

Grid Analysis and Design for Energy and Infrastructure Resilience in New Orleans, LA



GRID
MODERNIZATION INITIATIVE
U.S. Department of Energy

PIs: Robert Jeffers (Sandia), Mary Ewers (LANL)

Project Team: Mike Hightower, Nancy Brodsky, Sarah Walsh, Amanda Wachtel, Mike Baca (Sandia)

Mary Ewers, Donatella Pasqualini, John Ambrosiano (LANL)

Project Description

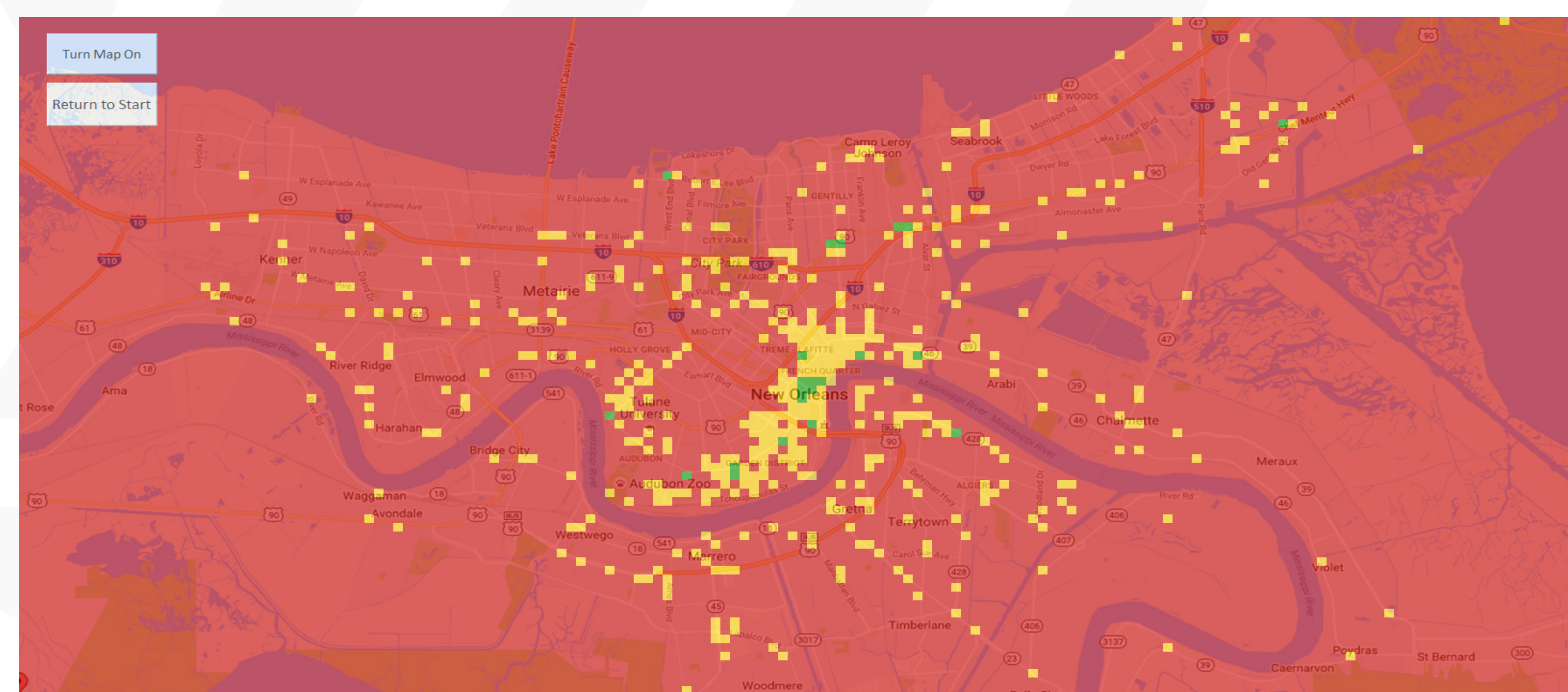
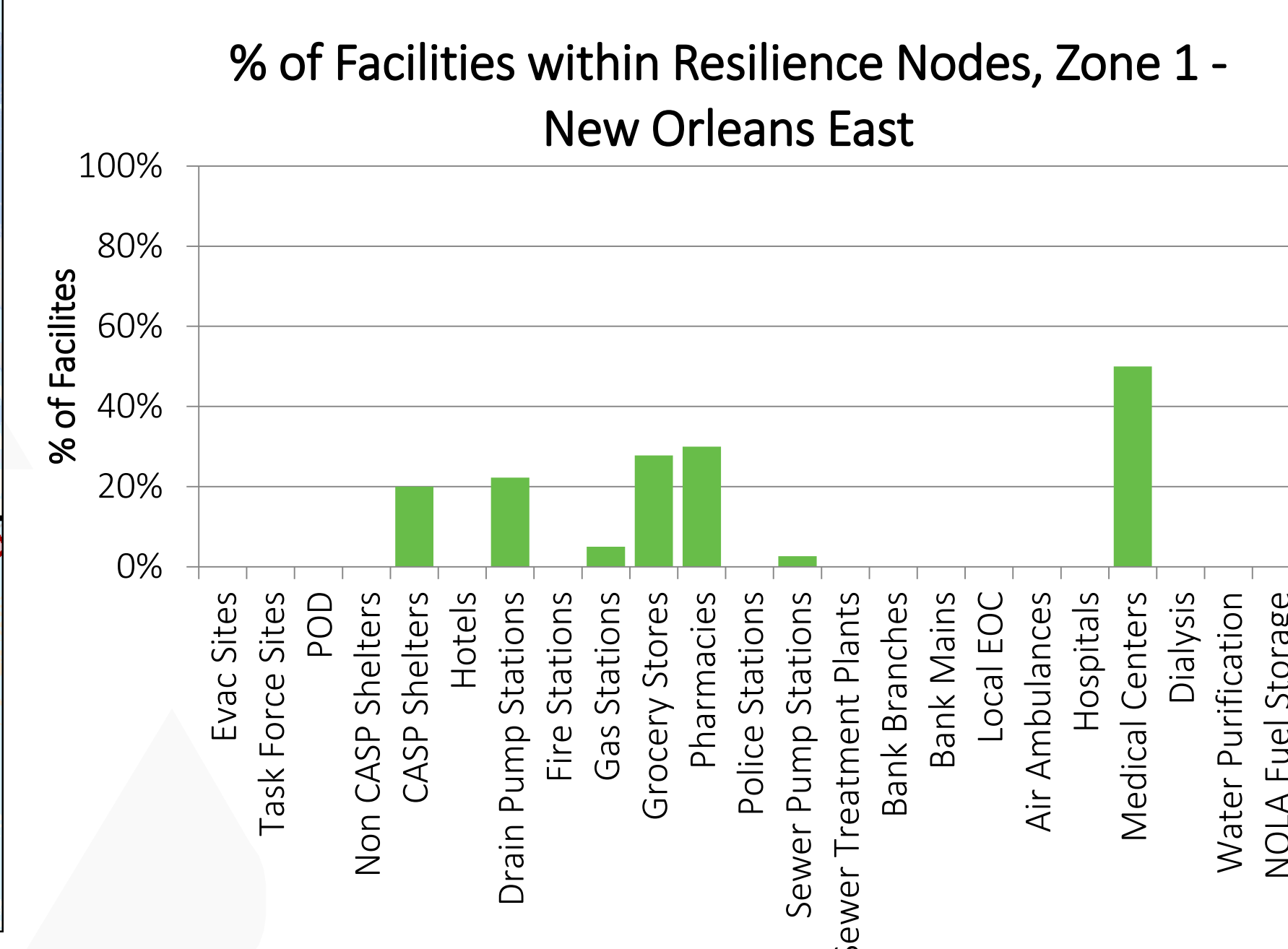
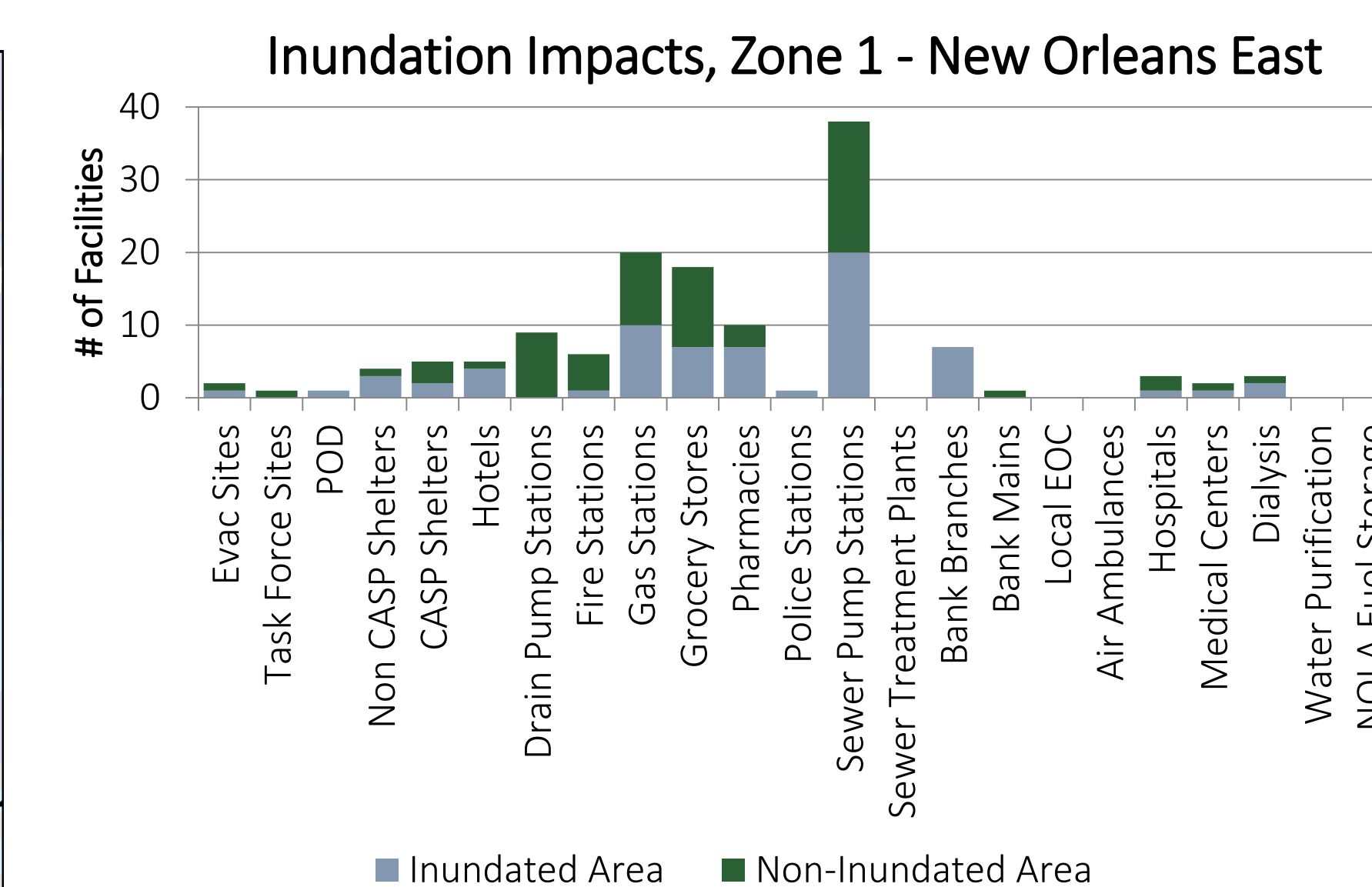
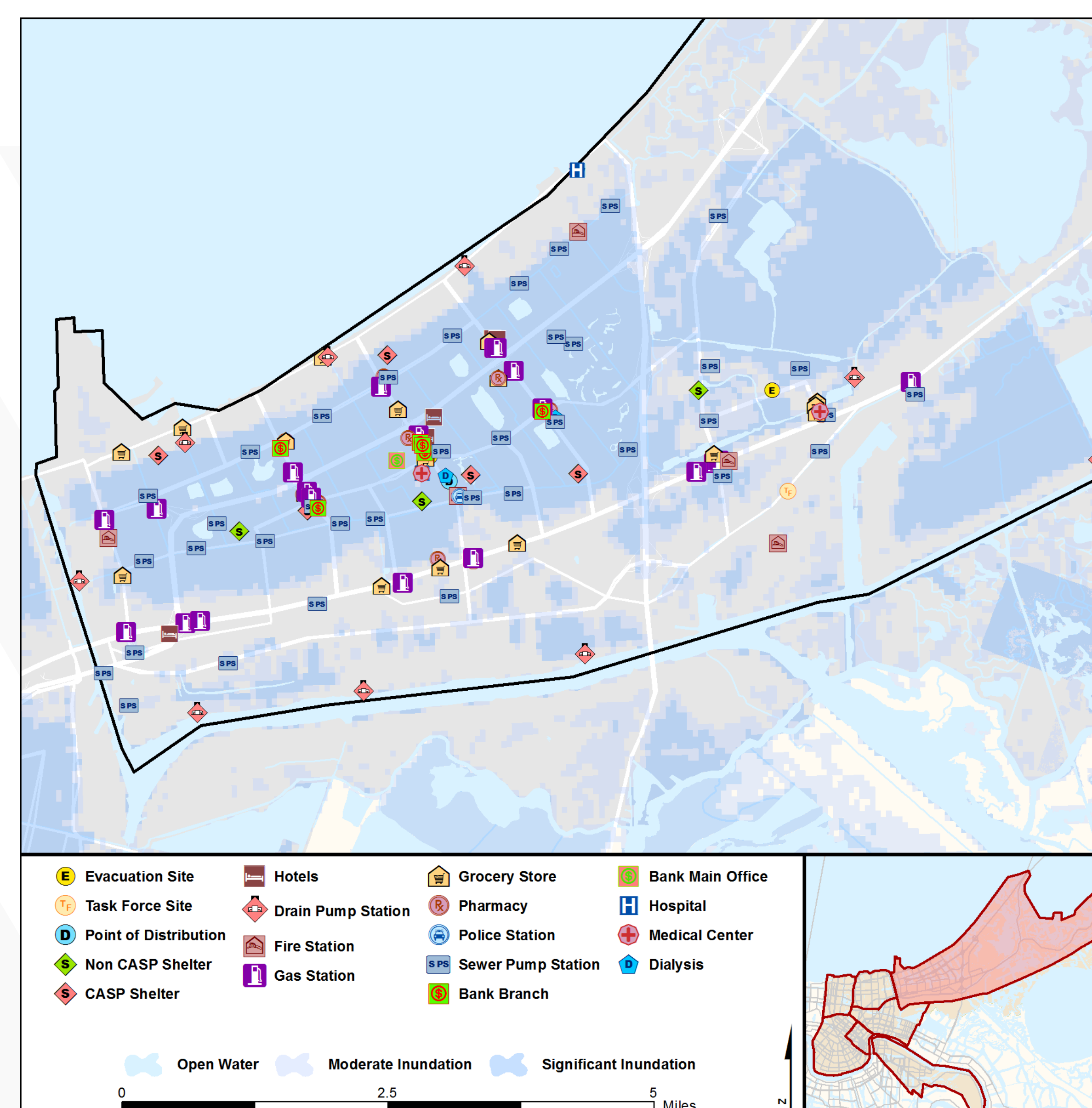
Grid resilience investments often do not fully account for their impacts to **community-level resilience metrics**. This project is using a community-level resilience analysis to aid the City of New Orleans in **identifying and prioritizing grid modernization options**. The focus is on understanding where collections of critical infrastructure services can be cost-effectively supported by grid investments.

Expected Outcomes

- Aid the City of New Orleans in identifying and prioritizing areas where grid modernization options can cost-effectively improve community resilience
- Identify potential implementation paths, working in conjunction with Entergy New Orleans and community stakeholders

Progress to Date

- Provided baseline urban infrastructure resilience analysis to New Orleans
- Assisted the City of New Orleans in generating alternative portfolios of microgrid options with associated resilience benefits
- Identified a path toward prioritization of options and ultimate implementation



Investing in grid modernization to minimize consequence to communities involves understanding which lifeline services receive greatest benefit from improved power resilience (**top**). Subsequently, areas are identified where clusters of high-impact infrastructure assets can be served by advanced microgrids (**bottom**).

Significant Milestones	Date
Multi-infrastructure community resilience analysis based on Urban Resilience Analysis Process	Aug 2016
Analysis of transactive controls feasibility for resilience in NOLA	Dec 2016
Initial grid modernization recommendations	Jan 2017
Final report including costs and benefits	Mar 2017