Overview

The Federal Emergency Management Agency (FEMA) and Argonne National Laboratory (Argonne) created the Resilience Analysis and Planning Tool (RAPT) to support state, local, tribal, territorial analysis in identifying focus areas for building resilience, response, and recovery capabilities. RAPT is a geographic information system (GIS) webmap tool with clickable layers of community resilience indicators, infrastructure locations, and hazard data, and widgets to help with analysis, including a population counter. The RAPT is available at: https://bit.ly/ResilienceAnalysisandPlanningTool.

Community Resilience Indicators

FEMA and Argonne conducted analysis of peer-reviewed research and identified 20 commonly used community resilience indicators, 11 with a population focus and 9 with a community focus. The research team then developed a process to combine all 20 indicators into one county-level aggregate resilience indicator.

Population-Focused

- Educational Attainment
- Unemployment Rate
- Disability
- English Proficiency
- Home Ownership
- Mobility
- Age
- Household Income
- Income Inequality
- Health Insurance
- Single-parent Household

Community-Focused

- Hospital Capacity
- Medical Professionals
- Affiliation with a Religion
- Presence of Mobile Homes
- Public School Capacity
- Population Change
- Hotel/Motel Capacity
- Rental Property Capacity
- Connection to Civic/Social Org.

Infrastructure Layers

The infrastructure layers in RAPT are drawn from the Homeland Infrastructure Foundation-Level Data (HIFLD) Subcommittee Online Community and include community lifelines datapoints. Infrastructure layers include hospitals, fire stations, mobile home parks, and school locations.

Hazard Layers

RAPT includes GIS layers of historic hazard data for tornados, tropical storms, and wildfire; risk assessments for seismic and flooding events; and real-time watch and warning notifications from the National Weather Service. Jurisdictions can click on multiple hazard layers at a time to see a more comprehensive view of hazard risk.

Using RAPT

RAPT is not a scorecard of resilience but is a tool to help jurisdictions better understand the interplay of factors that may be important for resilience, response, and recovery. Users can select multiple layers to better understand local challenges to resilience, such as population with a disability combined with location of mobile home parks, and historic tropical storm/cyclone activity.

By combining layers, jurisdictions can conduct analysis of their community to develop targeted outreach and resilience strategies. For questions, please email FEMA-TAResquest@fema.dhs.gov.

The RAPT webmap site includes an overview of the Community Resilience Indicator Analysis, a summary of how the researchers connected each indicator to resilience, a correlation analysis of each indicator to the other 19 indicators, and a link to the full report: Community Resilience Indicator Analysis: County-Level Analysis of Commonly Used Indicators from Peer-Reviewed Research: 2019 Update.