



## Resilience Analysis and Planning Tool (RAPT): Data Layers and Sources

### RAPT Data Layers

Table 1 lists the data layers available in the Resilience Analysis and Planning Tool (RAPT), accessible at <https://bit.ly/ResilienceAnalysisPlanningTool>. RAPT helps emergency managers and local leaders visually assess challenges to resilience. The tool includes hazard and infrastructure information, as well as 20 community resilience indicators identified in the [Community Resilience Indicator Analysis: County-level Analysis of Commonly Used Indicators from Peer-Reviewed Research: 2019 Update](#) (CRIA) conducted by the Federal Emergency Management Agency (FEMA) and Argonne National Laboratory. Table 2–Table 5 on the following pages provide the data sources for each data layer category.

**Table 1: Data Layers Available in RAPT**

Population-Focused Indicators	Community-Focused Indicators	Infrastructure Data	Hazard Data
CRIA Commonly Used Indicators	CRIA Commonly Used Indicators		Historic / Risk
% Population without Health Insurance*	Connection to Civic/Social Organizations	Nursing Homes	Flood Hazard Zones
% Population Unemployed*	Hospital Capacity	Hospitals	Tornado Paths
% Population without a High School Education*	Medical Professional Capacity	Urgent Care Facilities	Tropical Storms
% Population with a Disability*	Affiliation with a Religion	Public Health Depts.	Seismic Hazards
% Population without Access to a Vehicle*	Presence of Mobile Homes*	Fire Stations	Wildfire
% Population with Home Ownership*	Public School Capacity	Emergency Medical Services (EMS) stations	
% Population over 65*	Population Change	Local Law Enforcement locations	NOAA Layers
% Population Single-Parent Households*	Hotel/Motel Capacity	911 Service Area Boundaries	Current Watches/Warnings
% Population with Limited English Proficiency*	Rental Property Capacity*	Mobile Home Parks	Hurricane Outlook: Atlantic
Median Household Income*		Places of Worship	Severe Weather Outlook
Gini Index: Income Inequality		Public Schools	Excessive Rainfall Outlook
		Private Schools	River Flood Outlook
<b>Other Population Indicators</b>		Colleges and Universities	
At-risk electricity-dependent Medicare beneficiaries		Prison Boundaries	
		Transmission Lines	
		Electric Power Plants	
		Solid Waste Landfills	
		Wastewater Treatment Plants	
		Pharmacies (RX Open)	
		Dialysis Centers	

\*Both U.S. Census Bureau county and census tract data available.

**Table 2: Population-Focused Indicator Data Sources**

Population Data	Data Source
Lack of High School Diploma	U.S. Census American Community Survey (ACS) 2014–2018 five-year estimates, Table S1501
Unemployment Rate	ACS 2014–2018 five-year estimates, Table S2301
Disability	ACS 2014–2018 five-year estimates, Table S1810
Limited English Language Proficiency	ACS 2014–2018 five-year estimates, Table S1602
Home Ownership	ACS 2014–2018 five-year estimates, Table DP04
Lack of a vehicle	ACS 2014–2018 five-year estimates, Table B08201
Age over 65	ACS 2014–2018 five-year estimates, Table S0101
Household Income	ACS 2014–2018 five-year estimates, Table S1903
Income Inequality	ACS 2014–2018 five-year estimates, Table B19083
Health Insurance	ACS 2014–2018 five-year estimates, Table S2701
Single-Parent Households	ACS 2014–2018 five-year estimates, Table DP02
EmPower at-risk electricity dependent Medicare beneficiaries	<a href="https://empowermap.hhs.gov/">https://empowermap.hhs.gov/</a>

**Table 3: Community-Focused Indicator Data Sources**

Community Data	Data Source
Connection to Civic/Social Organizations	U.S. Census Bureau, 2016 County Business Patterns, Table 00A1, NAICS Code 8134
Hospital Capacity	U.S. Census Bureau, 2016 County Business Patterns, Table 00A1, NAICS code 622110
Medical Professional Capacity	ACS 2014–2018 five-year estimates, Table S2401
Affiliation with a Religion	Association of Statisticians of American Religious Bodies. 2010 U.S. Religion Census. <a href="http://www.usreligioncensus.org/index.php">http://www.usreligioncensus.org/index.php</a>
Presence of Mobile Homes	ACS 2014–2018 five-year estimates, Table DP04
Public School Capacity	U.S. Department of Education. National Center for Education Statistics. Elementary/Secondary Information System. 2017-2018 school year. <a href="https://nces.ed.gov/ccd/elsi/">https://nces.ed.gov/ccd/elsi/</a>
Population Change	U.S. Census Bureau, Population Division. Table: Cumulative Estimate of the Components of Resident Population Change (PEPTCOMP): April 1, 2010, to July 1, 2018
Hotel/Motel Capacity	U.S. Census Bureau, 2016 County Business Patterns, Table 00A1, NAICS Codes 721111 and 721120
Rental Property Capacity	ACS 2014–2018 five-year estimates, Table DP04

**Table 4: Infrastructure Data Sources**

Infrastructure	Publication date	Data Source <sup>1</sup>
Nursing Homes	June 2019	<a href="https://services1.arcgis.com/Hp6G80Pky0om7QvQ/arcgis/rest/services/NursingHomes/FeatureServer/0">https://services1.arcgis.com/Hp6G80Pky0om7QvQ/arcgis/rest/services/NursingHomes/FeatureServer/0</a>
Hospitals	Oct 2019	<a href="https://hifld-geoplatform.opendata.arcgis.com/datasets/hospitals">https://hifld-geoplatform.opendata.arcgis.com/datasets/hospitals</a>
Urgent Care Facilities	April 2018	<a href="https://hifld-geoplatform.opendata.arcgis.com/datasets/urgent-care-facilities">https://hifld-geoplatform.opendata.arcgis.com/datasets/urgent-care-facilities</a>
Public Health Departments	Dec. 2019	<a href="https://hifld-geoplatform.opendata.arcgis.com/datasets/public-health-departments">https://hifld-geoplatform.opendata.arcgis.com/datasets/public-health-departments</a>
Fire Stations	July 2019	<a href="https://hifld-geoplatform.opendata.arcgis.com/datasets/fire-stations">https://hifld-geoplatform.opendata.arcgis.com/datasets/fire-stations</a>
Emergency Medical Services	July 2019	<a href="https://hifld-geoplatform.opendata.arcgis.com/datasets/emergency-medical-service-ems-stations">https://hifld-geoplatform.opendata.arcgis.com/datasets/emergency-medical-service-ems-stations</a>
Local Law Enforcement	Sept. 2019	<a href="https://hifld-geoplatform.opendata.arcgis.com/datasets/local-law-enforcement-locations">https://hifld-geoplatform.opendata.arcgis.com/datasets/local-law-enforcement-locations</a>
911 Service Area Boundaries	June 2017	<a href="https://hifld-geoplatform.opendata.arcgis.com/datasets/psap-911-service-area-boundaries">https://hifld-geoplatform.opendata.arcgis.com/datasets/psap-911-service-area-boundaries</a>
Mobile Home Parks	Sept. 2018	<a href="https://hifld-geoplatform.opendata.arcgis.com/datasets/mobile-home-parks">https://hifld-geoplatform.opendata.arcgis.com/datasets/mobile-home-parks</a>
Places of Worship	April 2018	<a href="https://hifld-geoplatform.opendata.arcgis.com/datasets/all-places-of-worship">https://hifld-geoplatform.opendata.arcgis.com/datasets/all-places-of-worship</a>
Public Schools	June 2019	<a href="https://hifld-geoplatform.opendata.arcgis.com/datasets/public-schools">https://hifld-geoplatform.opendata.arcgis.com/datasets/public-schools</a>
Private Schools	Sept. 2018	<a href="https://hifld-geoplatform.opendata.arcgis.com/datasets/private-schools">https://hifld-geoplatform.opendata.arcgis.com/datasets/private-schools</a>
Colleges/ Universities	July 2019	<a href="https://hifld-geoplatform.opendata.arcgis.com/datasets/colleges-and-universities">https://hifld-geoplatform.opendata.arcgis.com/datasets/colleges-and-universities</a>
Prison Boundaries	Sept. 2018	<a href="https://hifld-geoplatform.opendata.arcgis.com/datasets/prison-boundaries">https://hifld-geoplatform.opendata.arcgis.com/datasets/prison-boundaries</a>
Transmission Lines	Sept. 2019	<a href="https://hifld-geoplatform.opendata.arcgis.com/datasets/electric-power-transmission-lines">https://hifld-geoplatform.opendata.arcgis.com/datasets/electric-power-transmission-lines</a>
Electric Power Plants	Oct. 2019	<a href="https://hifld-geoplatform.opendata.arcgis.com/datasets/power-plants">https://hifld-geoplatform.opendata.arcgis.com/datasets/power-plants</a>
Solid Waste Landfill Facilities	Sept 2018	<a href="https://hifld-geoplatform.opendata.arcgis.com/datasets/solid-waste-landfill-facilities">https://hifld-geoplatform.opendata.arcgis.com/datasets/solid-waste-landfill-facilities</a>
Wastewater Treatment	Dynamically updated	<a href="https://hifld-geoplatform.opendata.arcgis.com/datasets/environmental-protection-agency-epa-facility-registry-service-frs-wastewater-treatment-plants">https://hifld-geoplatform.opendata.arcgis.com/datasets/environmental-protection-agency-epa-facility-registry-service-frs-wastewater-treatment-plants</a>

<sup>1</sup> Most RAPD infrastructure datapoints are drawn from the Homeland Infrastructure Foundation-Level Data (HIFLD) Open data portal. HIFLD contains national foundation-level geospatial critical infrastructure data in the public domain at <https://hifld-geoplatform.opendata.arcgis.com/>

Infrastructure	Publication date	Data Source <sup>1</sup>
Pharmacies	Dynamically updated	<a href="http://www.healthcareready.org/rxopen">www.healthcareready.org/rxopen</a> <sup>2</sup>
Dialysis Centers	5/29/2020	<a href="https://hifld-geoplatform.opendata.arcgis.com/datasets/kidney-dialysis-centers">https://hifld-geoplatform.opendata.arcgis.com/datasets/kidney-dialysis-centers</a>

**Table 5: Hazard Data Sources**

Hazard Data	Data Source
Flood Hazard Zones	National Flood Hazard Layer: <a href="https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd">https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd</a>
Tornado	<a href="https://www.spc.noaa.gov/gis/svrgis/">https://www.spc.noaa.gov/gis/svrgis/</a>
Seismic Zones	<a href="https://earthquake.usgs.gov/hazards/hazmaps/conterminous/">https://earthquake.usgs.gov/hazards/hazmaps/conterminous/</a>
Tropical Storm	<a href="https://www.spc.noaa.gov/gis/svrgis/">https://www.spc.noaa.gov/gis/svrgis/</a>
Wildfire	<a href="https://apps.fs.usda.gov/arcx/rest/services/RDW_Wildfire/RMRS_WildfireHazardPotential_2018/MapServer">https://apps.fs.usda.gov/arcx/rest/services/RDW_Wildfire/RMRS_WildfireHazardPotential_2018/MapServer</a>
Watches and Warnings	<a href="https://idpgis.ncep.noaa.gov/arcgis/rest/services/NWS_Forecasts_Guidance_Warnings/watch_warn_adv/MapServer/1">https://idpgis.ncep.noaa.gov/arcgis/rest/services/NWS_Forecasts_Guidance_Warnings/watch_warn_adv/MapServer/1</a>
Hurricane Outlook: Atlantic	<a href="https://idpgis.ncep.noaa.gov/arcgis/rest/services/NWS_Forecasts_Guidance_Warnings/NHC_Atl_trop_cyclones_active/MapServer">https://idpgis.ncep.noaa.gov/arcgis/rest/services/NWS_Forecasts_Guidance_Warnings/NHC_Atl_trop_cyclones_active/MapServer</a>
Severe Weather Outlook	<a href="https://idpgis.ncep.noaa.gov/arcgis/rest/services/NWS_Forecasts_Guidance_Warnings/SPC_wx_outlks/MapServer">https://idpgis.ncep.noaa.gov/arcgis/rest/services/NWS_Forecasts_Guidance_Warnings/SPC_wx_outlks/MapServer</a>
Excessive Rainfall Outlook	<a href="https://idpgis.ncep.noaa.gov/arcgis/rest/services/NWS_Forecasts_Guidance_Warnings/wpc_precip_hazards/MapServer">https://idpgis.ncep.noaa.gov/arcgis/rest/services/NWS_Forecasts_Guidance_Warnings/wpc_precip_hazards/MapServer</a>
River Flood Outlook	<a href="https://idpgis.ncep.noaa.gov/arcgis/rest/services/NWS_Forecasts_Guidance_Warnings/sig_riv_fld_outlk/MapServer">https://idpgis.ncep.noaa.gov/arcgis/rest/services/NWS_Forecasts_Guidance_Warnings/sig_riv_fld_outlk/MapServer</a>

<sup>2</sup> Healthcare Ready supports the Rx Open Platform which provides information on the operating status of pharmacies. Healthcare Ready is a 501c3. More information is available at <https://healthcareready.org/>