Collaborative Decision Making Innovations

Powering Readiness, Response & Recovery

Connecting Federal, State, Local & Regional Partners

For Improved Situational Awareness, Coordination and Response

Dave Jones, Founder & CEO, 2013 AMS Fellow
StormCenter Communications, Inc.

March 7, 2013

IHC & Tropical Cyclone Research Forum
Invited Presentation

StormCenter COMMUNICATIONS INC

EVCM Collaboration Technology Evolution

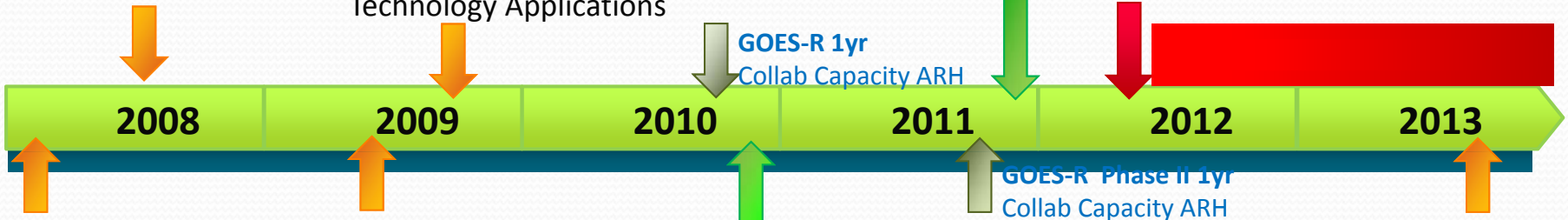
NASA ASP Grant 1yr
Introduce EVTT Technology to NWS, FEMA & TDEM – Realtime Collaboration

NASA ASP ROSES Grant 2yr
GOMA Collaboration Technology Applications

NASA SBIR Phase II 2yr
Develop Innovation

Launch EVCM NWS OPG/IBW
Enable real-time provision of IDSS within NWS

GOES-R 1yr
Collab Capacity ARH



GOES-R Phase II 1yr
Collab Capacity ARH

EVCM INNOVATION
Internal development and innovation

NASA ASP ROSES A.18 Grant 4yr
Visualization & Collaboration in AWIPS II environment

NASA SBIR Phase I 9mo
Enable real-time collaboraiton on other platforms

Multiplatform Collaboration
Expand collaboration capability across geo-browsers

Setting the stage for End-To-End Data Services Chained by Workflows

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EVCM – Geospatially Enabled Cyber-Infrastructure

StormCenter EVCM Support

NWS LWX IMET Support

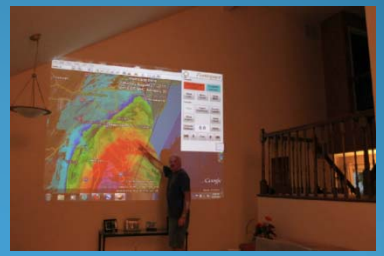
EVCM Display/Projection Computer

EVCM Montgomery Co.

Governor, Lt. Governor & MD State Police Commander

EVCM Installed on SEOC Commanders Computer

EVCM Baltimore City



EVCM Anne Arundel Co.

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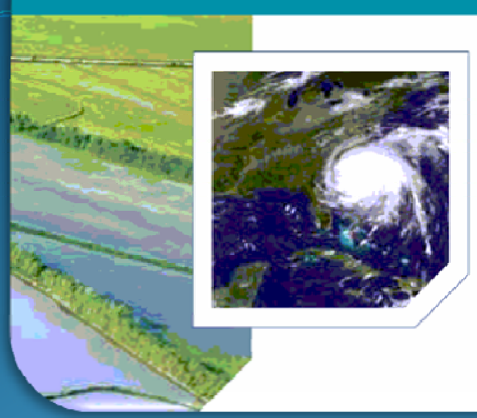
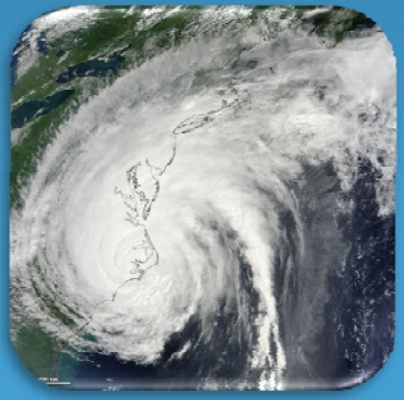
FEATURED PROJECTS AND EVENTS



"StormCenter's technology allowed us to access data that we had not been able to access in the past. By combining NASA, NOAA and our own GIS information, we were able to improve our situational awareness in real time so we could better serve the citizens of Maryland."

Martin O'Malley
Governor of Maryland



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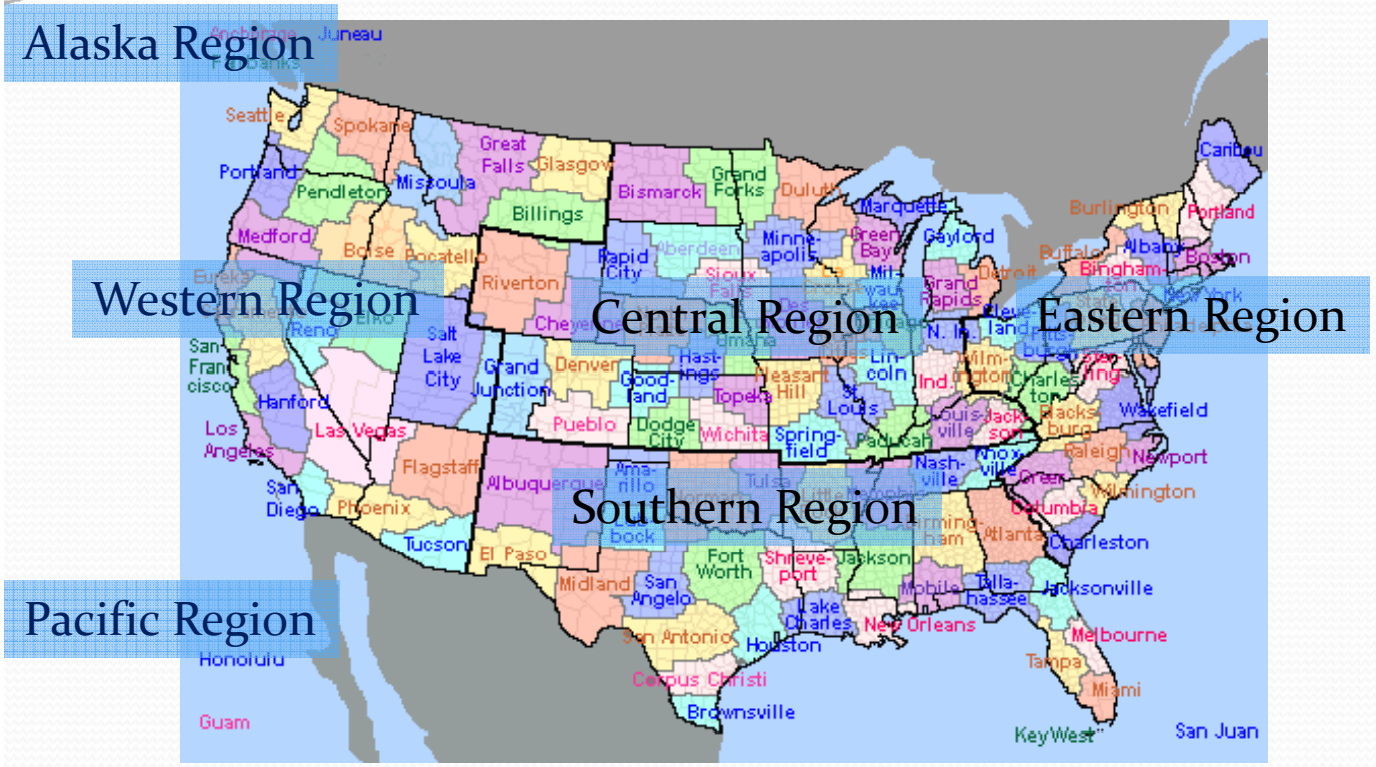
Collaboration Across NWS



Collaboration Enabled

National Centers
National-Regional
Regional Collaboration
Regional-WFO
WFO-County EOC
National Centers-WFO
NHC-Carib Islands
NHC-Hurr Hotline
Training
Deployment of ERS
Remote Support
Research to Ops-Models

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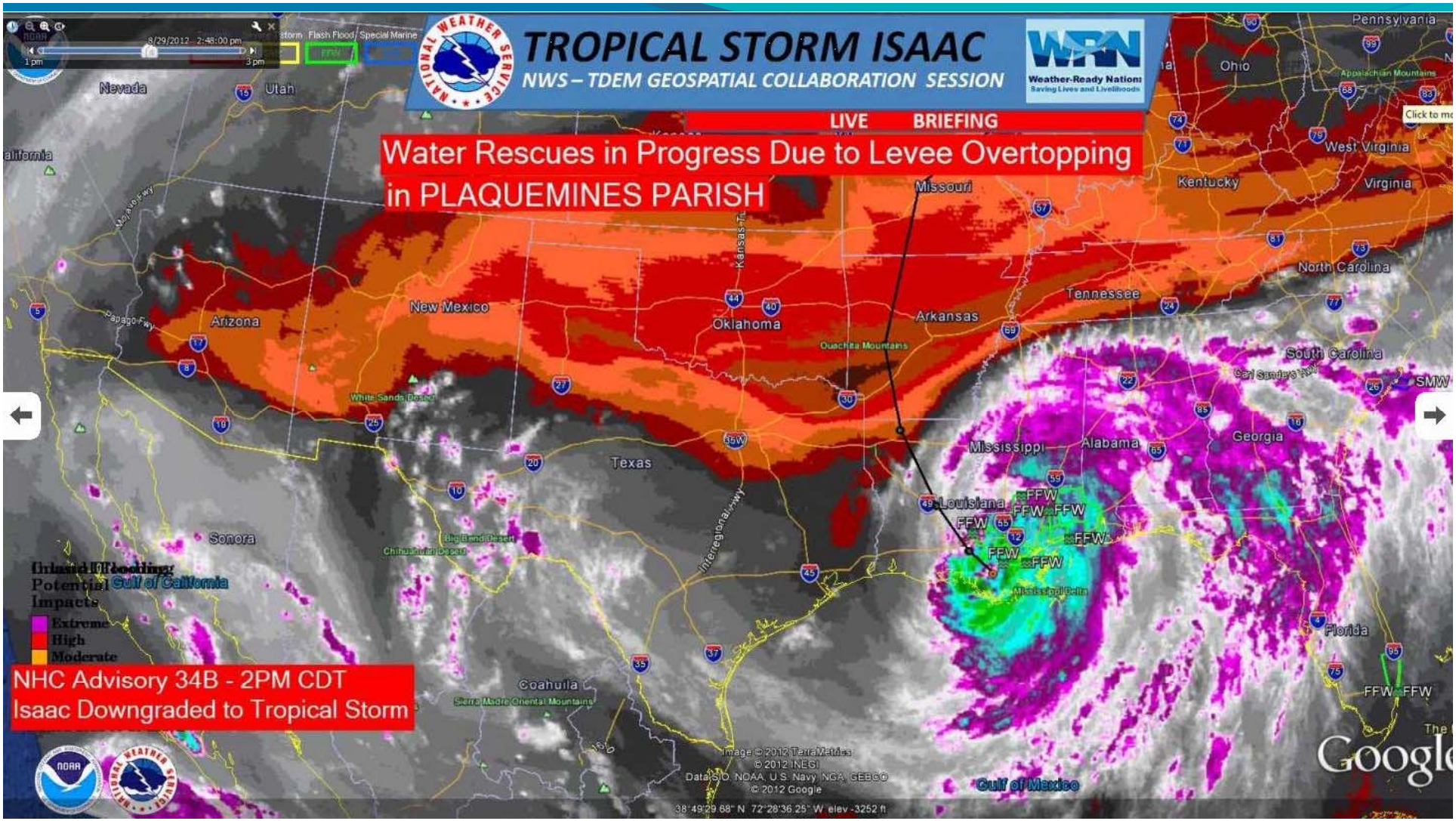
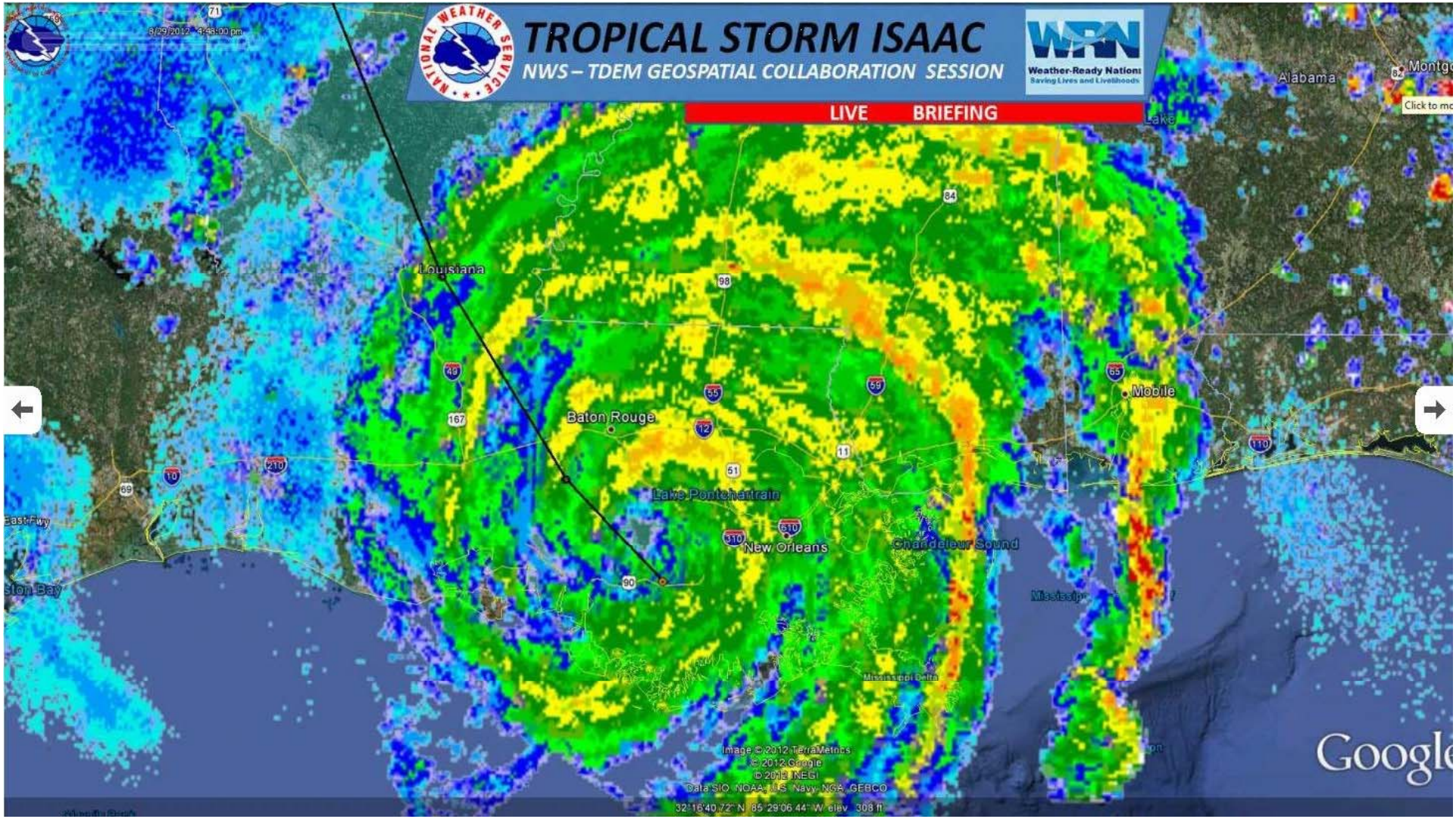
Cross-Agency Collaboration Examples

Real-Time Geospatial Collaboration in a Cloud Cyber-Infrastructure Can Enable:

- Cross-Agency data sharing for improved understanding of events, processes, interactions, impacts
- Connecting Federal Agencies to States / Federal Agencies Vertically / International
  - Joint Product creation (i.e. Volcanic Ash Collaborative Coordination)
  - New way to deliver NHC products & data to International Partners
- NWS-FEMA-USACE-USGS-DoD – Data sharing in a secure environment, including classified
- NASA-NWS NHC-WFOs – NASA HS_3 Data to NHC, NCEP
- Acceleration of science data into state EM EOCs (Tsunamis Warning, Aviation, H. Security)
- Federal Agency data to be accessed and used for decision making by multiple locations
- Scientist to scientist – data sharing for discussion and accelerated
- NSF – NWS for improved Visiting Scientist Program (Tuesday Dr. Michael Morgan)
- NSF ability to enable PI sharing of geospatial data and information (Ramamurthy)


TROPICAL STORM ISAAC
NWS – TDEM GEOSPATIAL COLLABORATION SESSION
Weather-Ready Nation:
Saving Lives and Livelihoods
LIVE BRIEFING
Water Rescues in Progress Due to Levee Overtopping
in PLAQUEMINES PARISH
Nevada
Utah
Arizona
New Mexico
Oklahoma
Texas
Missouri
Arkansas
Louisiana
Mississippi
Alabama
Georgia
Florida
Tennessee
Kentucky
Ohio
West Virginia
Virginia
North Carolina
South Carolina
Pennsylvania
Sonora
Coahuila
Gulf of California
Gulf of Mexico
Potential Impacts
Extreme
High
Moderate
NHC Advisory 34B - 2PM CDT
Isaac Downgraded to Tropical Storm
FFW
Google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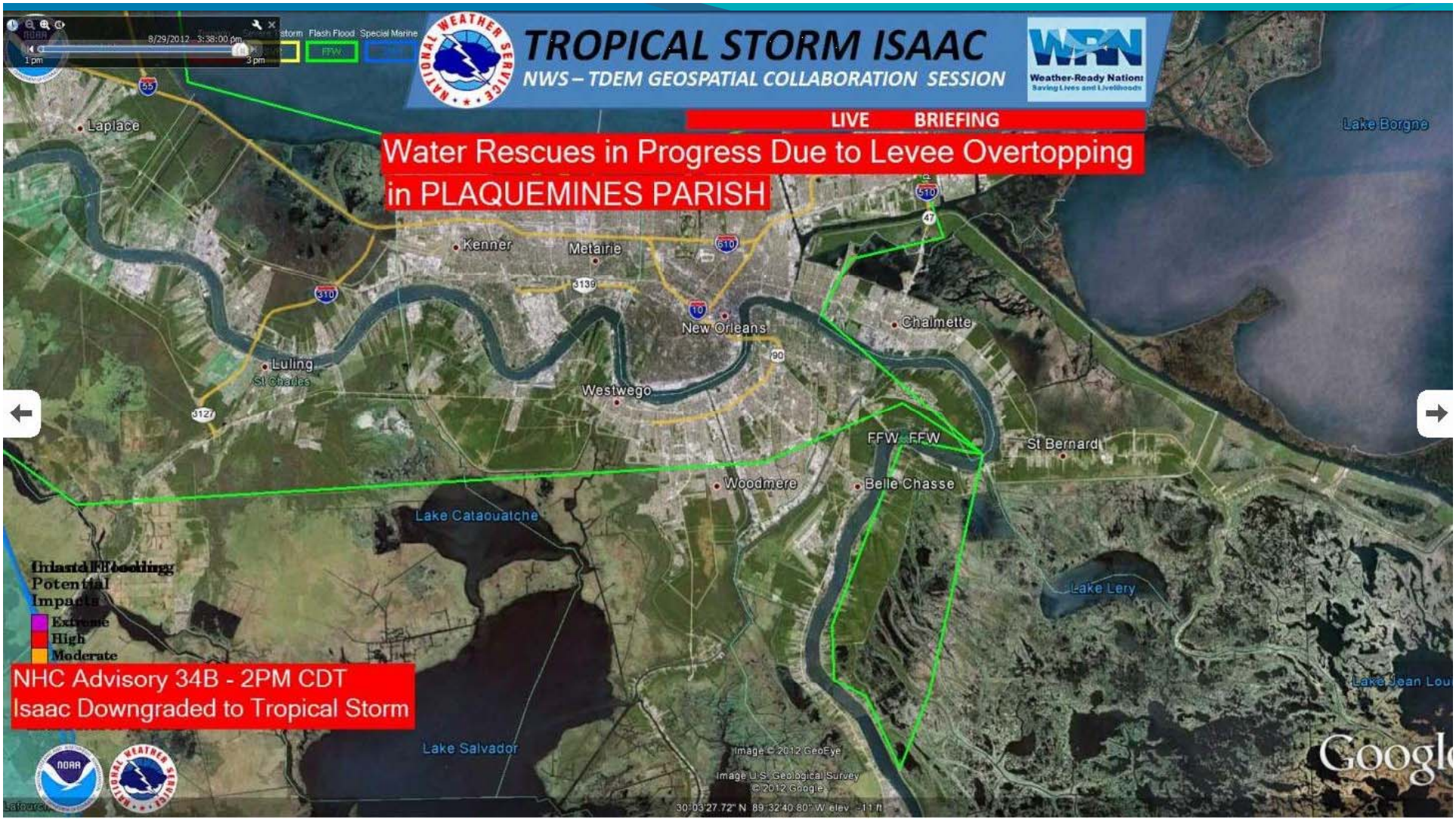
Louisiana
Baton Rouge
Lake Pontchartrain
New Orleans
Chandeleur Sound
Mobile
Alabama
Google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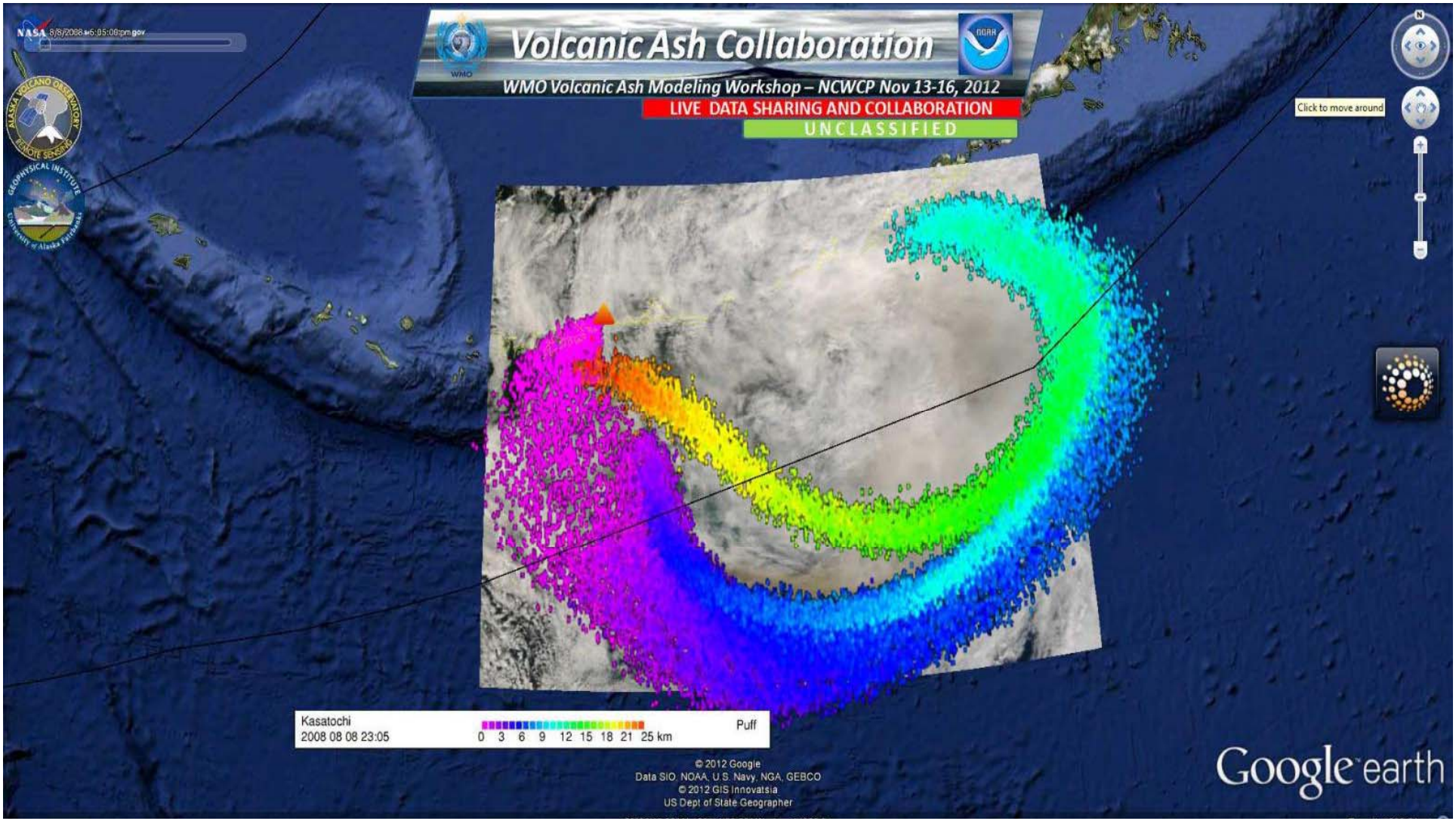
Kenner
Metairie
New Orleans
Chalmette
Luling
St Charles
Westwego
St Bernard
Woodmere
Belle Chasse
Lake Borgne
Lake Cataouatche
Lake Lery
Lake Salvador
Potential
Impacts
Extreme
High
Moderate
NHC Advisory 34B - 2PM CDT
Isaac Downgraded to Tropical Storm
Image © 2012 GeoEye
Image U.S. Geological Survey
© 2012 Google
30°03'27.72" N 89°32'40.80" W elev -11 ft


NASA
Volcanic Ash Collaboration
WMO Volcanic Ash Modeling Workshop – NCWCP Nov 13-16, 2012
LIVE DATA SHARING AND COLLABORATION
UNCLASSIFIED
Click to move around
Kasatochi
2008 08 08 23:05
0 3 6 9 12 15 18 21 25 km
Puff
© 2012 Google
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
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US Dept of State Geographer
Google earth

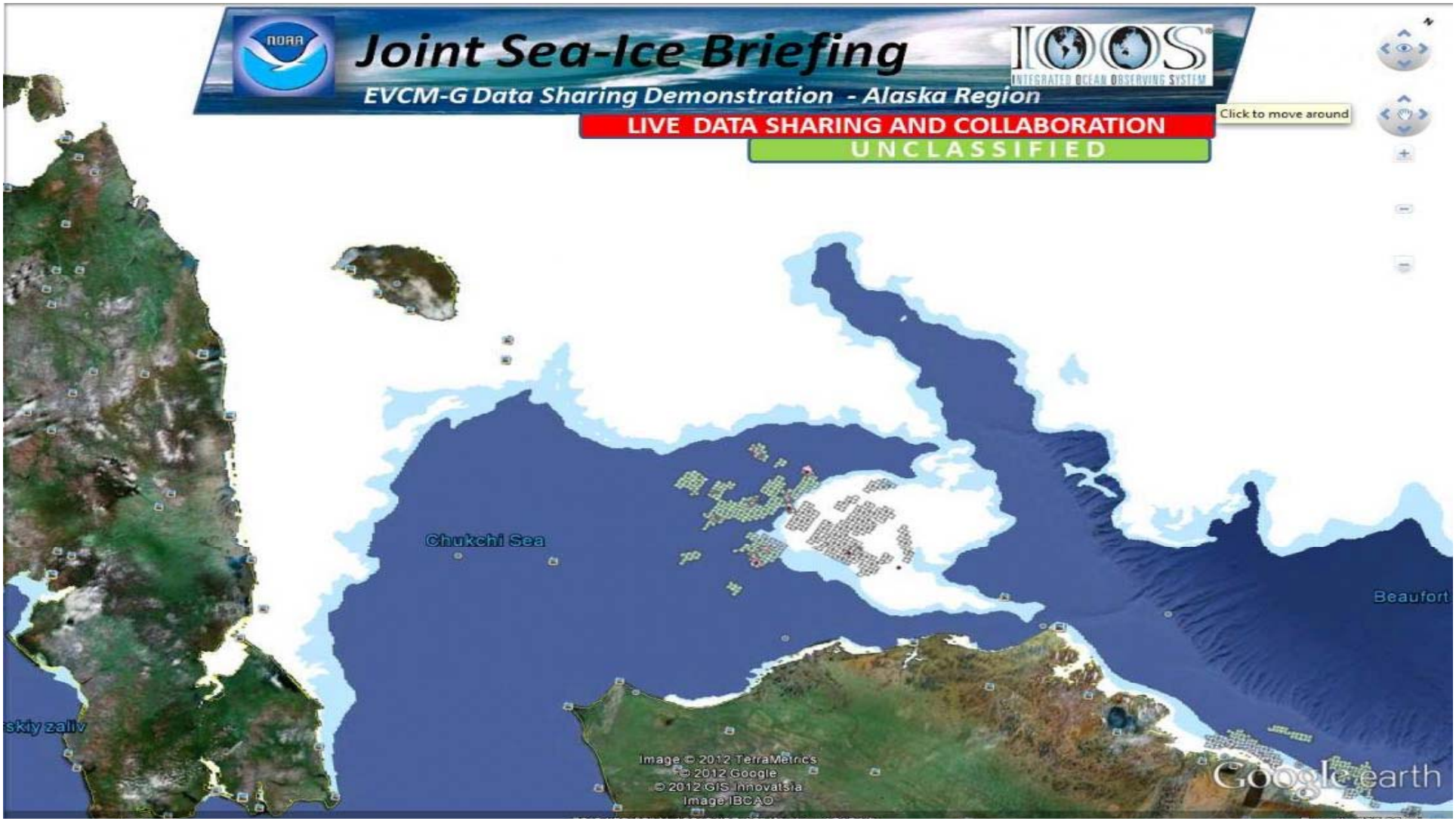
Joint Sea-Ice Briefing
EVCM-G Data Sharing Demonstration - Alaska Region
IOOS
INTEGRATED OCEAN OBSERVING SYSTEM
LIVE DATA SHARING AND COLLABORATION
UNCLASSIFIED
Click to move around
Chukchi Sea
Beaufort
Image © 2012 TerraMetrics
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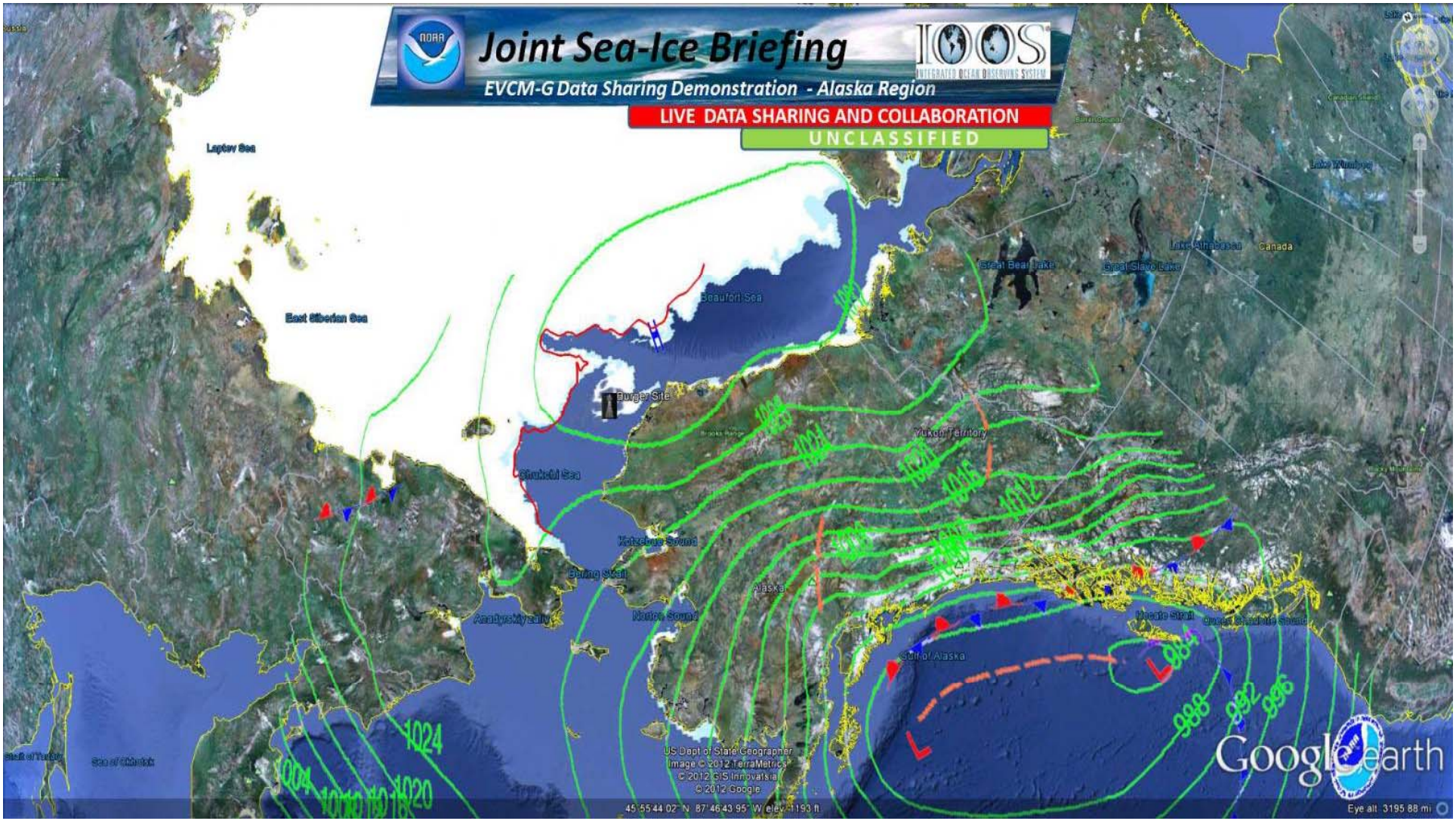
Image IBCAO
Google earth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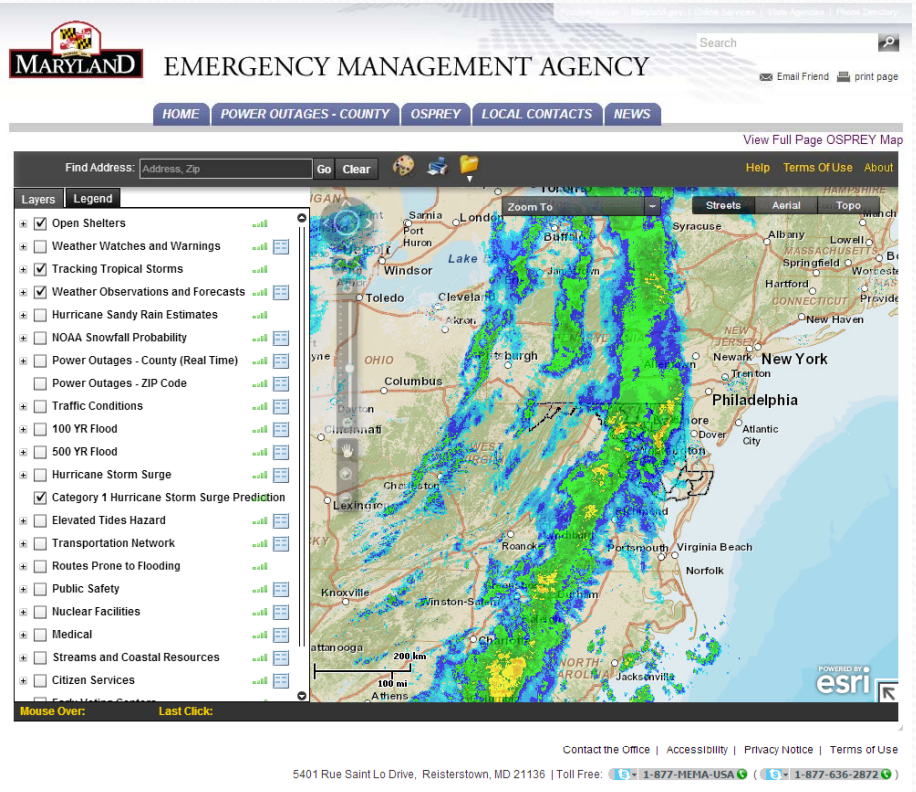
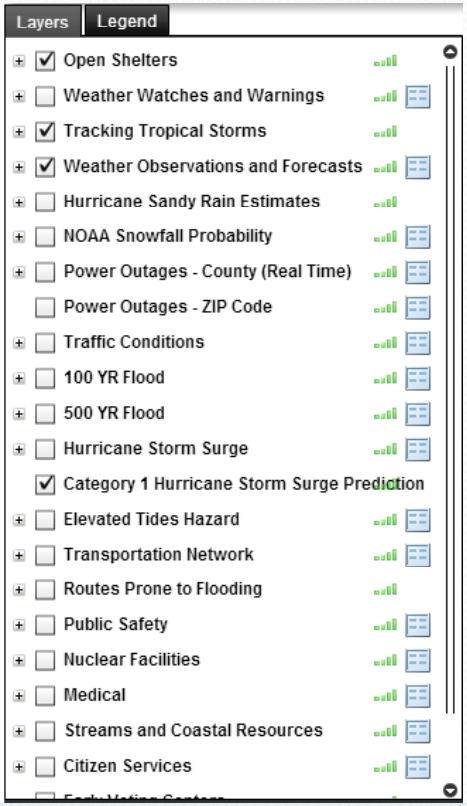
LIVE DATA SHARING AND COLLABORATION
UNCLASSIFIED
IOOS
Laptev Sea
East Siberian Sea
Beaufort Sea
Great Bear Lake
Great Slave Lake
Lake Athabasca
Canada
Burger Site
Yukon Territory
Chukchi Sea
Kotzebue Sound
Bering Strait
Alaska
Norton Sound
Gulf of Alaska
1024
1020
988
992
996
US Dept of State Geographer
Image © 2012 TerraMetrics
© 2012 GIS Innovatsia
© 2012 Google
45°55'44.02" N 87°46'43.95" W elev -1193 ft
Google earth
Eye alt 3195.88 mi

Flex Viewer & GeoCollaborate™





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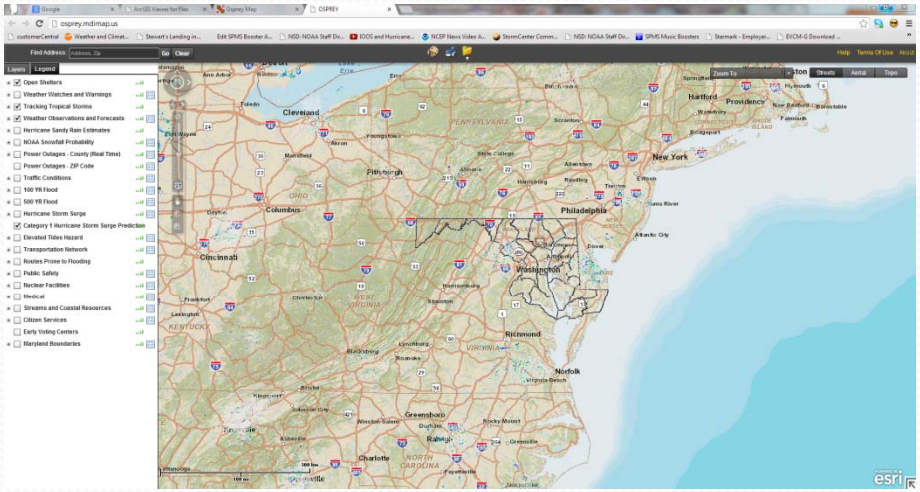
Flex Viewer & GeoCollaborate

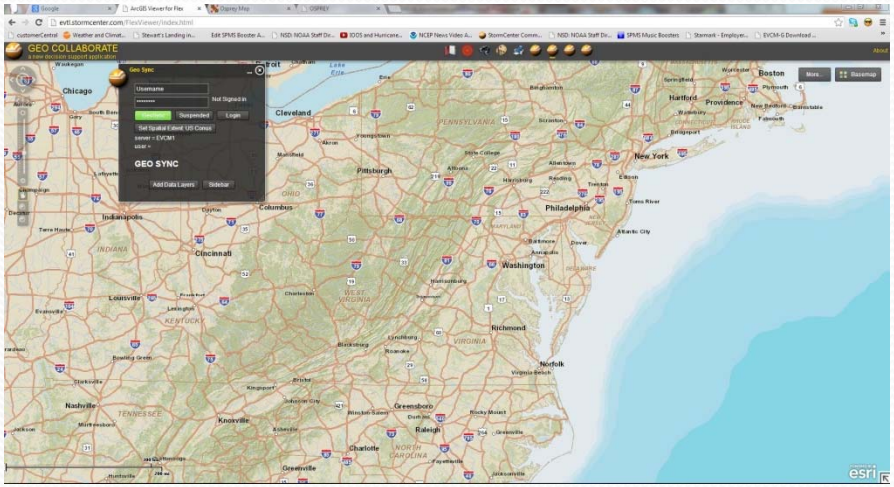
Flex Viewer Technology – Pervasive through many state EOCs

MARYLAND EMERGENCY MANAGEMENT AGENCY

HOME | POWER OUTAGES - COUNTY | OSPREY | LOCAL CONTACTS | NEWS

StormCenter COMMUNICATIONS, INC.
Redefining Collaboration and Data Sharing





StormCenter selected as the Federal Government's Preferred Provider of Geospatial Collaboration Technologies

Sole Source contract vehicle to implement geospatial collaboration within ANY Federal Agency – No Ceiling, No Timeframe, Sub-contracting allowed

This SBIR vehicle lowers the procurement process by 10-24 months

Thank You.

Dave Jones (dave@stormcenter.com)