

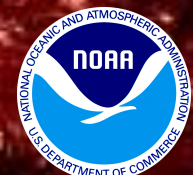
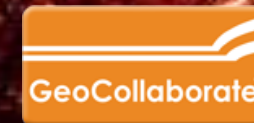
Collaboration & Communication

Improving Access & Sharing of Trusted Information for a Unified Approach to Fighting Wildfires

A TFRSAC Update on: GeoCollaborate

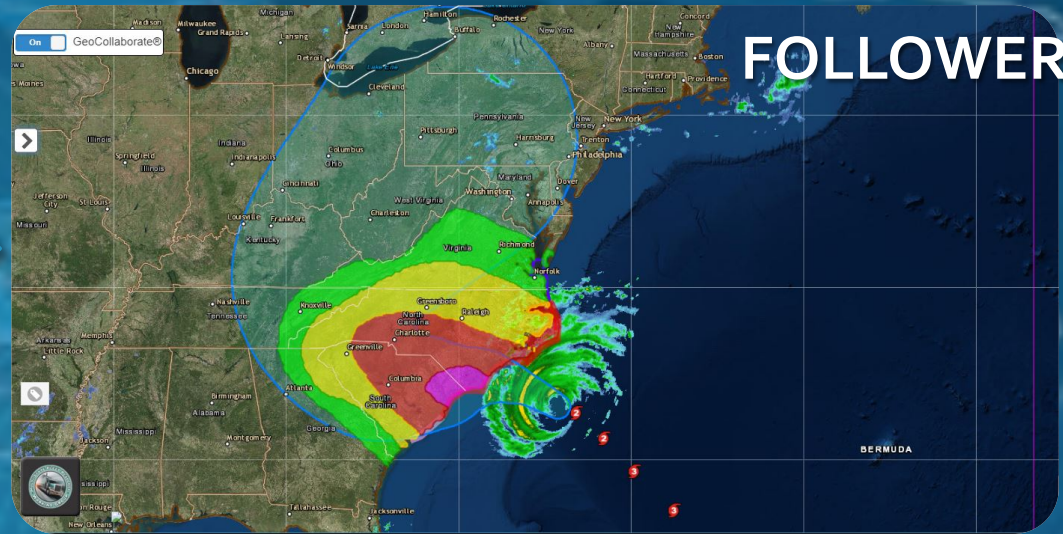
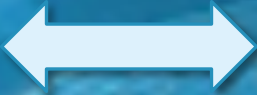
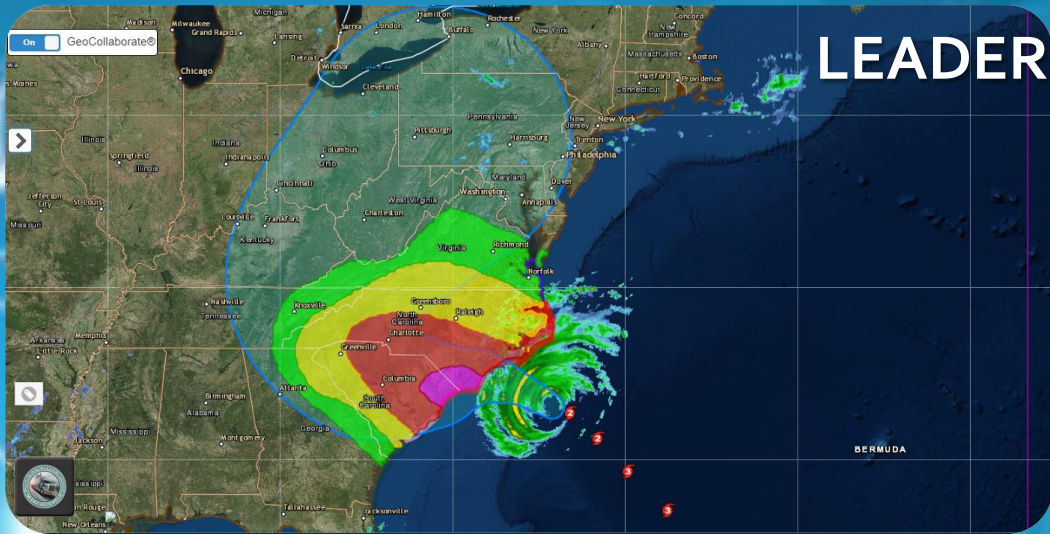
Wednesday May 29, 2019 1:15pm-3:00pm PT
NASA Ames Research Center, CA

Dave Jones, *StormCenter Communications, Inc.*
dave@stormcenter.com & *GeoCollaborate*®



Accelerating Trusted Data Sharing

Collaborative Data-Driven Decision Making 3DM



COLLABORATIVE DASHBOARD

Fleet Response Working Group GeoCollaborate® Daily Dashboard

HURRICANE MICHAEL IS AN INTENSE CATEGORY 4 HURRICANE. WIDESPREAD CATASTROPHIC DAMAGE WILL RESULT FROM WINDS, STORM SURGE, AND FLOODING ALONG ITS PATH.

Reload Dashboard

Basemap: Satellite

Layers

- RT Wx Radar-NWS ORL-1
- NWS Watches Warnings LIVE-ORL1
- NWS 24hr Rainfall Forecast-ORL2
- Forecast Wind Gust 6Hrs
- Status Red
- NC SoE (Florence)
- GOES-East TC FullDisc
- Pass Through Michael
- GOES-East Meso-1-TC
- WPC 48hr Excessive Rainfall Fcst
- WPC 24hr Excessive Rainfall Fcst
- WPC 72hr Excessive

Key Points

FRWG-SISE Updates LIVE TODAY CODE RED

Operational Fleet Movement Sharing of Trusted Data October 10, 2018

...CAT4 MICHAEL CONTINUES TO STRENGTHEN...DEVASTATION LIKELY NEAR THE CORE FOR THE NORTHEASTERN GULF COAST.

State Declarations:

- Florida
- Alabama
- Georgia

Threat Level - Potential for wind 74 to 119 mph

Potential Impacts Include:

- Considerable roof damage to sturdy buildings, with some having window, door, and garage door failures leading to structural damage. Mobile homes severely damaged, with some destroyed. Damage accentuated by airborne projectiles. Locations may be uninhabitable for weeks.
- Many large trees snapped or uprooted along with fences and roadway signs blown over.
- Some roads impassable from large debris, and more within urban or heavily wooded areas. Zoom to

Real-Time Trusted Data Dashboard Sensitive Information Sharing Environment (SISE) OPERATIONAL ACTIVE FLEET MOVEMENT SUPPORT

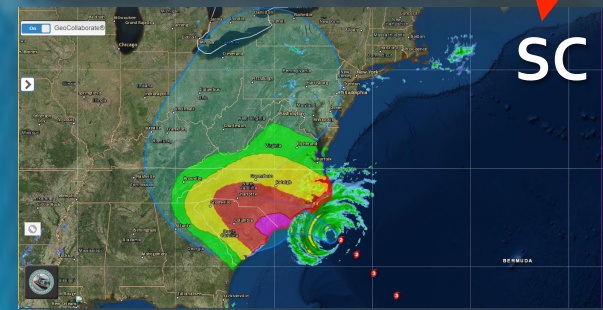
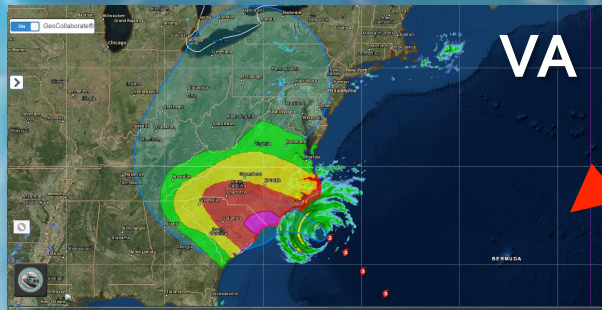
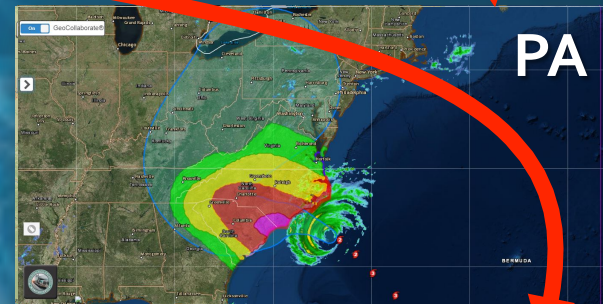
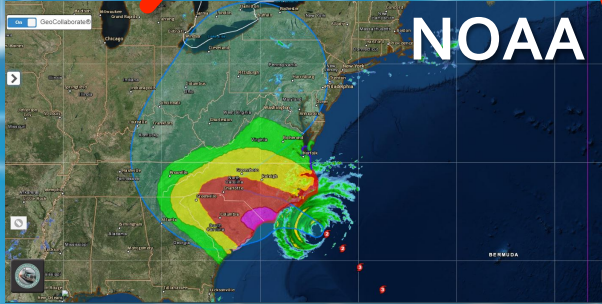
GeoCollaborate esri



Many People. One Map.

Federal to State/Private Sector Sharing

Trusted
Data
CLOUD



BRIEFINGS

STATUS

KEY POINTS

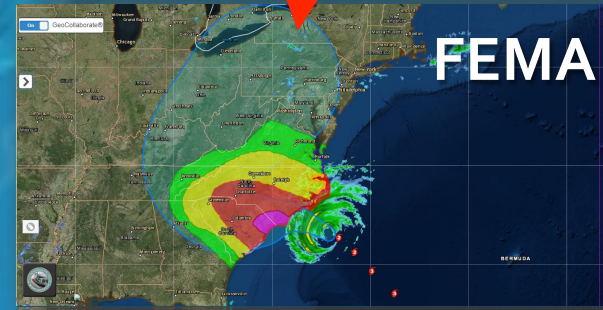
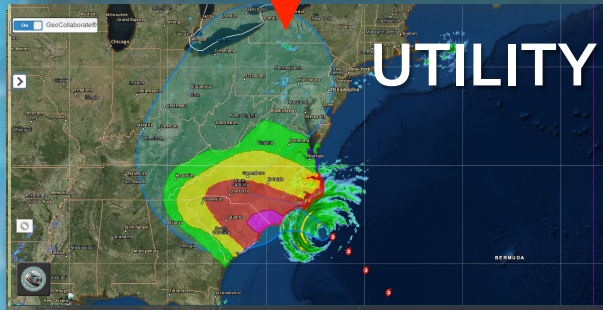
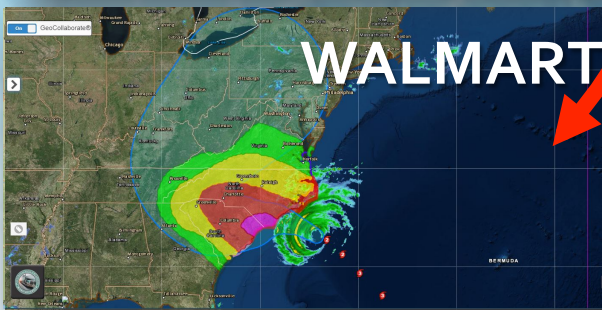
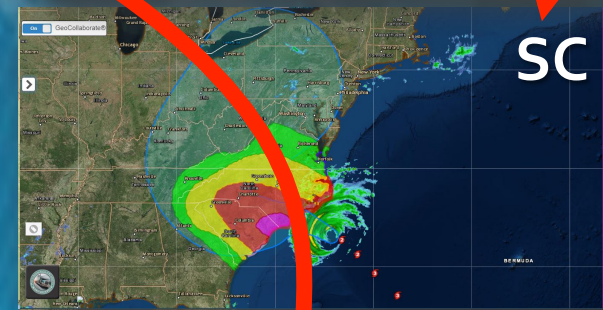
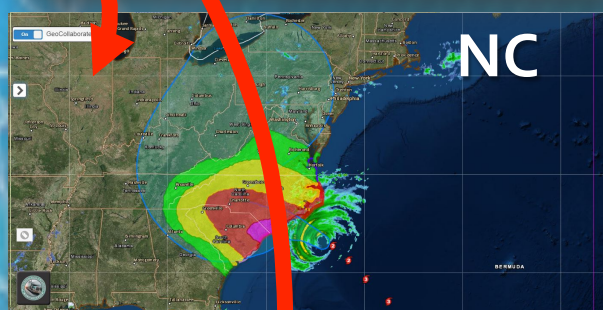
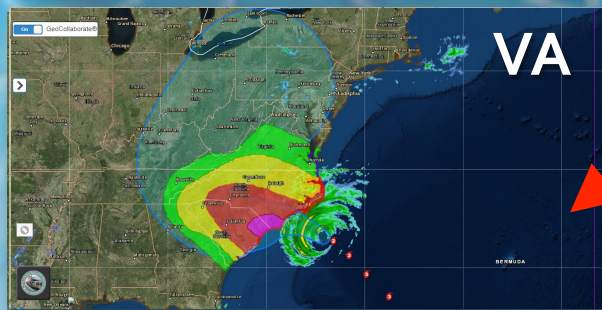
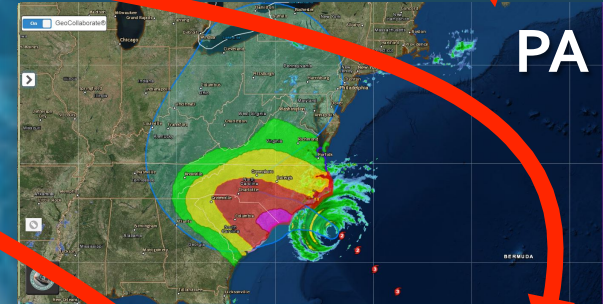
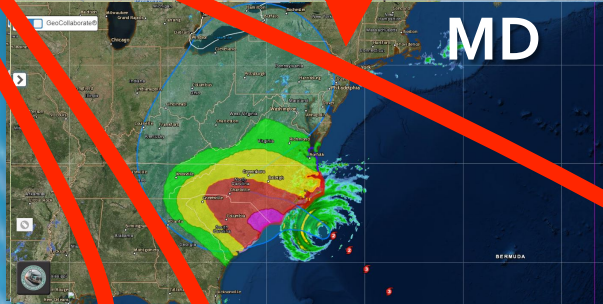
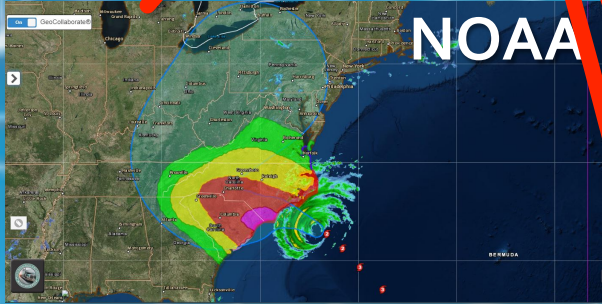
DASHBOARD



Many People. One Map.

Federal to State/Private Sector Sharing

Trusted
Data
Sources



BRIEFINGS

STATUS

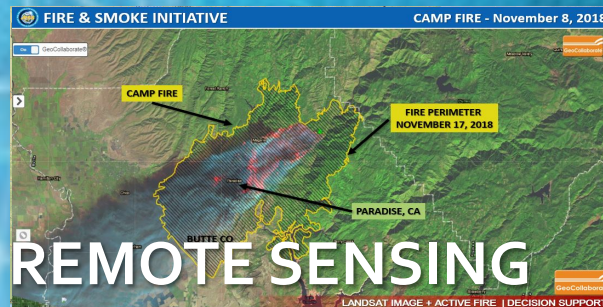
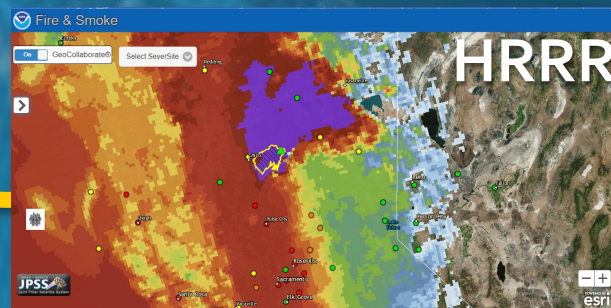
KEY POINTS

DASHBOARD



Many People. One Map.

FLEXIBLE DATA SHARING (requires individual license & Data Sharing Agreement)



Many People. One Map.

Developments Since Last Briefing

Last briefing: Dec 14, 2017

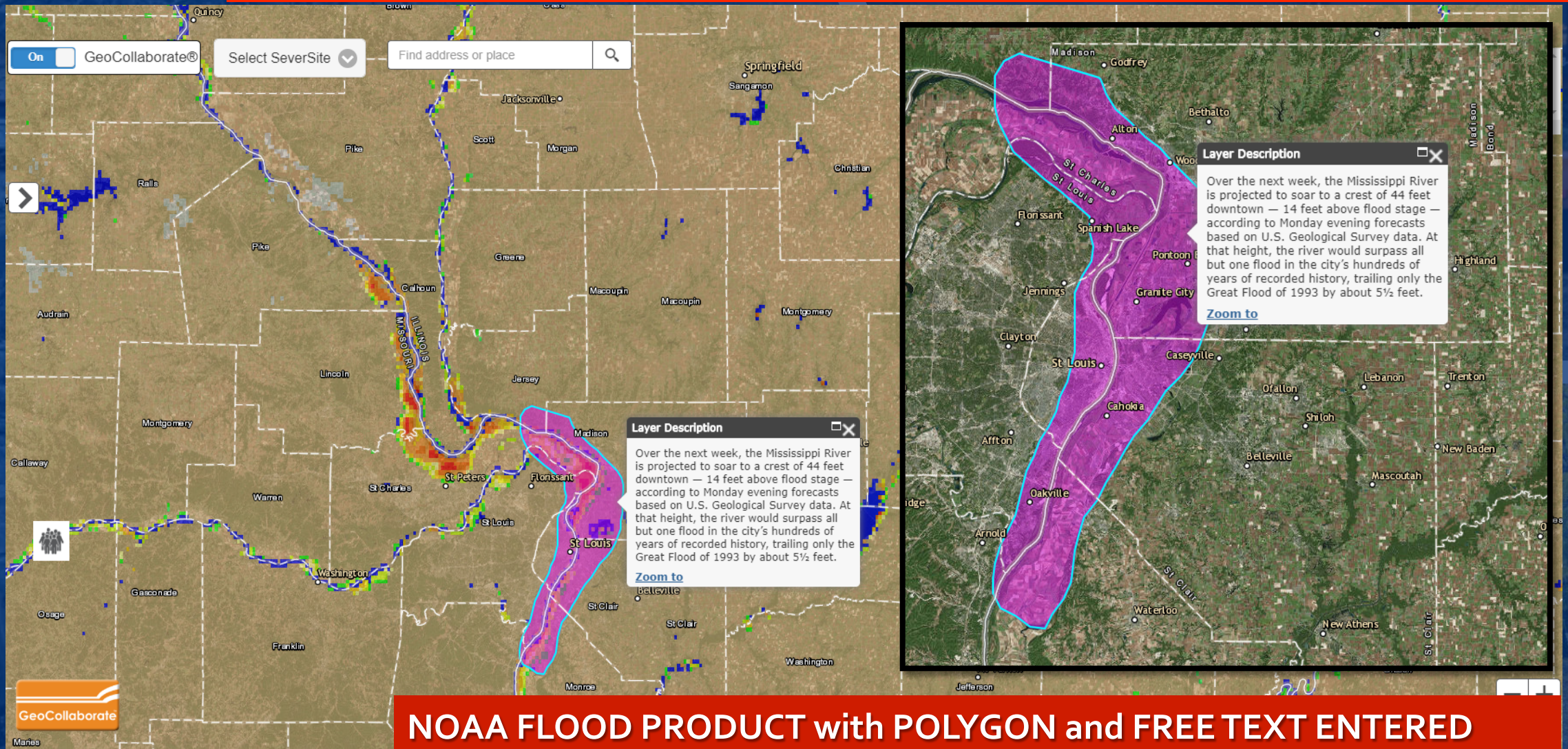
Functionality (Data Sharing Across All Platforms)

- ❖ Able to connect disparate instances of GeoCollaborate
- ❖ Able to add any type of information on the fly outlined by any type of polygon
- ❖ Advanced evolution of ORLs
 - ❖ Operational Readiness Levels
 - ❖ Rapid assessment of trusted data for 30-second decisions
- ❖ Increasing access to trusted data services and share them in **real-time** (i.e. NOAA damage assessment, smoke model data, observations)

FAST ACCESS TO DATA FROM MULTIPLE AND DISPARATE TRUSTED SOURCES

Developments Since Last Briefing

Last briefing: Dec 14, 2017



NOAA FLOOD PRODUCT with POLYGON and FREE TEXT ENTERED

FAST ACCESS TO DATA FROM MULTIPLE AND DISPARATE TRUSTED SOURCES

Developments Since Last Briefing

Last briefing: Dec 14, 2017

Contracts – SBIR Phase III (sole source basis)

- ❖ WMATA – Washington Metro Area Transit Authority
- ❖ DHS – CyberSecurity & Infrastructure Security Agency
- ❖ NOAA JPSS – Fire & Smoke; River, Ice & Flooding Initiatives
 - ❖ GC used to deliver NOAA data into DM environments
- ❖ US Census Bureau
- ❖ PEMA – Pennsylvania Emergency Management Agency
- ❖ NOAA JPSS Production: The Promise of JPSS - <https://youtu.be/euPPfwexaE>

IMPROVING EFFICIENCIES WITH DECLINING BUDGETS, LEVERAGING FED INVESTMENT

Leveraging GeoCollaborate® within Initiatives



Fire & Smoke



Field Ops



USFS



Population Data

Evap Drought Index Precip Estimates

HRRR Smoke Remote Sensing

Satellite Imagery

Snow Cover/Green-up

Field Ops



Command Center



Forward Command Center



Anyone Anywhere



Fire Image sources: Evan Ellicott, Associate Research Professor, Dept of Geographical Sciences, University of Maryland, JPSS Science Seminar January 2019



Developments Since Last Briefing

Last briefing: Dec 14, 2017



All Hazards Consortium (AHC) Sensitive Information Sharing Environment

- ❖ Establishing an environment for private sector to share sensitive information for Federal & State Decision-Making
- ❖ State & Private sector share critical information to keep commerce moving, businesses operating
- ❖ 3DM, ORL (really taking off)
- ❖ Transportation, Food, Fuel, Utilities, Medical Supplies
- ❖ DHS establishing long-term sustainability approach for AHC

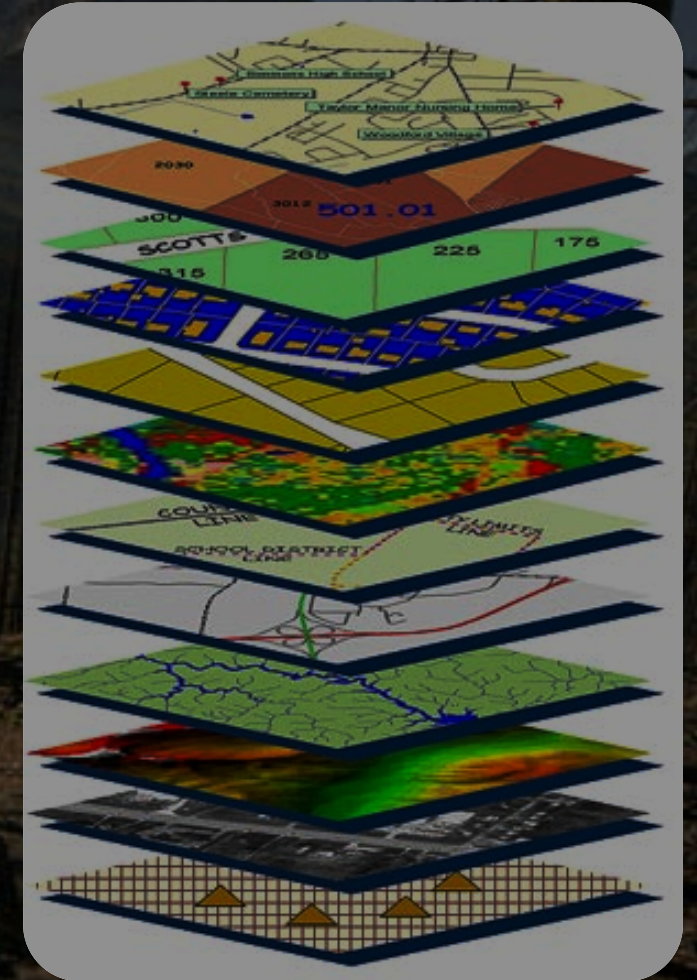
FAST ACCESS TO DATA FROM MULTIPLE AND DISPARATE TRUSTED SOURCES

Trusted Layers

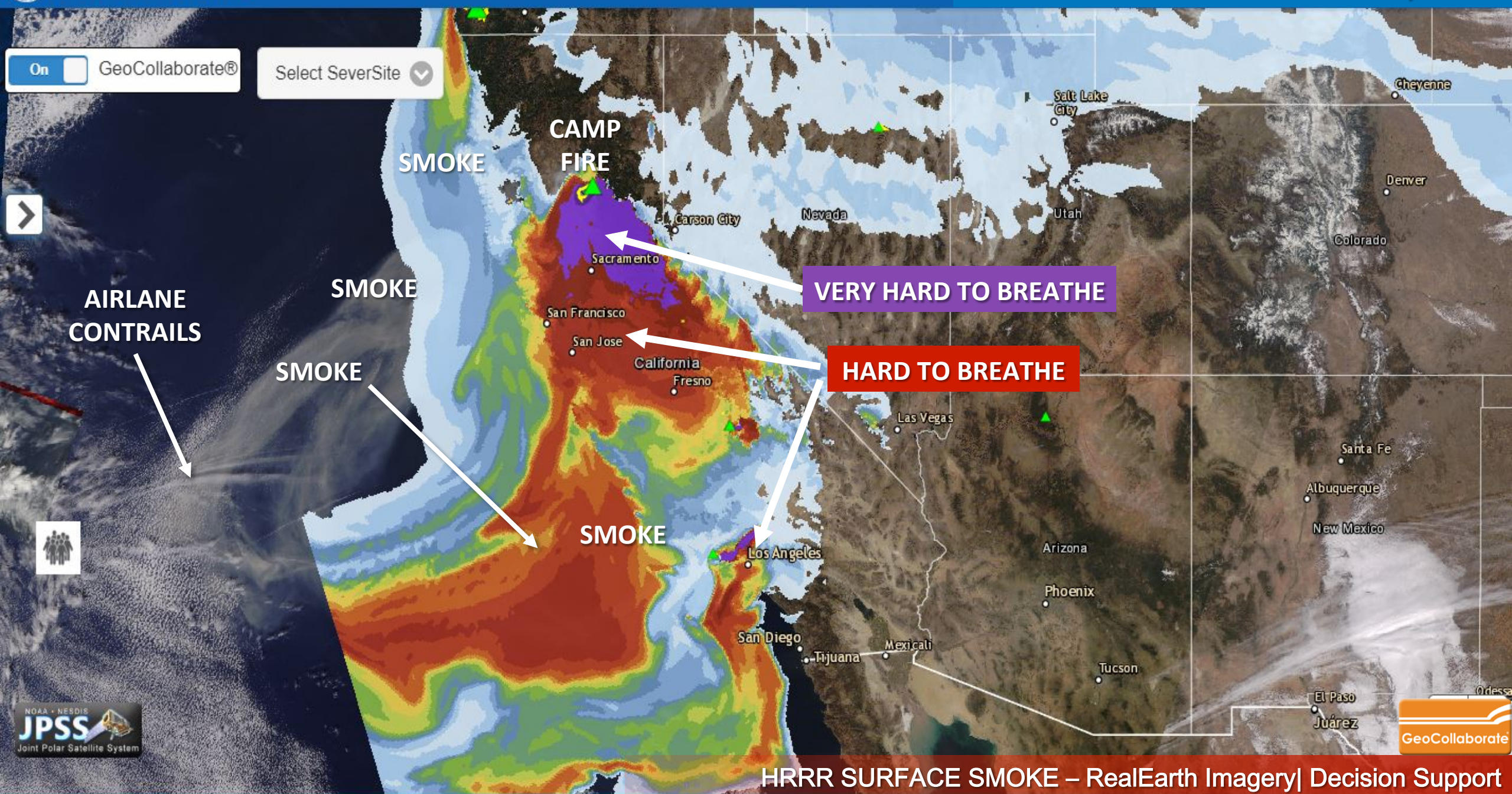
Can be disparate sources from multi-agencies & private sector

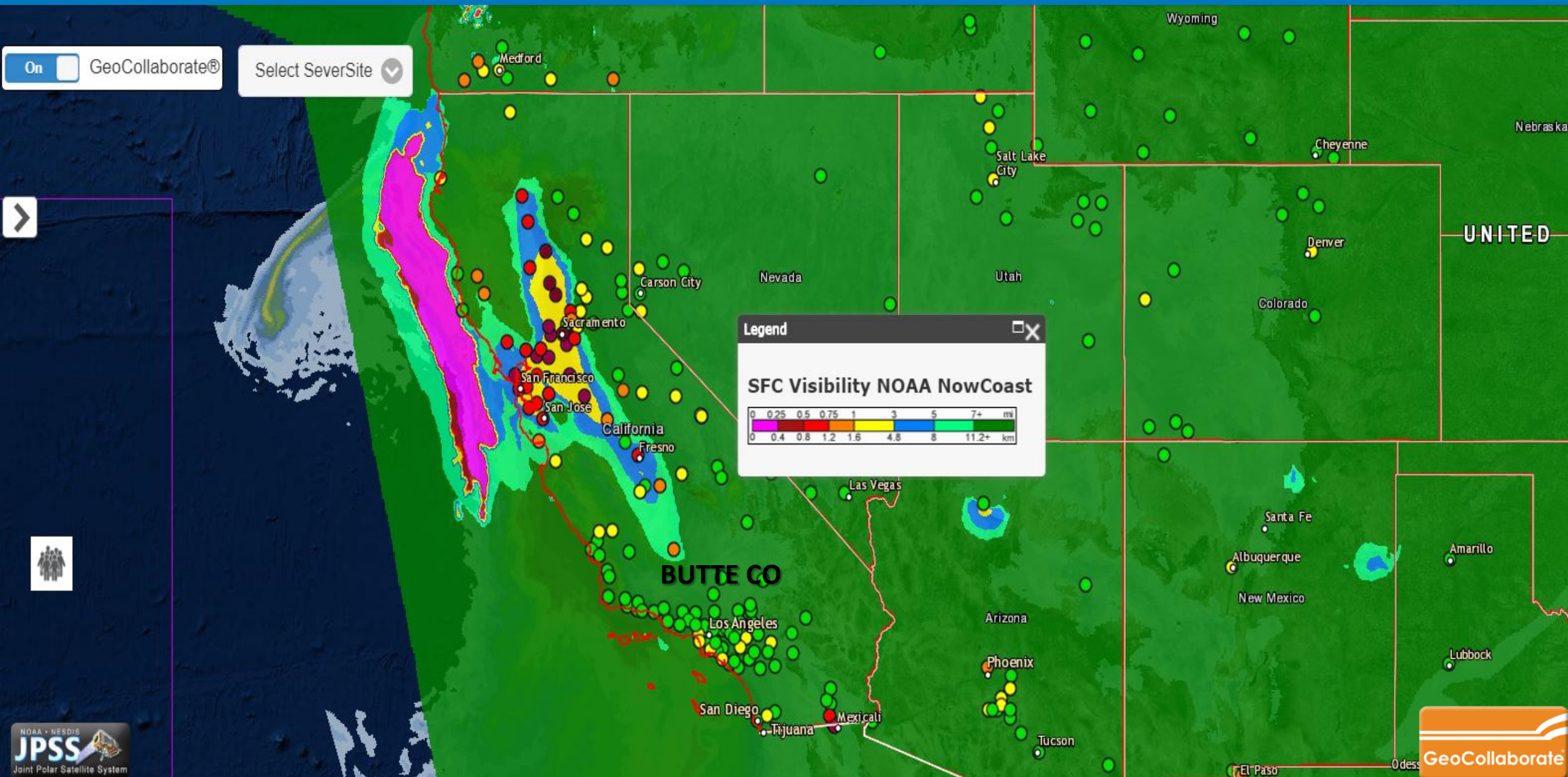
Each trusted data source is a separate layer


- Weather Observations
- Pictures of soil conditions in burn scars
- Remote Sensing
- Declarations, Waivers, Guidance
- Critical Infrastructure
- Drone Data
- Cameras
- Federal Open Datasets
- Video
- Municipality Datasets

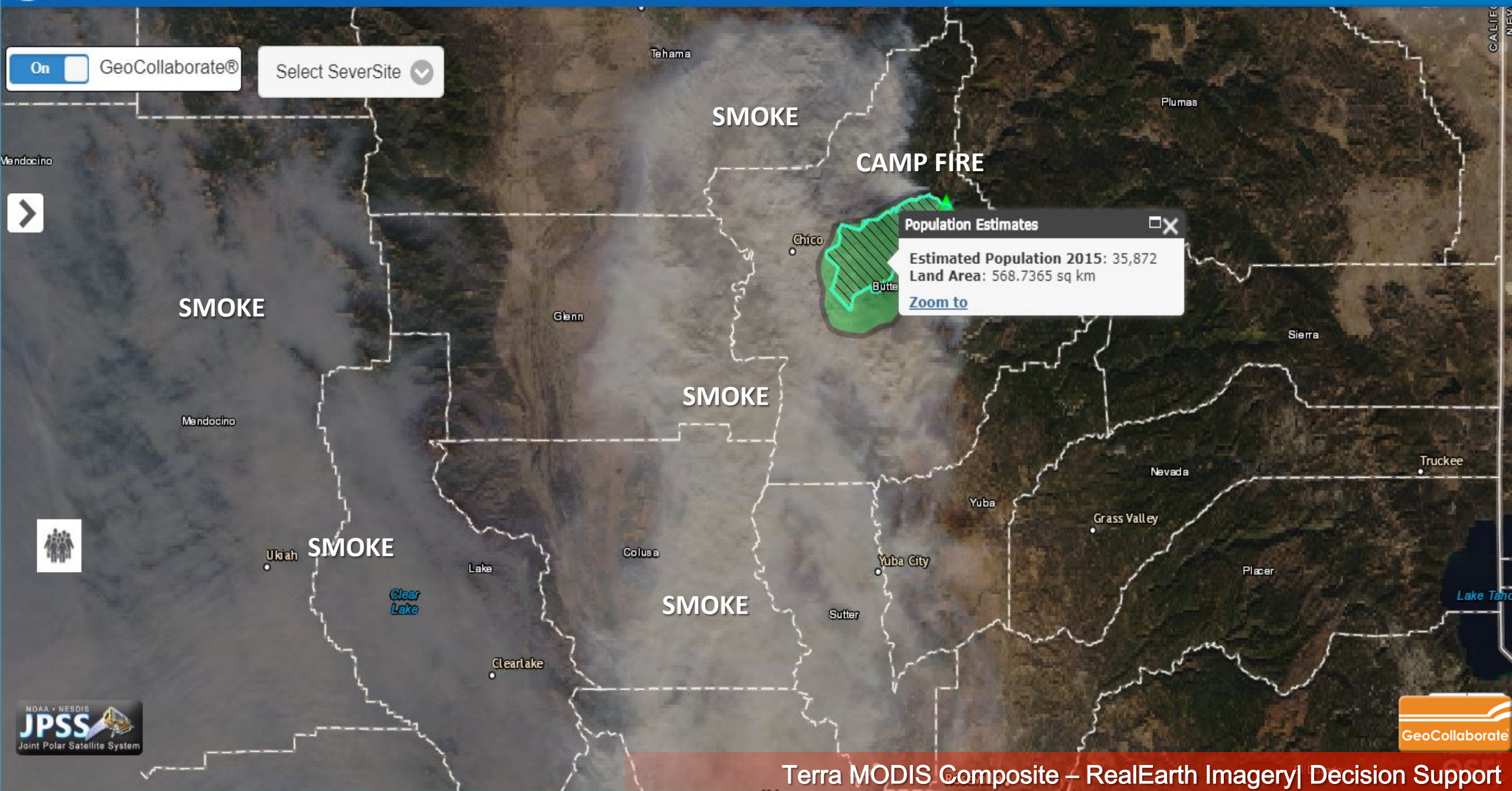


LIMIT CONFUSION –OPERATIONAL READY LEVELS (ORLs) FOR DATA





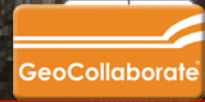
On GeoCollaborate® Select SeverSite 



Population Estimates 

Estimated Population 2015: 35,872
 Land Area: 568.7365 sq km

[Zoom to](#)



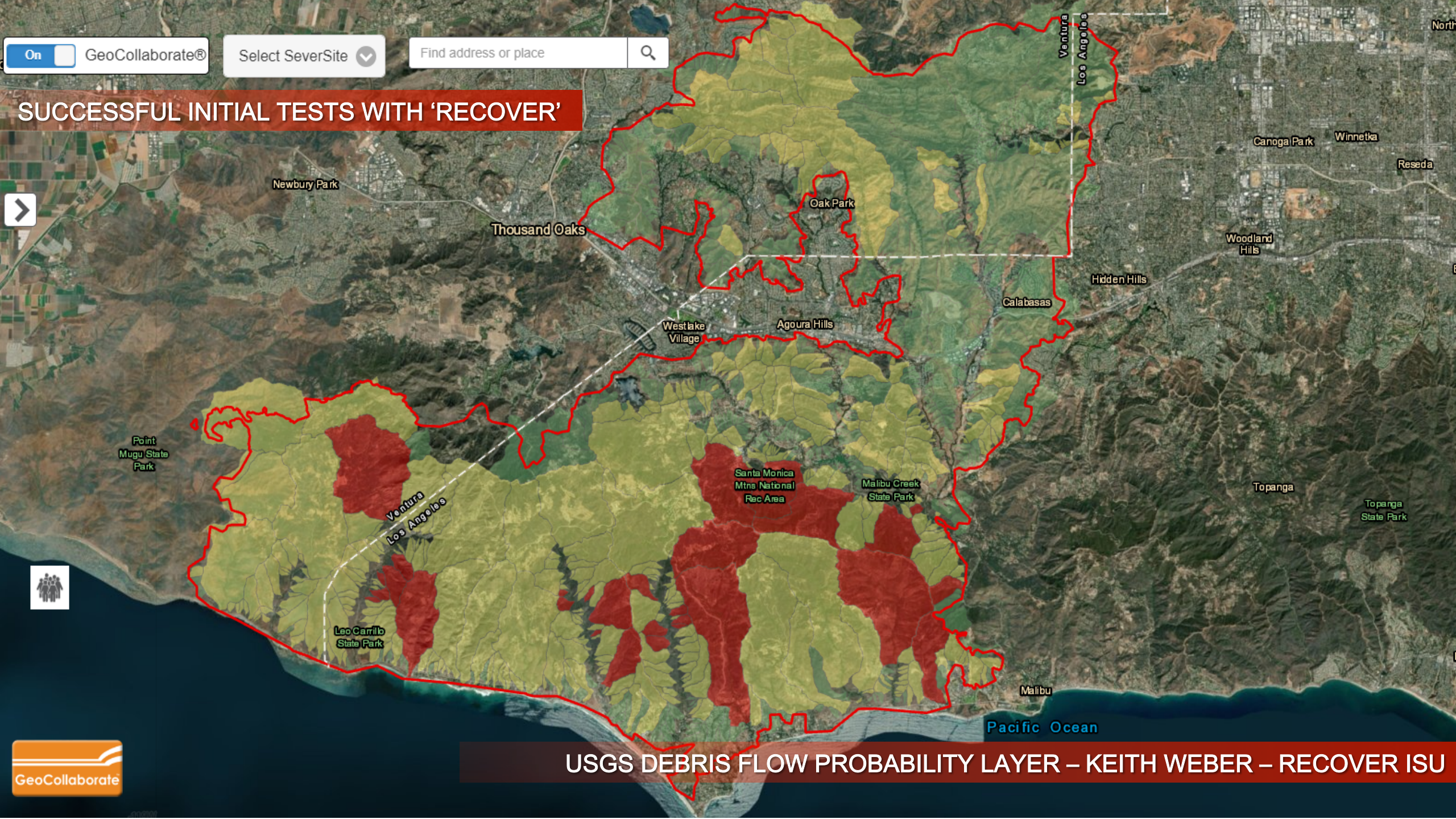
On GeoCollaborate®

Select SeverSite 

Find address or place



SUCCESSFUL INITIAL TESTS WITH 'RECOVER'



USGS DEBRIS FLOW PROBABILITY LAYER – KEITH WEBER – RECOVER ISU



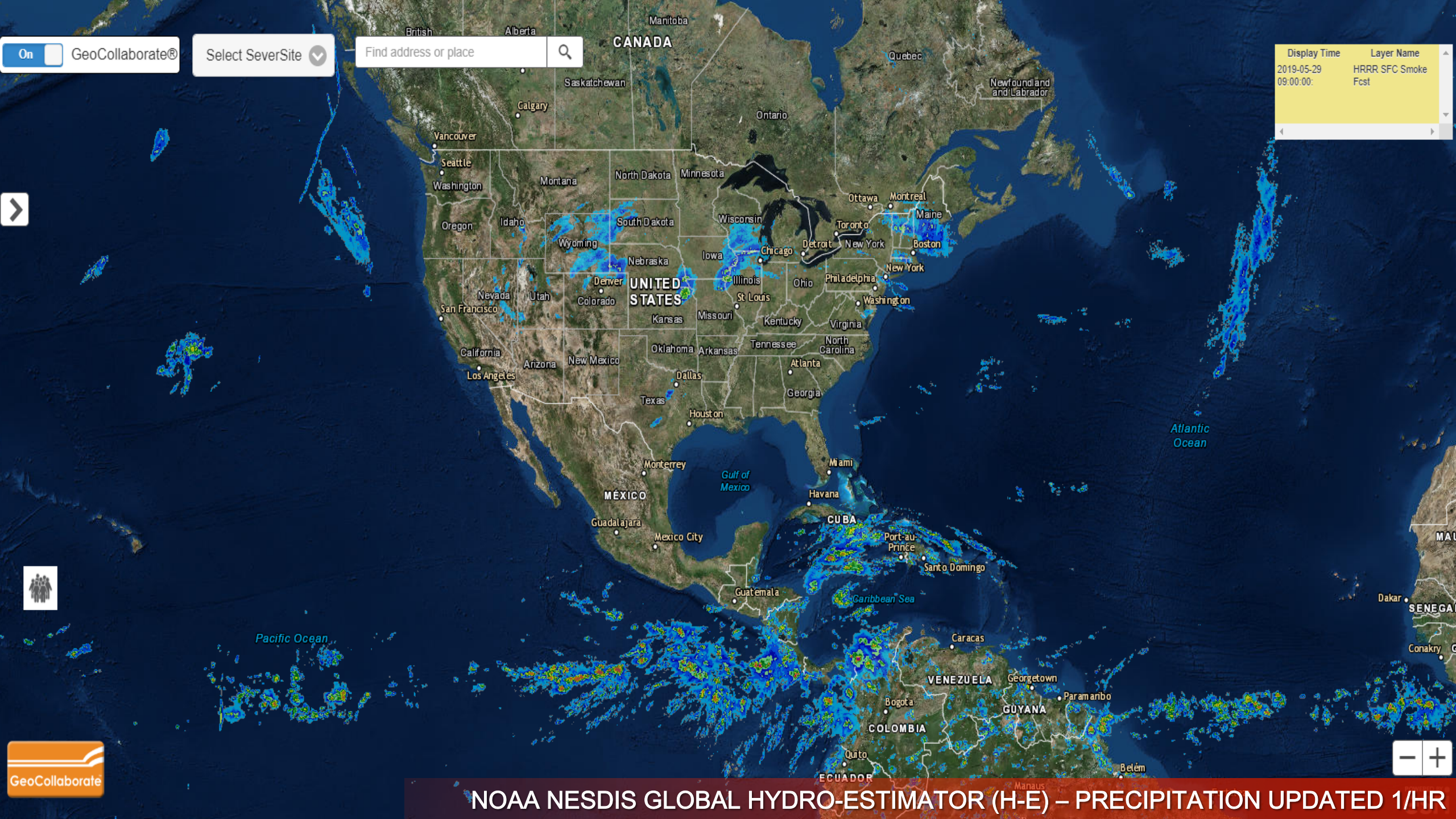
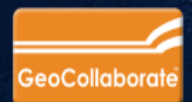
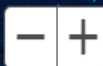
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Select SeverSite

Find address or place

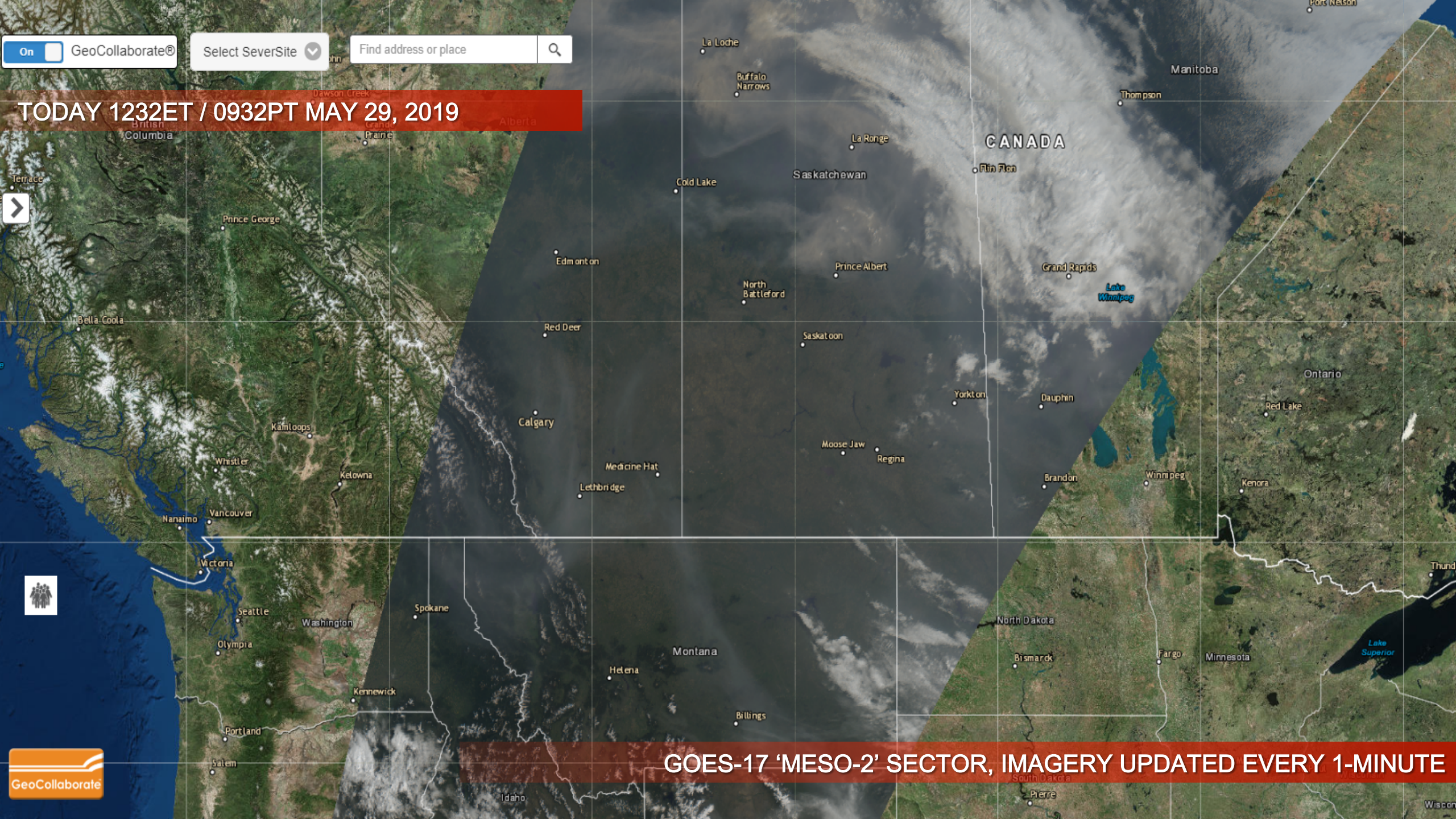


Display Time	Layer Name
2019-05-29 09:00:00	HRRR SFC Smoke Fct

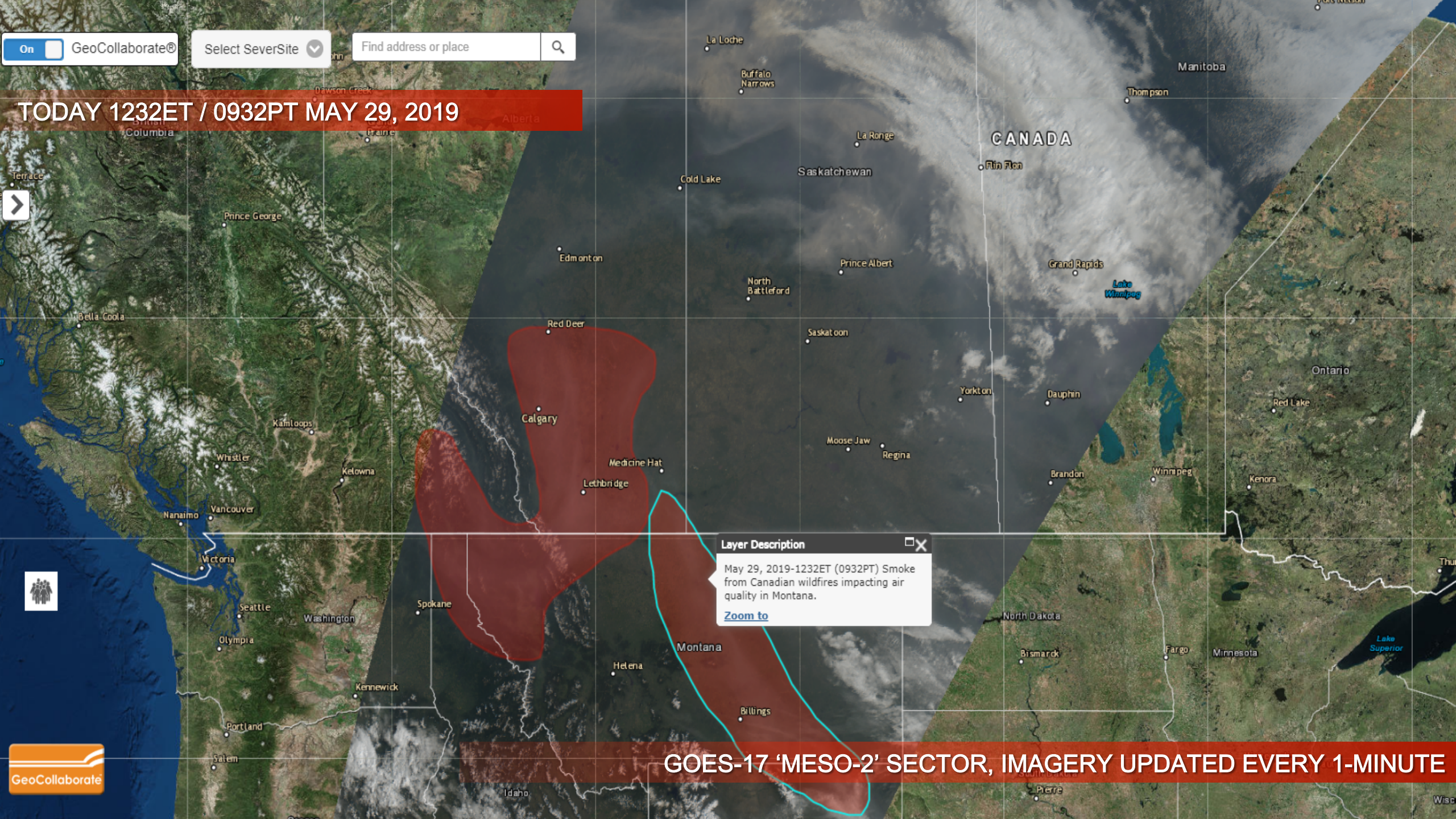


NOAA NESDIS GLOBAL HYDRO-ESTIMATOR (H-E) – PRECIPITATION UPDATED 1/HR

TODAY 1232ET / 0932PT MAY 29, 2019



TODAY 1232ET / 0932PT MAY 29, 2019



Layer Description

May 29, 2019-1232ET (0932PT) Smoke from Canadian wildfires impacting air quality in Montana.

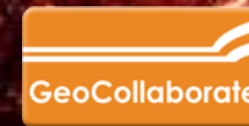
[Zoom to](#)

AFTER THE FLAMES...WORKSHOP

Denver, CO April 1-3, 2019

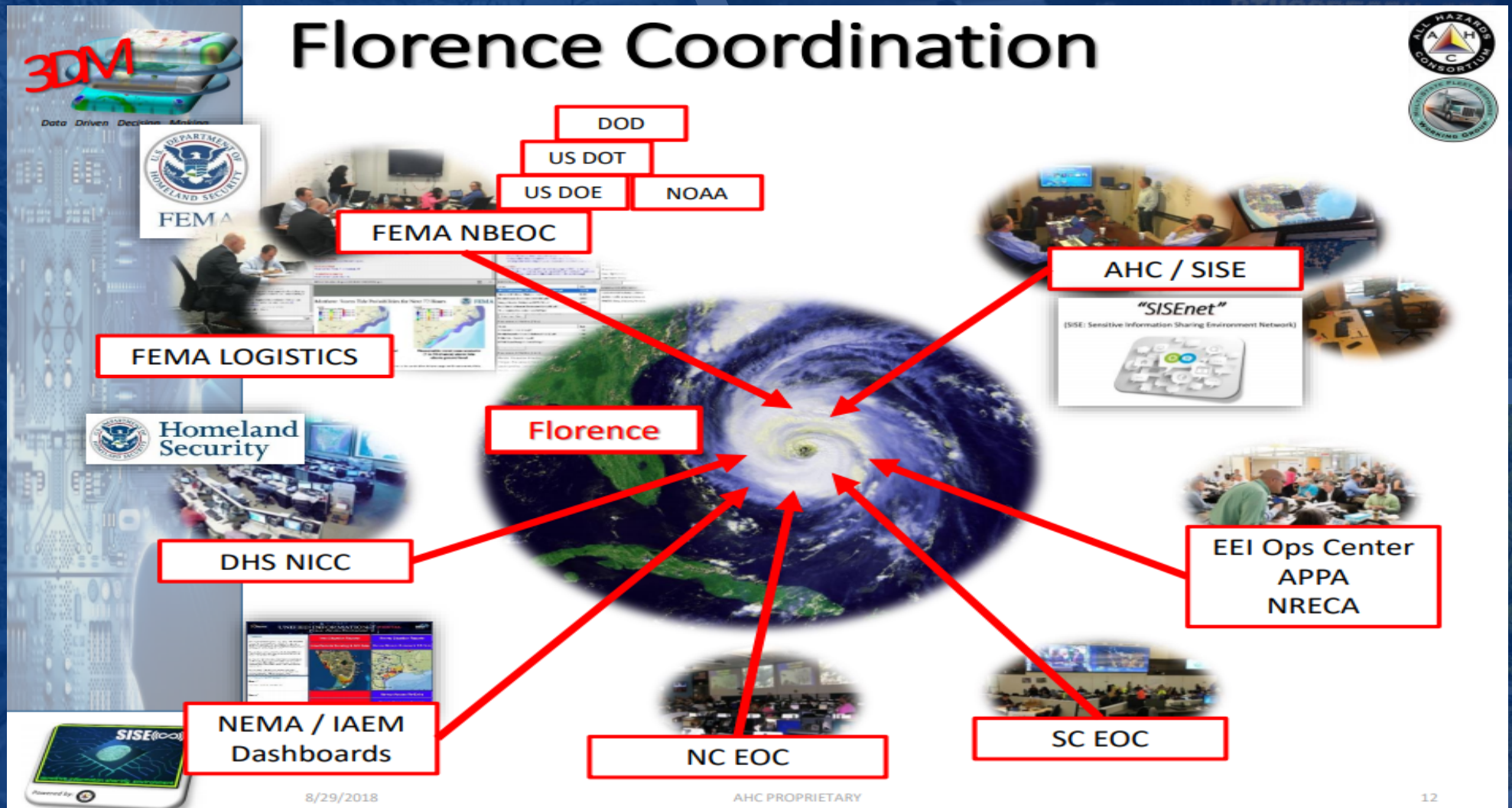


Dave Jones, StormCenter Communications, Inc.
dave@stormcenter.com & GeoCollaborate®



Developments Since Last Briefing

Last briefing: Dec 14, 2017



EXAMPLE OF GEOCOLLABORATE USE DURING HURRICANE FLORENCE - AHC

Improving Communication & Collaboration

- ❖ Leverage Fed Gov't investment in SBIR program to implement cross-platform data sharing rapidly (sole source)
- ❖ Enable communication across agencies and organizations to improve situational awareness
- ❖ Placing responders and decision makers on the same map at the same time
- ❖ Disseminating trusted information across all platforms and devices (ie. NOAA, NASA Satellite Data, Federal Data sources)
- ❖ Information collection from the field

CREATING A UNIFIED APPROACH TO KEEPING COMMUNITIES PREPARED & RESILIENT

Improving Communication & Collaboration

WILDFIRES
Unified Approach During & After the Flames

GeoCollaborate®
SBIR Phase III
Status

Minutes matter. Every pilot, doctor and first responder knows it. For time-critical problems, people need fast access to data from multiple and often disparate sources. Sharing of all data layers across any platform for a unified approach to situational awareness and decision making enables faster action. Now, firefighters, National Weather Service, States, Counties and Municipalities can all be on the same map at the same time across any device.

Delivers Trusted Information Across Platforms

FIRE & SMOKE INITIATIVE CAMP FIRE - November 8, 2018

Critical Data Layer Menu

- Satellite Imagery
- Real-Time Weather
- Fire Perimeter USGS GeoMAC



LIVE dashboard for Data Driven Decision Making (3DM)

Collaborative Data Sharing Can Join Multiple Agencies

Many People. One Map



USFS
Evap Drought Index
Precip Estimates
HRRR Smoke
Remote Sensing
Satellite Imagery
Snow Cover/Green-up

OPERATIONS CENTER

Anyone Anywhere

MOBILE AWARENESS

GeoCollaborate® is a product of StormCenter Communications, Inc.
Funded under NOAA JPSS Task Order: Fire & Smoke Initiative

Contact: Dave Jones
dave@stormcenter.com
410-203-1316

Hand out there at meeting...

- ❖ Use case one-pagers
- ❖ Focus ways to access and share data services
- ❖ Federal & State agency
- ❖ Cross-platform information sharing
- ❖ Private sector data sharing

CREATING A UNIFIED APPROACH TO KEEPING COMMUNITIES PREPARED & RESILIENT

Webinars & Workshops

- ❖ ESIP Webinar: Managing Disasters Through Improved Data-Driven Decision Making
- ❖ JPSS Science Seminar Series: Delivering JPSS Data to Improve Situational Awareness and Decision Making
- ❖ All Hazards Consortium: Sensitive Information Sharing Environment Webinar on GeoCollaborate
- ❖ Natural Hazards Workshop: July in Broomfield, CO
- ❖ AmericaView & Disaster Response: November 2019

CREATING A UNIFIED APPROACH TO KEEPING COMMUNITIES PREPARED & RESILIENT

Thank You



- ❖ Dave Jones
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dave@stormcenter.com
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Halethorpe, MD 21227
- ❖ 410-203-1316 (office)
410-271-4413 (mobile)
- ❖ GeoCollaborate is an SBIR Phase III technology