



INSTITUTE FOR DEFENSE ANALYSES

Global Mission Assurance Portal (GMAP): Establishing Integrated Situational Awareness via Streamlined Data Sharing for Collection and Visualization

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About This Publication

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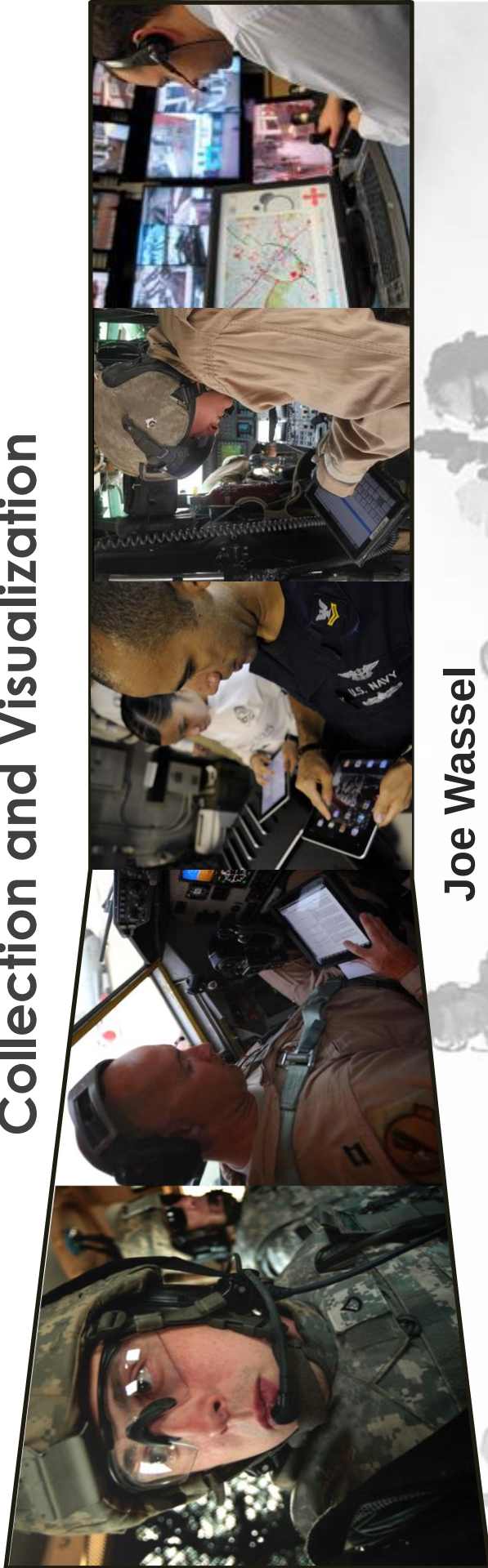
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Global Mission Assurance Portal (GMAP):

Establishing Integrated Situational Awareness via Streamlined Data Sharing for Collection and Visualization



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Global Mission Assurance Portal (GMAP)

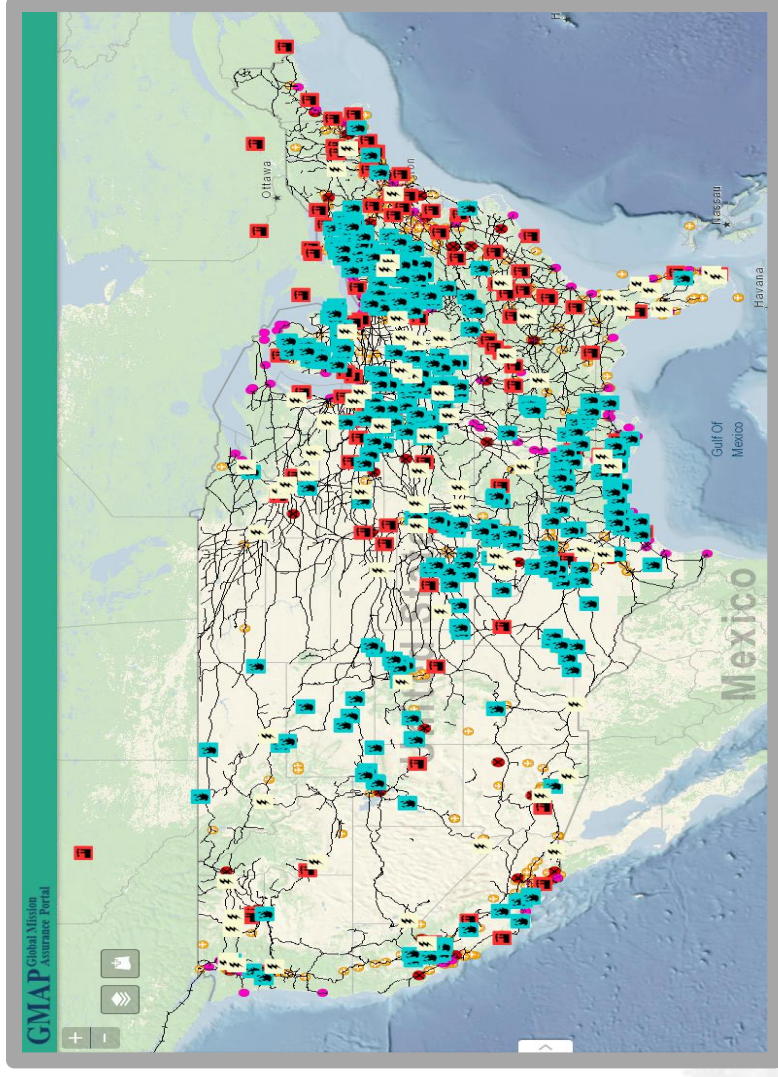
GMAP is a Critical Infrastructure Protection portal and map application that serves as a dedicated collaboration and coordination space for critical infrastructure protection planning, analyses, products, global operations, and crises.

Asset Visualization Tool (AVT)

- Geospatially visualizes **hundreds of infrastructure-related data layers**
- Exposes information from a multitude of partner organizations
- Provides critical infrastructure-focused analytical capabilities via interactive tools

Knowledge Management Portal

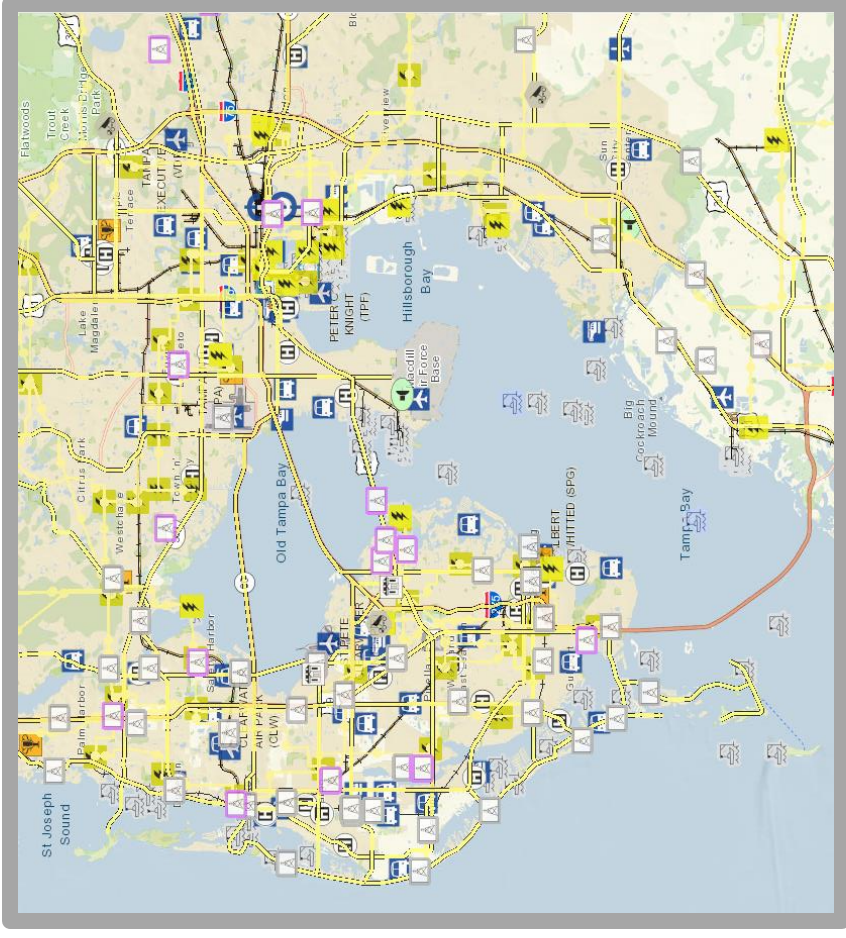
- Provides a data sharing platform for critical infrastructure-focused operations:
 - Collaboration workspaces
 - Asset data repository
 - Current threat reporting and analysis





How can GMAP Support Your Mission?

- **Alert Notifications for Current Events / Incidents of Concern**
 - Severe weather
 - Raw reporting of threats
- **DHS Homeland Security Infrastructure Protection (HSIP) Data**
 - Commercial Infrastructure (e.g. nuclear, bridges, stadiums, major venues, etc.)
- **Personal & Private Workspaces for State and Regional Operations**
 - Current analyses / “Hot Items” / reporting
 - Post, manage, share documents
 - State-specific mapping tools
- **Analysis of Threats and Hazards to Critical Infrastructure**
 - Geospatial products of impact assessments
 - Weekly analysis & summary newsletter
- **Threat Matrix Reporting**
 - Multi-source depictions of global threats towards US infrastructure



GMAP screenshot of Tampa area depicting infrastructure data: electric substations, power lines, ports and transportation terminals, telecommunications towers, major sports arenas, water and wastewater plants, etc.

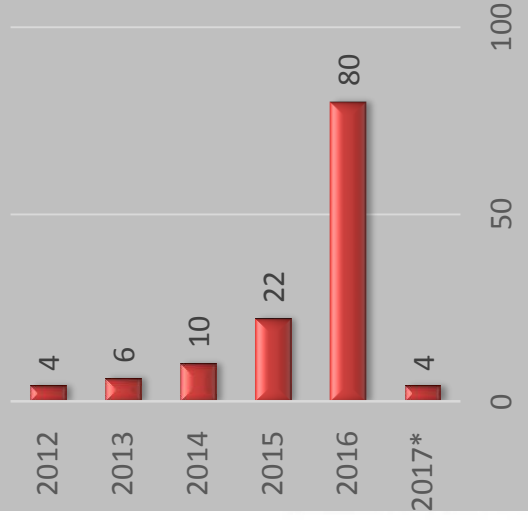


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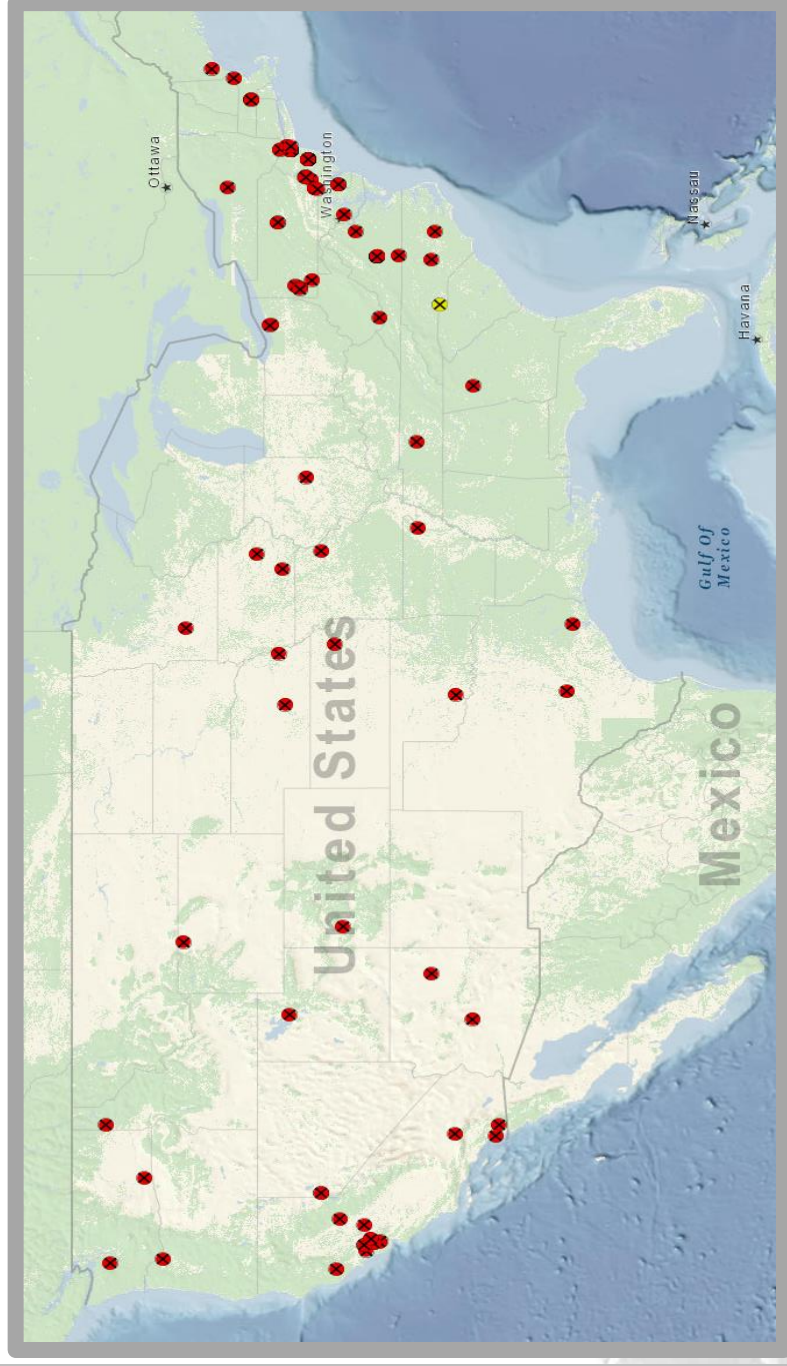
Threat Reporting & Analysis: Cable Cuts

- Cable Cuts
 - Derived from raw reporting and open source data
 - Impact analysis included in data; the majority of events resulted in loss of telecom services, often including 911.

Incidents by Year



The GMAP team compiles and manages additional geospatial and non-geospatial data sets. Examples of these include suspicious/nefarious US-based incidents of fiber optic cable cuts and unmanned aerial vehicle (UAV) activity.

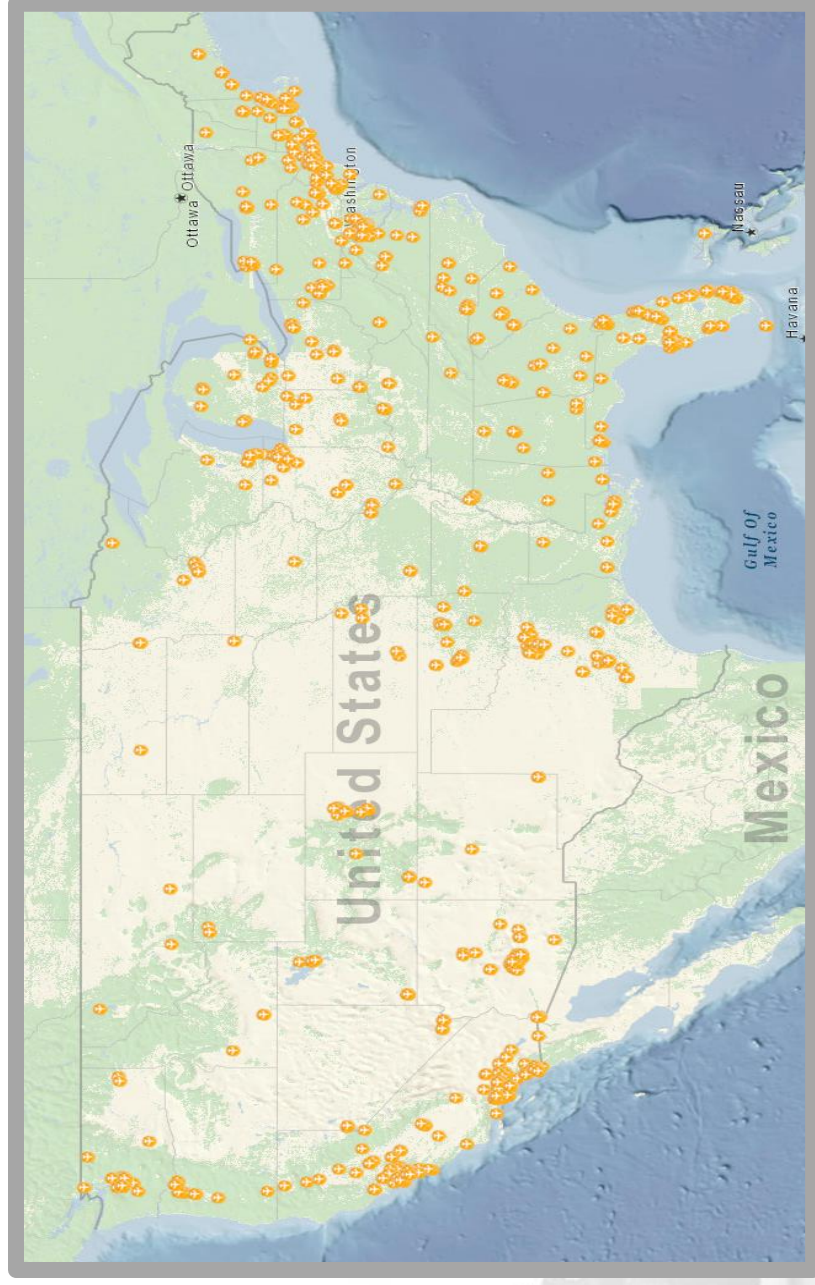




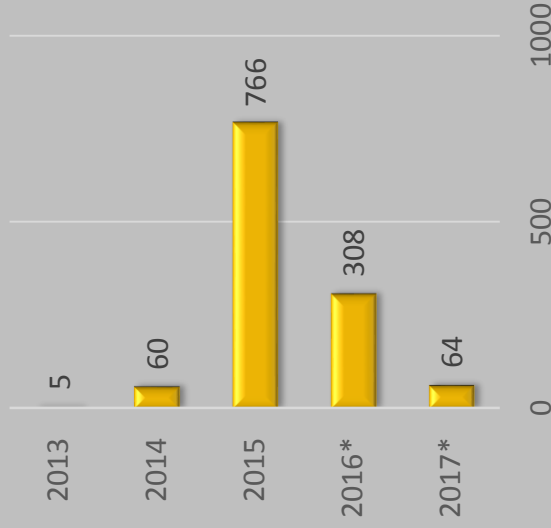
Threat Reporting & Analysis: UAVs

- **UAV Incidents**
 - Derived from raw reporting and open source data
 - Incidents of Concern: Operating in/around FAA areas, Nuclear Sites, Commercial HQs, Ports, Stadiums, etc.

Additionally, GMAP analysts collect, geospatially visualize, and analyze nefarious or suspicious UAV incidents affecting critical infrastructure. These data sets are updated on a monthly basis.



Incidents by Year

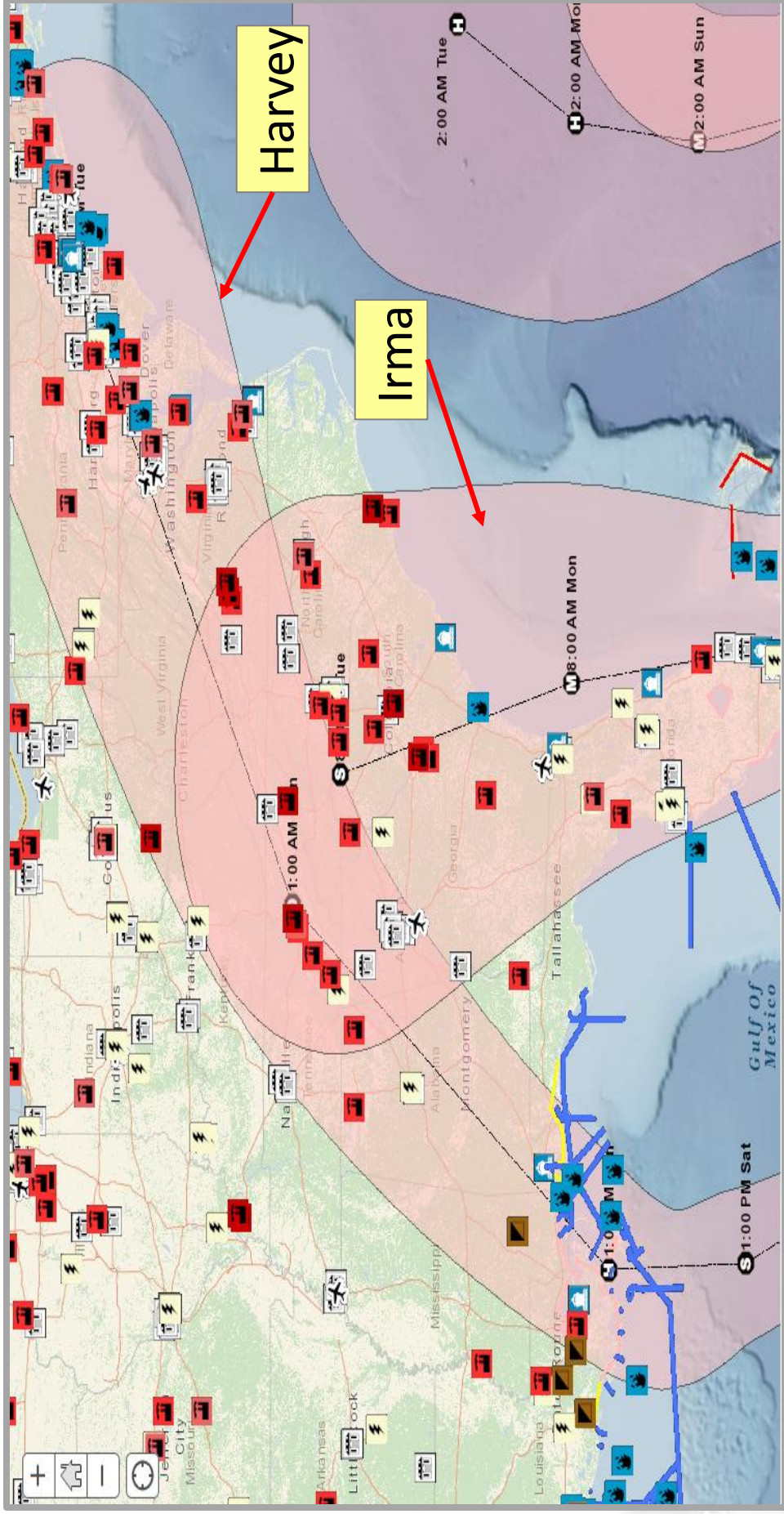




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Severe Weather Tracking: Hurricanes

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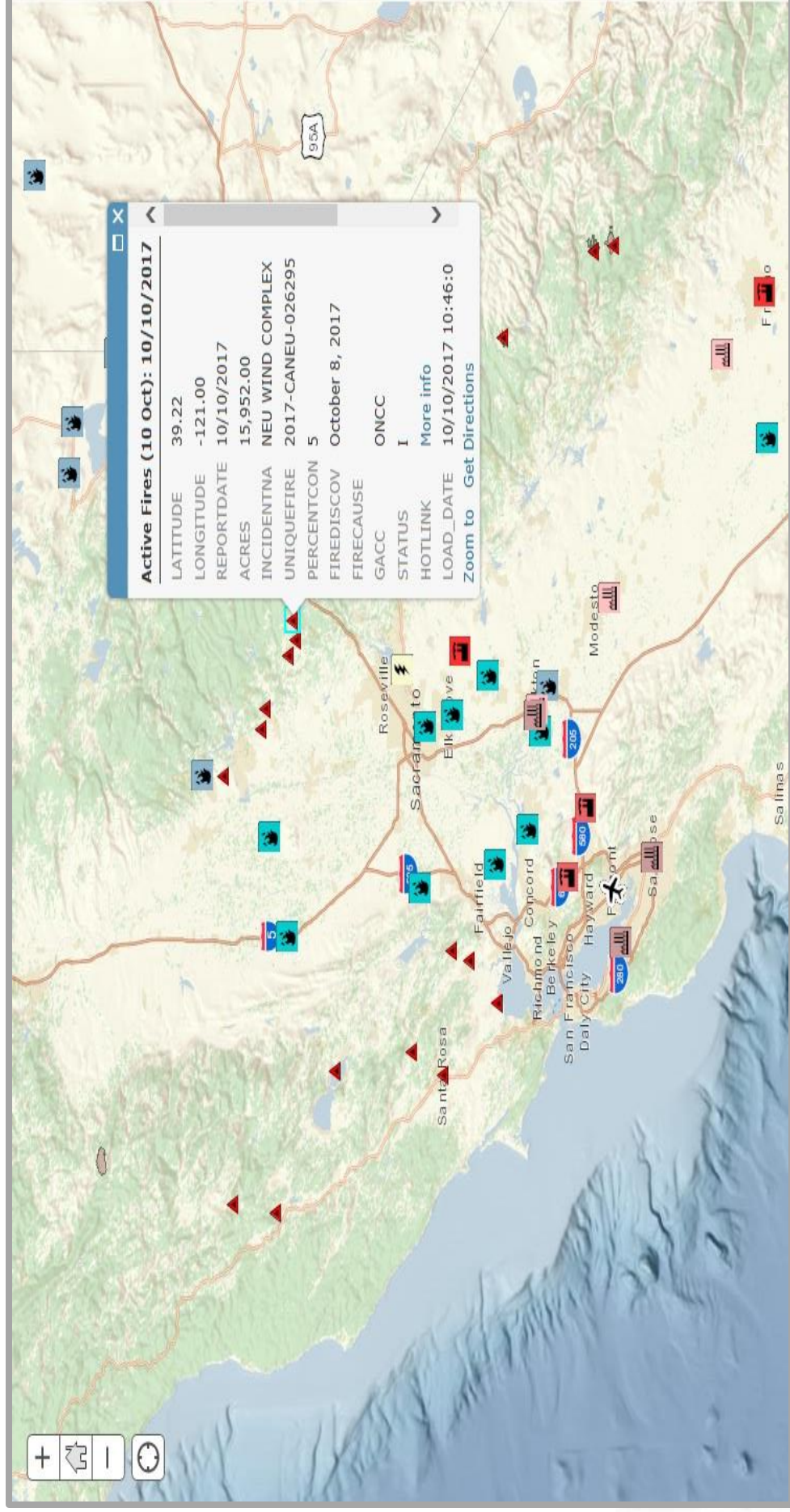




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Wildfires

GMAP analysts regularly update and geospatially visualize wildfire data within the GMAP AVT. Upon request, GMAP provides impact analysis reports for customer-specific infrastructure to provide customers with relevant situational awareness to support their operational capabilities.





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14. ABSTRACT The Global Mission Assurance Program (GMAP) delivers improved situational awareness for over 1,500 users in the Critical Infrastructure Protection (CIP) community at the Federal, State, and Local levels by providing tools and resources that facilitate data collection, sharing, and visualization. GMAP overcomes some of the most difficult challenges in establishing situational awareness, such as discovering, accessing, and visualizing relevant massive data sets for key missions. Each organization that deals with CIP missions collects its own data in its own way and are often hesitant to share their data with others, which leads to redundancy and limited situational awareness when data is not readily available. Furthermore, sifting through raw reports in Excel or non-dynamic PDF documents is an added burden and often does not provide detailed or interactive visualization capabilities for analysts to understand their mission, geographic areas of responsibility, and relevant threats. To overcome these challenges, GMAP has established strategic partnerships with dozens of diverse stakeholders to consume and publish data in easily consumable, intuitive tools for collaboration and custom geospatial analysis to improve stakeholders' situational awareness and understanding of mission vulnerabilities. Data is derived from GMAP's partnerships as well as dynamic collection capabilities of open source and sensitive data which accelerates GMAP's data sharing capabilities. GMAP's knowledge management site serves as a platform for data sharing while the geospatial web mapping application provides interactive global visualization of critical infrastructure.					
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