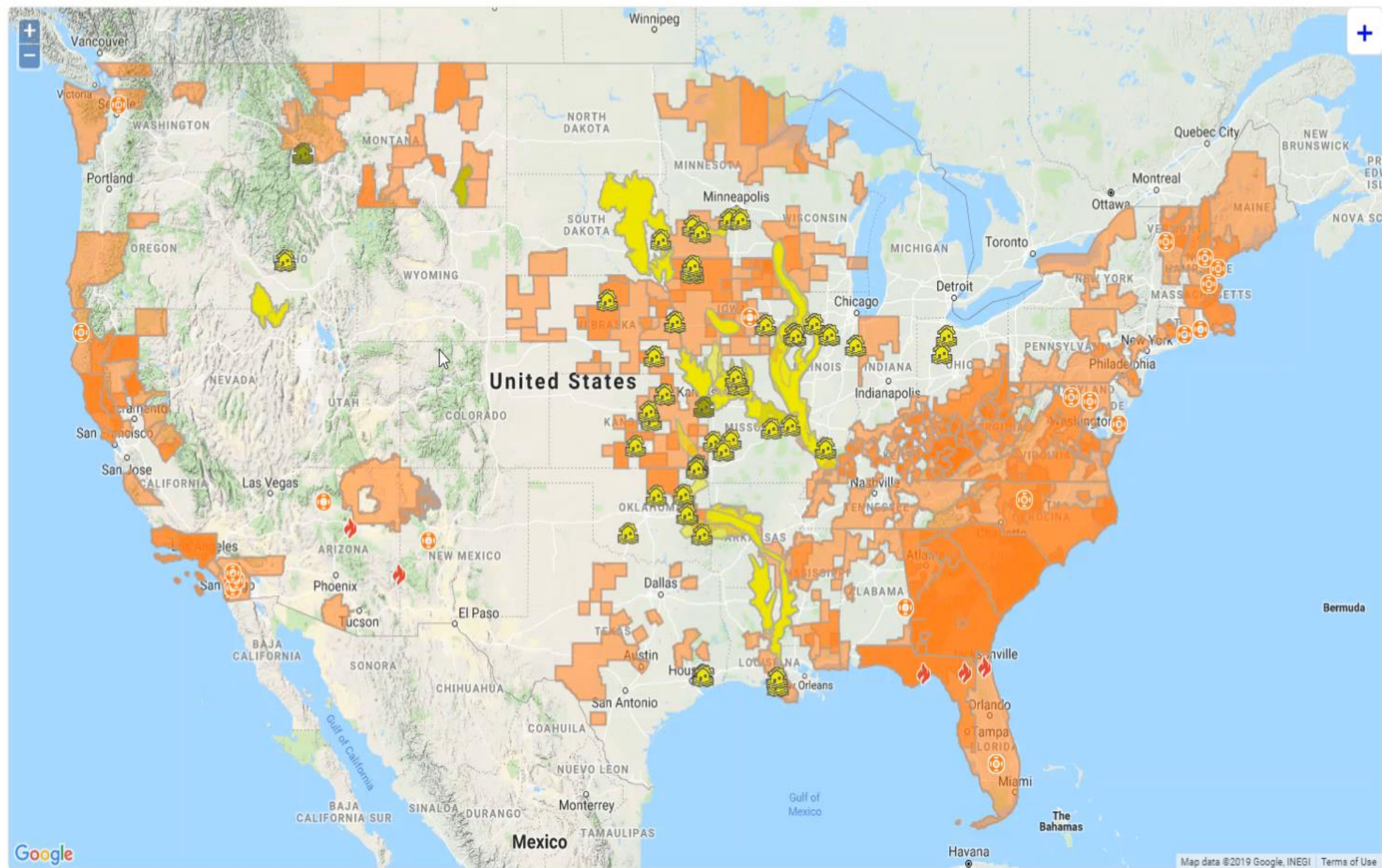
Los Angeles County, CA, Ventura County, CA, Butte County, CA

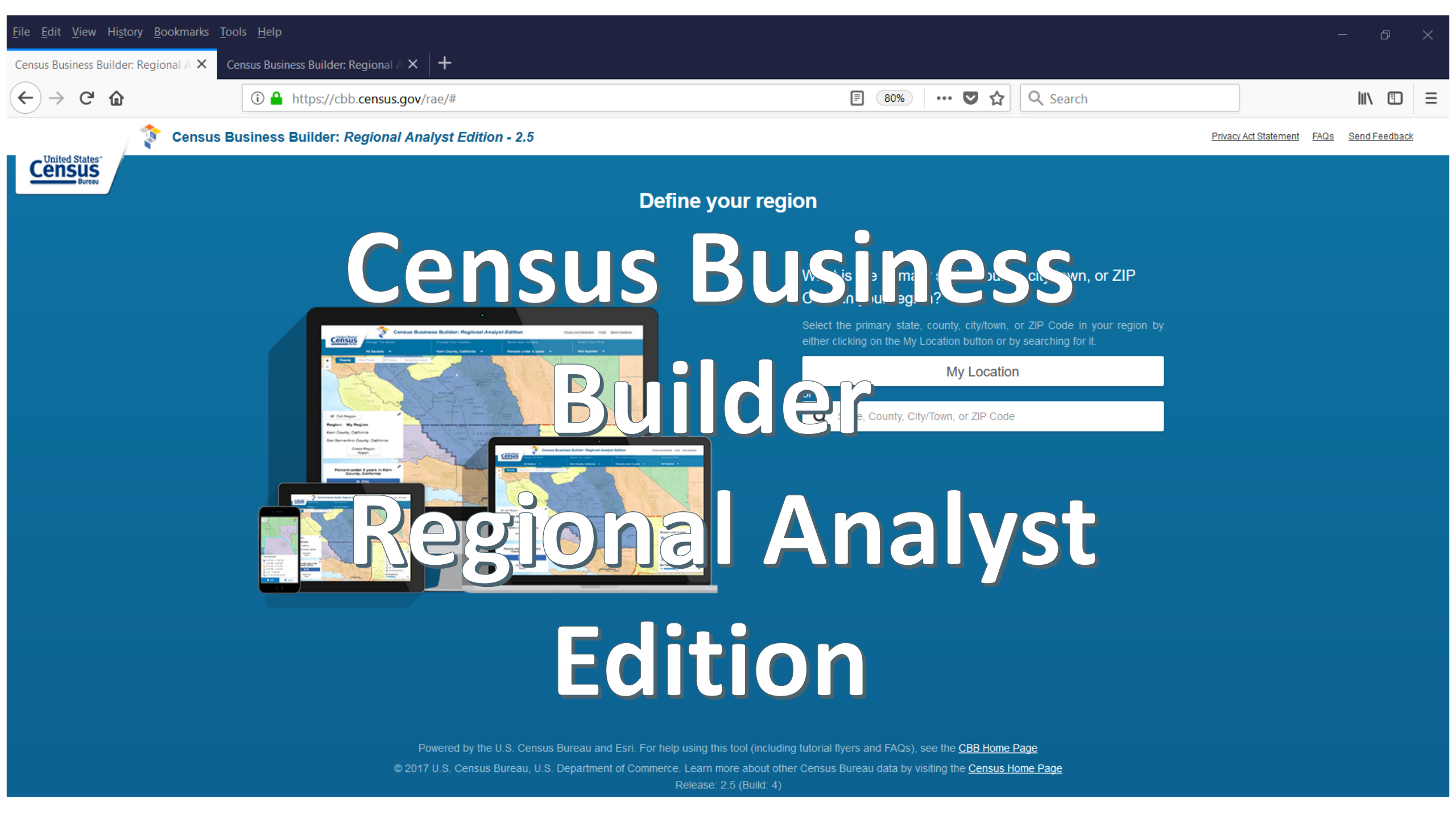
Affected Population: 10,861,926

DR-4338

Ware County, GA, Burke County, GA, Clinch County, GA and 156 other Counties

Affected Population: 9,697,776





Define your region

Census Business Builder Regional Analyst Edition

What is the main focus of your city, town, or ZIP Code in your region?

Select the primary state, county, city/town, or ZIP Code in your region by either clicking on the My Location button or by searching for it.

My Location

State, County, City/Town, or ZIP Code

United States
Bureau

Census Business Builder: Regional Analyst Edition - 2.5

[Privacy Act Statement](#) [FAQs](#) [Send Feedback](#)

Change The Sector

Change Your Location

Select Map Variable

Select Your Filter

All Sectors

Broward County, Florida

Total population

Not Applied

+ -

State County City/Town ZIP Code Tract

0 30 60mi

Region: Hurricane Region 1

Broward County, Florida

Collier County, Florida

Monroe County, Florida

Miami-Dade County, Florida

Create Region Report Edit Region

1,890,416 (n/a)

Total population (MoE +/-)

Total population

1,890,416

1,260,277

630,139

0

2006-2012 2013-2017

Geo hierarchy not presentable

\$78,625

Average income (\$883)

88.6%

Percent high school degree or higher (0.7%)

62.3%

Homeownership rate (0.5%)

60,204

Employer establishments (n/a)

Total population

949,842 - 2,702,602

404,839 - 700,165

298,763 - 363,542

76,745 - 173,236

13,197 - 40,228

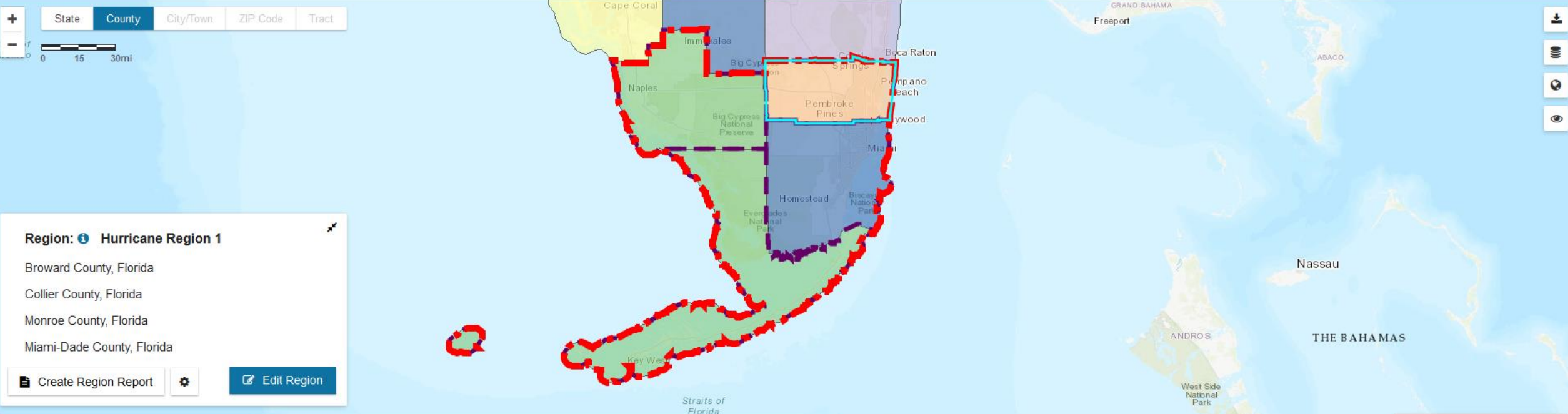
Map Configuration

Default Scheme

Quantile Classing Method

Esri, HERE, Garmin, FAO, NOAA, USGS, EPA, NPS

Powered by Esri



Broward County, Florida

14% (0.4%)

Percent in poverty (MoE +/-)

Create Report ⚙️

Percent in poverty

100.0%

66.7%

33.3%

0.0%

2006-2012

2013-2017

100.0%

66.7%

33.3%

0.0%

Broward County

Florida

U.S.

\$78,625

Average income (\$883)

★ ✎

11.1%

Percent disabled (0.2%)

★ ✎

1,890,416

Total population (n/a)

★ ✎

312,600

Total number of employers and nonemployers

★ ✎

Percent in poverty

19% - 25.5%

14.9% - 14.9%

14% - 14%

13.4% - 13.4%

12.7% - 12.8%

Map Configuration ⓘ

Default Scheme

Quantile Classing Method

Key Links to Data and Tools

- Emergency Prepared Page:
<https://www.census.gov/topics/preparedness.html>
- Census Business Builder Regional Analyst:
<https://www.census.gov/data/data-tools/cbb.html>
- OnTheMap for Emergency Management:
<https://onthemap.ces.census.gov/em/>
- Local Update of Census Addresses Count List:
https://www2.census.gov/geo/docs/partnerships/luca/address_countlist/

Thank You!

Jim Castagneri

James.d.Castagneri@census.gov

Lacey Loftin

Lacey.e.Loftin@census.gov

Group Discussion

10:00am – 10:30am

Group Discussions

- How are you currently using HIFLD data? Open vs. Secure?
- What additional and priority national data do you need? For what use cases?
- How are you using any of the above datasets to support your planning process?
 - THIRA process
 - Hazard Mitigation Planning
 - Operations Planning
 - Exercise Design, Development, and Conduct
 - Disaster Response Operations
- How does this data support decision making in response operations?
- How does this data support decision making during recovery operations?
- Is the data easily searchable and/or discoverable? If not, how could this be improved?
- Is the timing of available data useful to your processes? If not, how could the timing be adjusted to be more useful?

Break

10:30am – 10:45am

National Risk Index

Maureen Kelly, FEMA

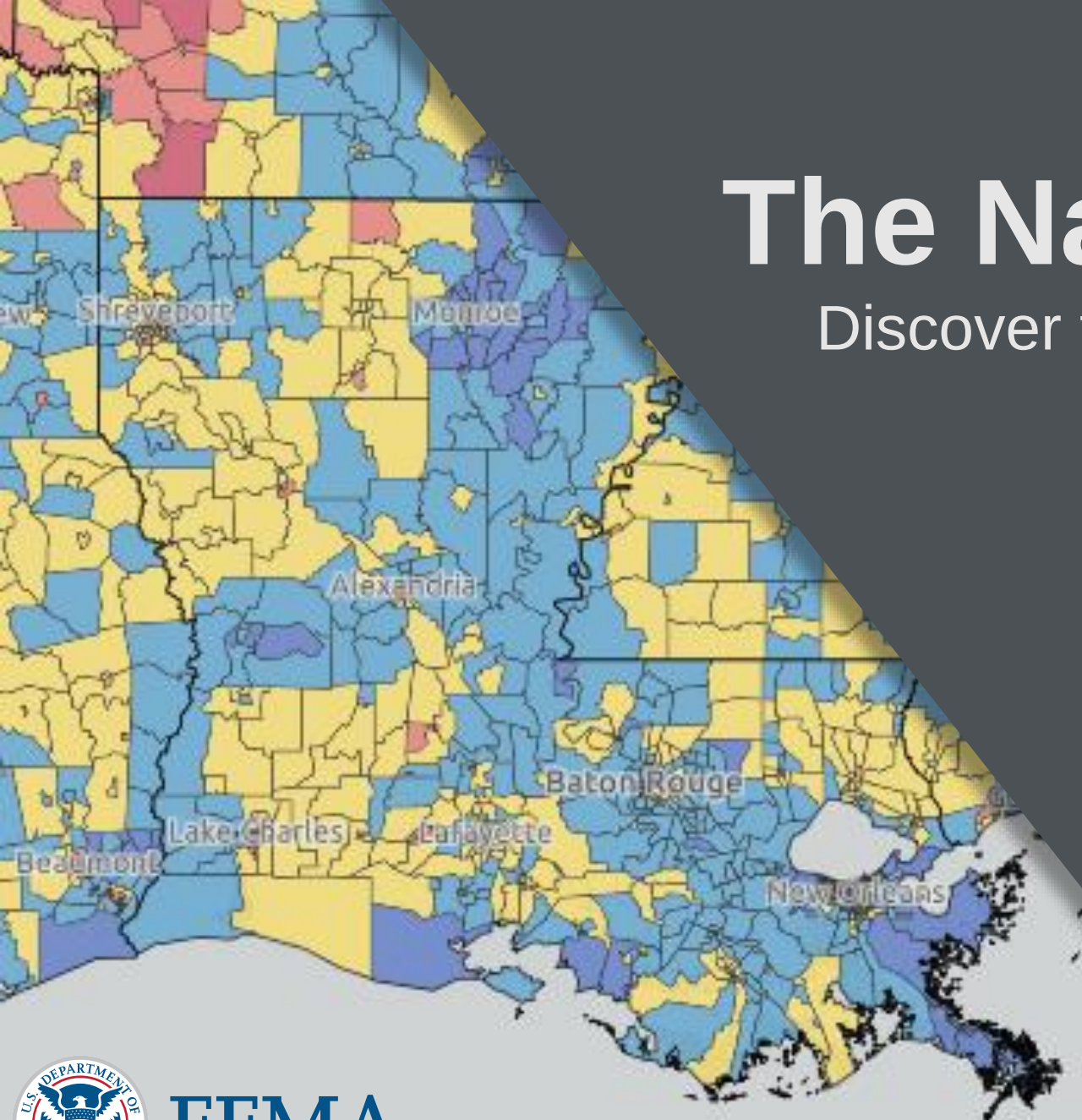
The National Risk Index

Discover the landscape of natural hazard risk

Maureen Kelly

Geospatial Risk Analyst

FEMA Natural Hazards Risk
Assessment Program

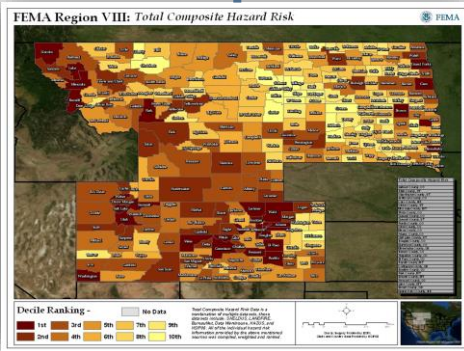


FEMA

NRI Development History (2008; 2016-2019)

FEMA Region VIII developed Vulnerability Index to identify and prioritize new mitigation projects based on data

2008

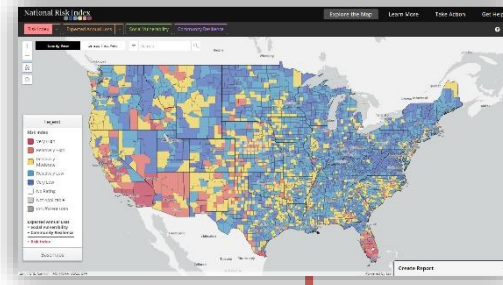
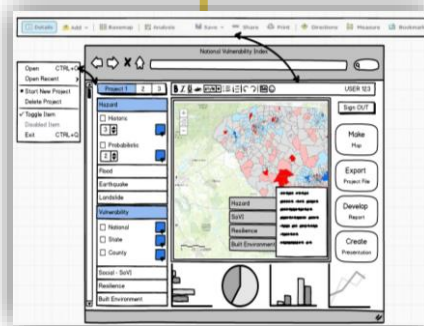


2016

Paul H. and Scott M. fund update of RVIII Index nationally under PTS SO2 Risk Assessment

Jesse/Casey take over NRI, led SME working groups, and take initial delivery of application

2017

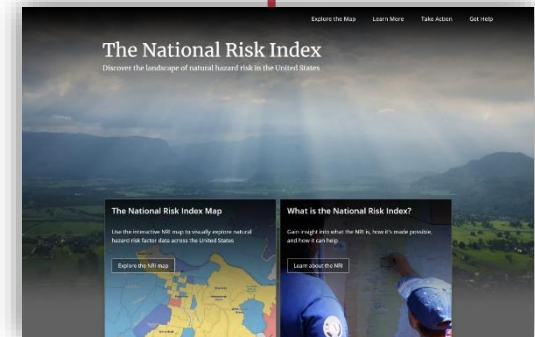


2018

Update Risk Equation based on RMD and Mitigation leadership review and update backend database

Delivery of final test application with updated data and NRI ready for production deployment in CDS

2019



National Risk Index



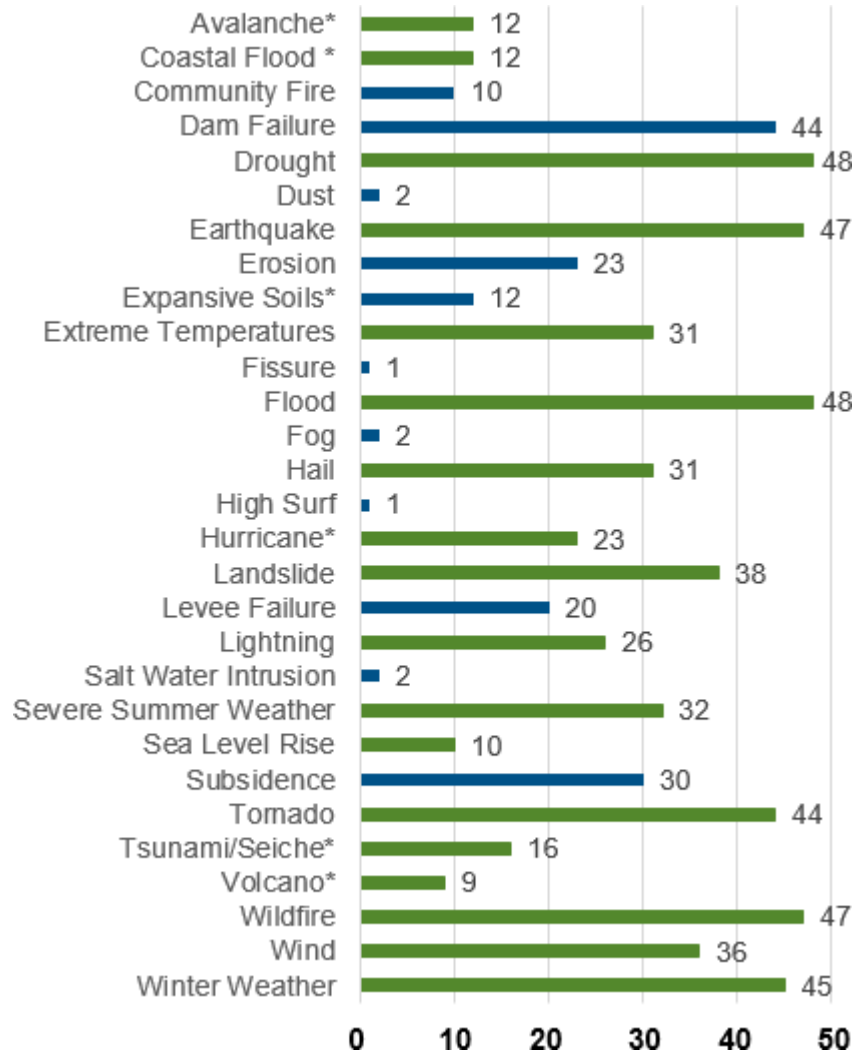
National Risk Index Contributors



National Risk Index



National Risk Index Hazard Selection



- Reviewed the 50 State Hazard Mitigation Plans
 - Initial list developed from rate of occurrence in each state plan
- Natural hazards only
 - Man-made hazards or hazards related to anthropogenic activities not included

■ Hazard Included in Analysis
■ Hazard Excluded from Analysis
 * Significant Regional Hazard for Consideration

NOTES:

- Coastal Flood and Sea Level Risk Hazards were combined
- Extreme Temperature is both Hot and Cold
- Severe Summer Weather is covered by Wind, Hail, Tornado, and Lightning
- Winter Weather is both Snow and Ice



Social Vulnerability and Community Resilience

Social Vulnerability Index: SoVI 2010-2014

- Developed by the University of South Carolina's HVRI
- Grouped into 7 components with 29 variables (SoVI 2010):
 1. Race and class (7 variables)
 2. Wealth (5 variables)
 3. Elderly residents (6 variables)
 4. Hispanic ethnicity (5 variables)
 5. Special needs individuals (2 variables)
 6. Native American ethnicity (1 variables)
 7. Service industry employment (2 variables)
- Comparative index at the county or subcounty level
- Positive and negative component loading

Baseline Resilience Indicators for Communities: BRIC 2010-2014

- Developed by the University of South Carolina's HVRI
- 6 resilience category scores, plus total score
 1. Social
 2. Economic
 3. Community capital
 4. Institutional
 5. Infrastructural
 6. Environmental
- Comparative indicators at the county level
- Indicators analyze the relationship between resilience, vulnerability, and the relative impact of disasters on rural and urban places



Determining Risk

$$\text{National Risk Index} = \text{Expected Annual Loss} \times \text{Social Vulnerability} \div \text{Community Resilience}$$

$$\text{Expected Annual Loss} = \text{Natural Hazard Exposure} \times \text{Natural Hazard Frequency} \times \text{Historical Loss}$$

- Risk is defined as the potential for negative impacts as a result of a natural hazard
- Considers the probabilities or frequencies of 18 natural hazards, and the population, property value, and crop value exposed within hazard extents
- Expected Annual Loss is calculated separately for each natural hazard, then summed to generate a composite score for all 18 natural hazards
- Equation supports traditional hazards risk approach of risk being defined as the product of Hazard, Vulnerability, and Exposure

The screenshot displays the National Risk Index website. At the top, the header includes the 'National Risk Index' logo with a color-coded bar, and navigation links: 'Explore the Map', 'Learn More', 'Take Action', and 'Get Help'. The main content area is titled 'Determining Risk' and explains that risk is defined as the potential for negative impacts from natural hazards. It details the three components of the risk equation: Expected Annual Loss (likelihood and consequence), Social Vulnerability (consequence enhancing), and Community Resilience (consequence reduction). Below the text are three icons: a person for Expected Annual Loss, a cloud with a lightning bolt for Social Vulnerability, and a family for Community Resilience. To the right, a 'Related' sidebar lists links like 'How the NRI Can Help', 'Social Vulnerability', 'Community Resilience', and 'Expected Annual Loss'. At the bottom, there is a cartoon character holding a shield labeled 'SHELDUS' and a link to 'Learn about how the NRI was developed'.

National Risk Index

Explore the Map Learn More Take Action Get Help

Determining Risk

In the National Risk Index (NRI), risk is defined as the potential for negative impacts resulting from a natural hazard.

The risk equation behind the NRI includes three components: a *natural hazards component* (**Expected Annual Loss**), a *consequence enhancing component* (**Social Vulnerability**), and a *consequence reduction component* (**Community Resilience**). The datasets supporting the natural hazards component were standardized using a min/max normalization approach. The datasets supporting the consequence enhancing and reduction components were acquired in a normalized format, allowing for easy incorporation into the NRI risk calculation.

Expected Annual Loss
is a likelihood and consequence component of risk that measures the expected loss of building value or population each year due to natural hazards

Social Vulnerability
is a consequence enhancing component of risk

Community Resilience
is a consequence reduction component of risk

Related

- How the NRI Can Help
- Determining Risk**
- Social Vulnerability
- Community Resilience
- Expected Annual Loss
- Understanding Scores & Ratings
- Behind the NRI
- Literature Review
- Working Groups Collaboration
- Data & Methods
- NRI Contributors
- Data Downloads
- Disclaimer

Spatial Hazard Events and Losses Database for the United States

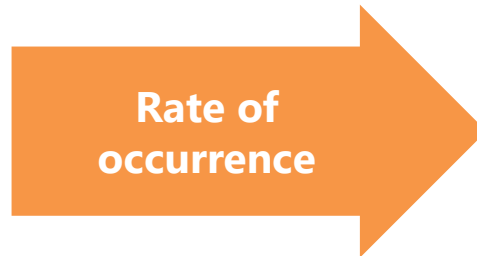
Learn about how the NRI was developed

Risk Calculation

$$\text{Risk} = \text{Expected Annual Loss} \times \text{Social Vulnerability} \div \text{Community Resilience}$$

where **Expected Annual Loss (EAL)** =

Annual Frequency



How likely is hazard to occur?

X

Exposure



How many people & how much property and crops are potentially at risk?

X

Historic Loss Ratio



What percent of property/people have historically been lost from hazard in a given area?



This is very much a work in progress website, loaded with basic datasets that may not represent the final product.

Questions?

Maureen Kelly

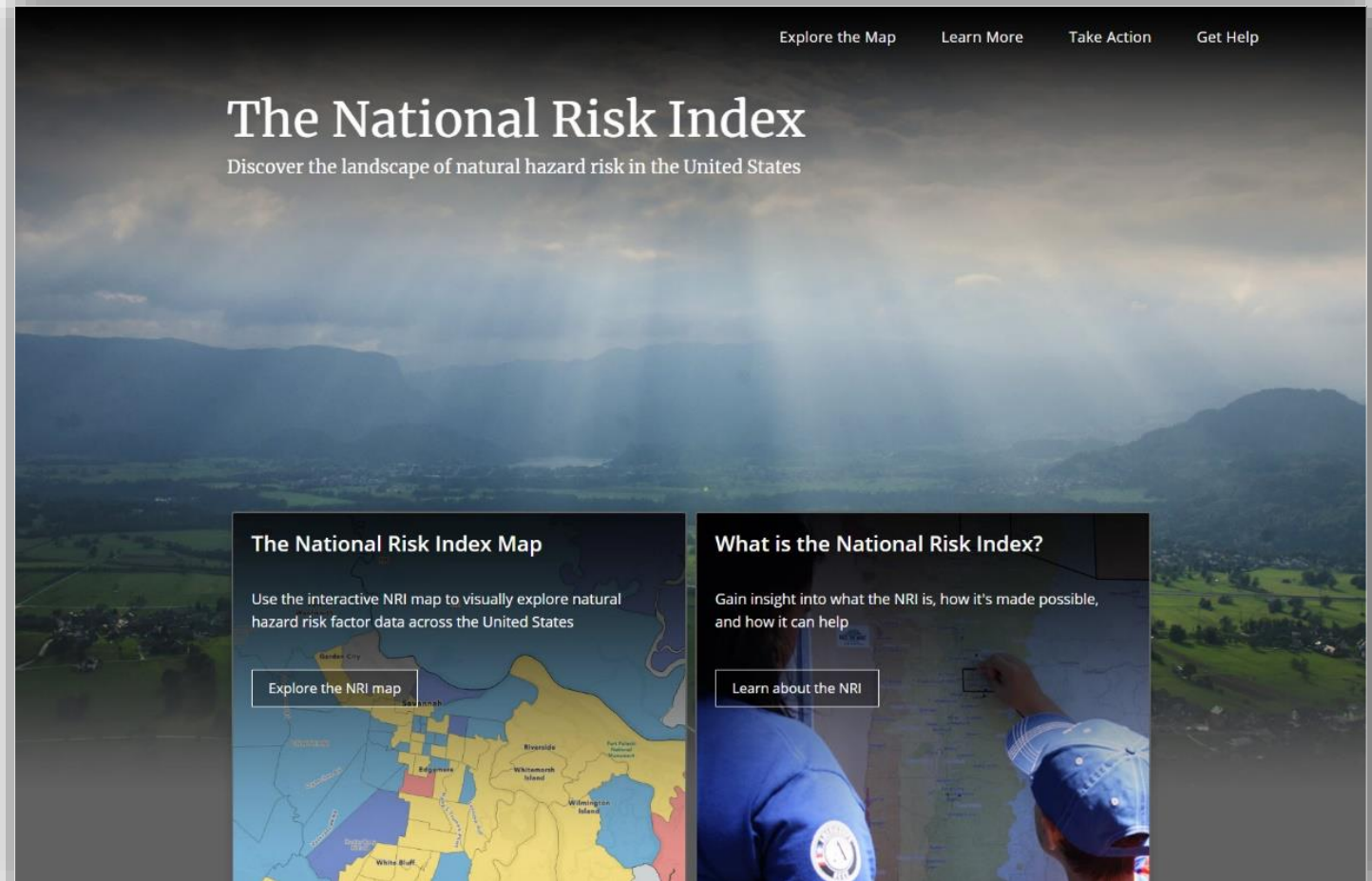
Geospatial Risk Analyst - FEMA NHRAP

Maureen.Kelly@fema.dhs.gov

Casey Zuzak, GISP

Senior Risk Analyst - FEMA NHRAP

Casey.Zuzak@fema.dhs.gov



Disaster Data

Chris Vaughan, FEMA

DISASTER DATA

Current and Future State of the Union on Preparedness Data

InSPIRE 2019



FEMA

Chris Vaughan
Response Geospatial Office
November 14, 2019

Community Lifelines

A CONSTRUCT FOR OBJECTIVES-BASED STABILIZATION EFFORTS

A lifeline enables the continuous operation of critical government and business functions and is essential to human health and safety or economic security.



- Lifelines are the most fundamental services in the community that when stabilized enable all other aspects of society
- Lifelines exist during steady-state and are normally provided by sources organic to the community.
- When disrupted, decisive intervention (e.g., rapid service re-establishment or employment of contingency response solutions) is required.

DATA Sources

	Primary Source (Operational Reporting)	Alternate Source (Operational Reporting)
Power Outages	DOE's Eagle-I	Poweroutage.us
Nuclear Plants		
Power Plants		RSOE EDIS, US Nuclear Reg Com
Retail Gas Stations		GasBuddy
Crude production		
Petroleum refineries		GasBuddy
Natural Gas facilities		
Petroleum terminals		
Residential Structures	Digital Map Products (HIFLD)	Humanitarian Open Street Map Team (Hot)
Shelters	National Shelter System	Crowd Emergency Disaster Response Digital Corps (CEDR), Code for America
Home Improvement Stores		Master Card/Visa
Grocery Stores		Master Card/Visa
Hotels/Lodging		Master Card/Visa, Airbnb
Distribution Facilities		
Crop & Animal Production		
School/University		
Day Care		
Nursing Home	HHS	
Blood Banks	HHS	
Pharmacies		Healthcare Ready/Rx Open
Hospital/Urgent Care	HHS	StandBy Task Force
EMS Stations		
Dialysis & Burn Centers		RxOpen
Wastewater Plant		
Water Treatment Plant		
Toxic Release Facility		
Biological Facility		
Chemical Facility		
Landfills / Superfund Sites		Crisis Cleanup
Police Station		
Fire Station		
DoD Facilities		
Government Buildings		
Local EOC		
State EOC		
Prisons		
Dams/Levees		
Historic/Cultural Resources		
Airports (Commercial & Military)		
Roads (Federal & Local)	DOT	WAZE
Railway (Freight & Passenger)		Amtrak
Rail/Bus Transit Stations		
Ports/Ferries/Waterways	USCG Homeport	
Bridges (Highway & Local)		
Public-safety answering point	FCC/DIRS	
Cellular Tower	FCC/DIRS	Facebook
AM & FM Transmission Towers		
Microwave Service Towers		
Data Centers		
Banks/ATMs		Master Card/Visa
Manufacturing		
Retail		Master Card/Visa, SABER

2019 | Modeling and Data Working Group

Overview:

- An interagency working group appointed by the Emergency Support Function Leaders Group (ESFLG) in 2012

Mission: Information Gathering & Sharing

- Assess the current state of **modeling systems**
- Identify **consistent, reliable, and authoritative models and datasets** to enable response planning and operational decision making for catastrophic events

Goals:

- Identify state-of-the-art capabilities to be incorporated into response operations
- Maintain the **Model and Data Inventory (MoDI)**
- Identify and fill gaps in data inventory to improve health of each Lifeline
- Improve **information sharing, outreach, and communication** with the broader emergency management community

2019 Efforts:

- Monthly meetings (**3rd Wednesday of every Month**) aligned with the **7 FEMA Lifelines**
- Encourage working group to begin/continue aligning their operations and data products under the Lifeline framework

2019 Yearly Plan

March - December



Communications



Hazardous Material



Pre-Shaken Fury Exercise



Post-Shaken Fury Exercise



Food, Water, Sheltering



Health and Medical



Energy (Power & Fuel)



Transportation



Safety and Security



Feedback Session

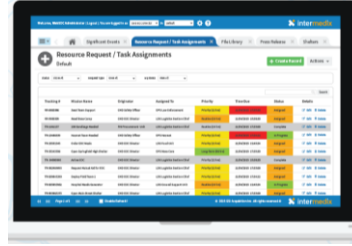
DATA | Steady State & Operational Data integration



Disaster Models



Imagery



Crisis Management Systems



Crowdsourcing



Mobile Applications

Steady-state “foundational”
data via authoritative
Bounded Crowd (FLSTT)

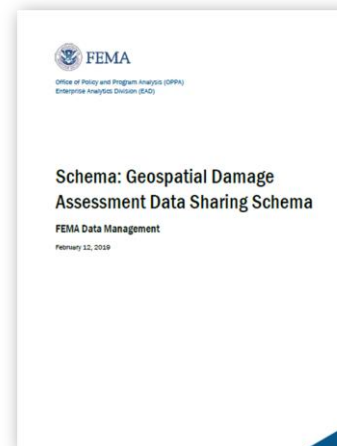


Transactional (Event-based)

- Authoritative reporting (WebEOC)
- Volunteer Geographic Information
- Field Observations (mobile apps)



Back to “Foundational” Data



Requirements:

Building outlines with unique FID
Unifying Schema

Modeling & Data Working Group

Siddharth Pandey, MDWG/Dewberry

Modeling and Data Working Group (MDWG)

An interagency working group appointed by the Emergency Support Function Leaders Group (ESFLG)

- **Mission:** Information Gathering & Sharing
 - Identify **consistent, reliable, and authoritative models and datasets** to enable response planning and operational decision making for catastrophic events
- **Goals:**
 - Maintain the [Model and Data Inventory \(MoDI\)](#)
 - Identify and fill gaps in data inventory to improve health of each Lifeline
 - Improve and encourage disaster information reporting by working with the emergency management community to align their data products and reporting with the lifeline construct
- **2019 Efforts:**
 - Monthly meetings (**3rd Wednesday of every month**) aligned with the **7 FEMA Lifelines**
 - Familiarize working group with the Lifeline framework and solicit feedback on important reporting criteria and metrics
 - Conduct a pre- and post- **Shaken Fury Exercise** meeting to discuss the use of lifelines framework in response exercise

March 20th - Communications

June 19th - Post-Shaken Fury Exercise

October 16th - Transportation

April 17th - Hazardous Material

July 17th - Food, Water, Sheltering

November 20th - Safety and Security

May 22nd - Pre-Shaken Fury Exercise

August 21st - Health and Medical

December 18th - Feedback Session



MDWG

What?

- Conducted multiple meetings and conversations to build out lifeline spreadsheet
 - To identify authoritative datasets to use in the Lifeline Dashboards and gather data requirements/needs

Community Lifeline	Component	Sub Component
Communications	Responder Communications	Land Mobile Radio Networks

- Identify various data attributes that relate to the Lifelines, Components and Sub-Components

Community Lifeline	Component	Sub Component	Attributes
Communications	Responder Communications	Land Mobile Radio Networks	Availability and status of first responder communications equipment, Status of EOC(s), dispatcher, and field responder communications, radio/satellite communication capability

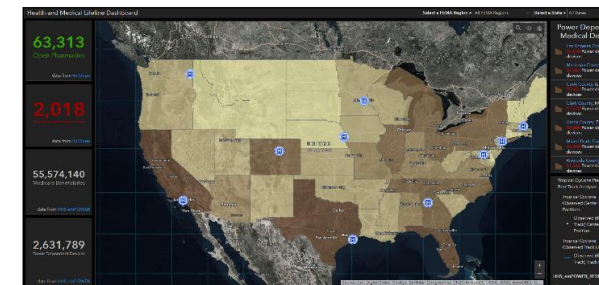
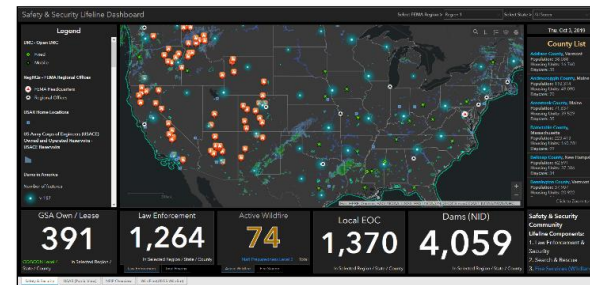
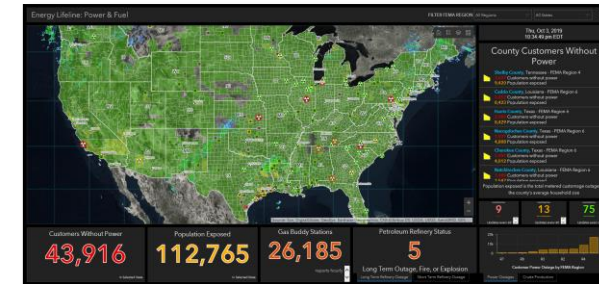
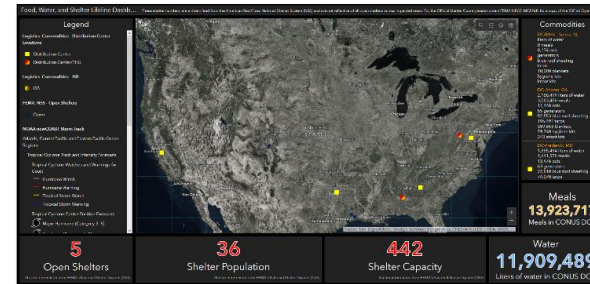
- Develop/understand indicators for stability of the Lifeline (Red, Yellow, Green)

Community Lifeline	Component	Sub Component	Red	Yellow	Green	Gray	White
Communications	Responder Communications	Land Mobile Radio Networks	Communications services are not available or 75% or more of wireless services and land lines are not operational	Major disruption to communications services; wireless services and land lines are between 25 and 50% operational	Little to no impact to communications services; less than 25% of wireless services and land lines are not operational	Unknown	Inactive



So What?

- Utilize static and real time geospatial data to display impacts to the community lifelines based on the lifeline components and sub-components
 - Piloted during this year's [National Level Exercise – Shaken Fury 2019](#)
- Provide situational awareness for first responders and decision makers and aid in decision making process.



MDWG

Now What?

- Continue determining interdependencies and cascading impacts/failures of critical infrastructure and their impacts to the lifelines to help determine response priorities
- Continue to determine data and reporting requirements of emergency response community
- Seeking engagement from emergency response GIS community to find and develop additional datasets to be utilized in response planning and operational decision making
 - What other data exists or is needed?
 - Can we pre-process data to be better prepared for future events?
 - What metrics are important?
- Interested in participating?
 - Contact us at FEMA-MDWG@FEMA.DHS.GOV



MDWG

Geospatial Coordination

Rebecca Kollmeyer, New Light Technologies

GEOSPATIAL COORDINATION

**Current & Future State of the Union on
Preparedness Data Workshop**

REBECCA KOLLMEYER

Contractor, FEMA Response Geospatial Office



OVERVIEW



Steady State

Monthly Geospatial Working Group Meeting (You are here!)



Incident Response: Geospatial Coordination Calls

2:00 PM

Geospatial Call

NRCC Level I Activation

or

As Needed

2:30 PM

Remote Sensing Call

As Needed

based on imagery requirements

COORDINATION CALLS DURING DISASTERS

CURRENT PROCESS

Who should call in?

FEMA

Interagency Partners

State & Local

GIS Disaster Response

How to call in?



Email sent out to Gov Delivery distribution list

- [Geospatial Coordination Calls During Disasters](#)
- [Remote Sensing Coordination Calls During Disasters](#)

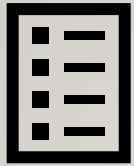


FEMA Conferencing System Phone Number & PIN



Storymap via Adobe Connect

NEW FOR 2019 SEASON



Each event has its own StoryMap

Barry: <http://arcg.is/WD8Pz>

Dorian: <https://arcg.is/ICeT0C>

Calendar Invite included in email



Imagery Services & Helpful Links URL

<https://communities.geoplatform.gov/disasters/dorian-imagery-services-and-helpful-links/>

Admin PIN for speakers to manage background noise



Group Discussion

11:45 – 12:25

Group Discussions

- Is the current type and level of coordination effective? Does it meet your needs?
- What more is needed to support geospatial and data coordination for preparedness AND in response?
- Are you able to readily search, discover, and access relevant data using the Disaster.Geoplatform?
- How can data dissemination and access be improved?

Thank you!

NAPSG Foundation Contact: Your Name email@publicsafetygis.org

Appropriate Link If Needed: http://bit.ly/NAPSG_USNG