



## FASTMap: Spatial Infrastructure Mapping & Analysis Tool

**The National Infrastructure Simulation and Analysis Center (NISAC)**, is a modeling, simulation, and analysis program that prepares and shares analyses of critical infrastructure and key resources including their interdependencies, vulnerabilities, consequences, and other complexities. NISAC is under the direction of the Department of Homeland Security's (DHS) Office of Infrastructure Protection (OIP).

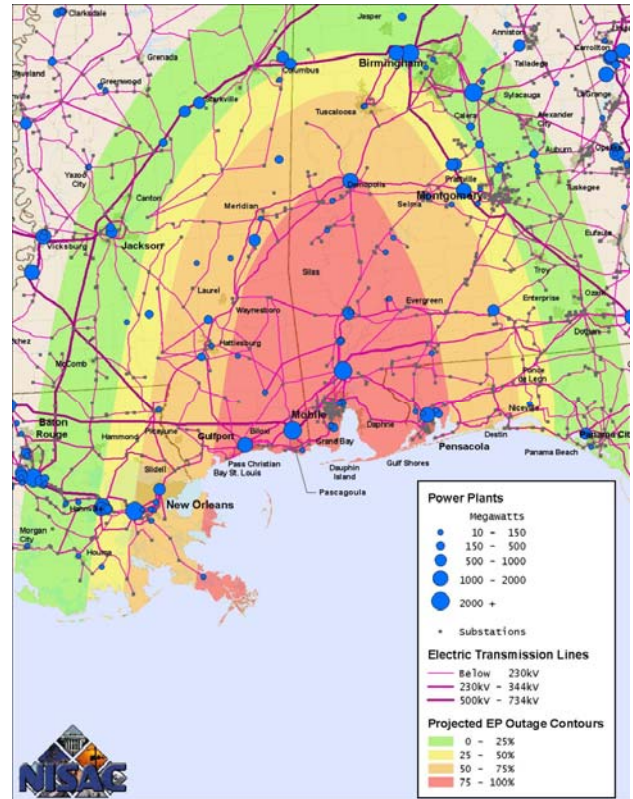
Sandia National Laboratories (SNL) and Los Alamos National Laboratory (LANL) are the prime contractors for NISAC, integrating the two laboratories' expertise in infrastructure disruption/vulnerability modeling and simulation.

### Support for NISAC Fast Analysis and Simulation Team (FAST)

A central component of NISAC's capability set is the ability to very quickly analyze questions of interest and provide answers to decision makers in a rapid fashion. Developing capabilities that support, enhance, and accelerate this capability is a central mission to NISAC developers. The FASTMap software suite is a set of mapping and analysis tools custom built for enhanced situational awareness and infrastructure analysis.

#### FAST solution for:

- Instant situational awareness
- Consolidated and seamless national infrastructure data
- Detailed spatial analysis reports for impacted infrastructure customized, compiled, and formatted for infrastructure-specific needs
- Pre-configured mapping functions to generate publication quality maps



FASTMap of Mobile area electric power infrastructure at risk due to hypothetical hurricane scenario

### FASTMap Supported Infrastructure Sectors:

#### Transportation

- Airports
- Highways and Bridges
- Intermodal Transfer Facilities
- Ports, Wharves, and Quays
- Railroads

#### Telecommunications

#### Banking and Finance

#### Chemical and Hazardous Materials

#### Emergency Services

- Police and Law Enforcement
- Fire Departments and Facilities
- Hospitals and Medical Facilities

#### Energy

- Electric Power
- Natural Gas
- Nuclear Power Generation
- Petroleum, Oil, and Lubricants

#### Population and Demographics

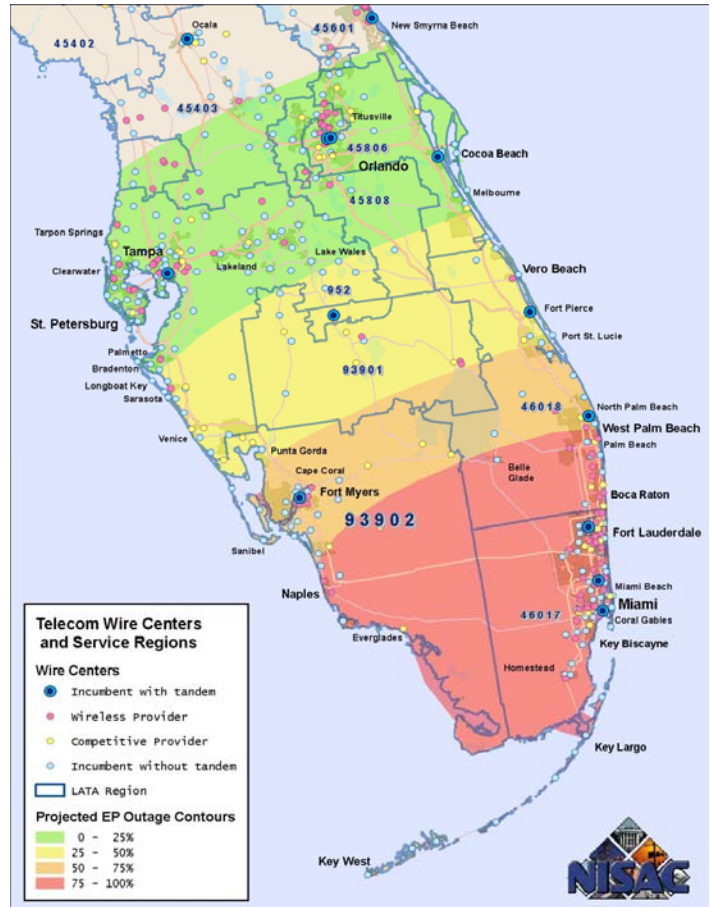


## FASTMap Benefits

- Common presentation and look to all mapping products
- Custom pre-programmed detailed analysis available within minutes of acquiring event data
- Rapidly informs infrastructure experts of the critical infrastructure at risk so less time is required discovering what is affected and more time is available to develop response and mitigation actions

## FASTMap Core

- Map templates that are symbolized in great detail to support repeatable, professional maps customized for the infrastructure mapped
- Configurable spatial analysis algorithms for customizing detailed spatial analysis and specially formatted analysis reports detailing the infrastructure at risk
- Solid and seamless national infrastructure GIS data for all supported infrastructure sectors



FASTMap of Miami area telecommunications infrastructure at risk due to hypothetical hurricane scenario

Affected Population Count by LATA

LATA	Total	0 - 25% outage contour		25 - 50% outage contour		50 - 75% outage contour		75 - 100% outage contour	
Region	population	population	% of all	population	% of all	population	% of all	population	% of all
952	3,472,836	3,040,620	88%	405,581	12%	0	0%	0	0%
45204	1,313,977	0	0%	0	0%	0	0%	0	0%
45402	464,085	137,952	30%	0	0%	0	0%	0	0%
45403	699,276	181,974	26%	0	0%	0	0%	0	0%
45601	402,580	8,164	2%	0	0%	0	0%	0	0%
45806	1,476,123	1,445,648	98%	0	0%	0	0%	0	0%
45807	3,620	3,610	100%	0	0%	0	0%	0	0%
45808	710,916	684,119	96%	1,805	0%	0	0%	0	0%
46017	3,939,579	0	0%	0	0%	39,877	1%	3,893,834	99%
46018	1,876,835	0	0%	343,675	18%	346,577	18%	1,188,835	63%
93901	179,232	0	0%	179,243	100%	0	0%	0	0%
93902	972,857	0	0%	159,080	16%	496,714	51%	318,876	33%

Example of FASTMap spatial analysis of Miami area telecommunications infrastructure at risk due to hypothetical hurricane scenario



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