

# OnTheMap for Emergency Management: Data Sources

## Local Employment Dynamics

### Hurricanes and Tropical Storms

The hurricane data used in OnTheMap for Emergency Management are supplied by feeds from the [National Hurricane Center \(NHC\)](https://www.nhc.noaa.gov/) and include several detailed GIS formatted representations of the storm area including: the current wind radii as well as the historical wind area (cumulative wind swath) and forecast area (uncertainty cone).

**Current Wind Radii** - Represents the forecasters' best estimates of the current location, intensity, and size of a tropical cyclone while the cyclone is ongoing. For additional details see <https://www.nhc.noaa.gov/aboutnhcgraphics.shtml#INITIALWIND>.

**Forecast Area (Cone of Uncertainty)** - Represents the probable track of the center of a tropical cyclone. For additional details see <https://www.nhc.noaa.gov/aboutnhcgraphics.shtml#WATCHWARN>.

**Wind History (Cumulative Wind Swath)** - Area representing how the size of the storm has changed and the areas potentially affected so far. For additional details see <https://www.nhc.noaa.gov/aboutnhcgraphics.shtml#CWIND>.

Details about these and other data sets available for hurricanes and tropical storms can be found at <https://www.nhc.noaa.gov/gis/>.

The feeds that deliver the hurricane data are provided in Really Simple Syndication (RSS) format and are updated by the NHC every 4-6 hours. OnTheMap for Emergency Management automatically reads and incorporates updates from these feeds every 4 hours. Further details about the contents and access to the RSS feeds are available at <https://www.nhc.noaa.gov/aboutrss.shtml>.

#### Additional Information on Pacific Storms

Data on hurricanes and tropical storms are sourced from the [National Hurricane Center](https://www.nhc.noaa.gov/). Once storms cross the 140W meridian, the [Central Pacific Hurricane Center](https://www.cphc.noaa.gov/) takes over the issuance of advisories and further storm updates are not available in this application.

### Flood Outlook Areas

The flood data used in OnTheMap for Emergency Management include Significant River Flood Outlook areas that are supplied daily by the [Weather Prediction Center \(WPC\)](https://www.weather.gov/wpc/) at the [National Weather Service](https://www.weather.gov/). The data, provided in GIS format, include representations for areas of active (Occurring or Imminent) or likely flooding in the forecast period. For additional details about data contents and access see <https://www.wpc.ncep.noaa.gov/nationalfloodoutlook/>.

## Snow & Freezing Rain Probability Forecasts (Winter Storms)

The Snow and Freezing Rain probability forecast data are supplied in GIS format daily by the [Weather Prediction Center \(WPC\)](#) at the [National Weather Service](#). The snowfall data displayed in OnTheMap for Emergency Management represent areas with a moderate probability of receiving more than 12 inches of snow or a high probability of receiving more than 4 inches within the 24-hour forecast period. The freezing rain data displayed represent areas with a moderate or high probability of receiving more than .25 inches of freezing rain within the 24-hour forecast period.

For additional details about data contents and access see [https://www.wpc.ncep.noaa.gov/wwd/winter\\_wx.shtml](https://www.wpc.ncep.noaa.gov/wwd/winter_wx.shtml) and <https://www.wpc.ncep.noaa.gov/wwd/about.shtml>.

## Wildfires

The wildfire data in OnTheMap for Emergency Management include [active wild fire perimeters](#) provided by the [National Interagency Fire Center \(NIFC\)](#), a group composed of technical and subject matter experts from state and federal agencies. The data are updated regularly and provided in GIS format for public use.

## Disaster Declaration Areas

The disaster declarations data displayed in OnTheMap for Emergency Management are defined and provided by the [Federal Emergency Management Agency \(FEMA\)](#). The declaration areas displayed include areas eligible for [Public Assistance](#) and [Individual Assistance](#). The data are updated as new declarations are made and provided in GIS format by means of RSS feeds.

For additional details about the data content and access methods see <https://www.fema.gov/disasters/how-declared>.

### Additional Information on COVID-19 Pandemic Events

As of March 13, 2020, COVID-19 Emergency and Disaster Declarations areas had been declared in [50 states, DC, and 5 territories](#). To help users of OnTheMap for Emergency Management identify and focus on specific sets of events more easily, the COVID-19 events have been organized into a separate group for map display. The shading of the COVID-19 events is the same as other Emergency or Disaster Declaration areas, but now users can enable display of those events independently using the “Legend & Map Controls” on the right side of the map. This change was implemented with Version 4.4.4 of OnTheMap for Emergency Management.

COVID-19 events were organized into a separate mapping group based on the existence of the term “COVID-19” (or its variants) within the event name or description, based on the official FEMA designations. These events include both declarations in states and territories as well as declarations in tribal areas. If future declarations are associated with COVID-19, they will be added to this group.

## Base Map

The base maps displayed in OnTheMap for Emergency Management are provided by Google through the Google Maps Application Programming Interface (API). Details about Google Maps API are available at <https://code.google.com/apis/maps/documentation/javascript/reference.html>.

## Workforce Origin and Destination Data

### [LODES 2021]

The workforce related data made available in OnTheMap for Emergency Management are provided by the LEHD Origin-Destination Employment Statistics (LODES) database. These data comprise a variety of statistics describing the U.S. workforce along with information on residential and workplace locations. These data may be useful for determining the number and location of workers living and working within affected areas or for identifying potential impact to various demographic groups and sectors of the economy.

Current vintage of LODES is 2021 and includes: Workers by Age, Workers by Educational Attainment, Workers by Earnings, Workers by NAICS Industry Sector, Workers by Race, Workers by Ethnicity, Workers by Sex, Workers by location.

The LODES data, which also supply data for the Census Bureau's award winning [OnTheMap](#) tool, are a product of the [Local Employment Dynamics \(LED\) partnership](#), a unique partnership between States and the Census Bureau that integrates existing data on workers and employers from administrative records with demographic, business, and survey data. The results are cost-effective new public data products about local labor market characteristics.

To learn more about these data please see the [OnTheMap Data Sources page](#) and [an Overview on the LEHD Origin-Destination Employment Statistics \(LODES\)](#).

## Decennial Census Data

### [2020 Decennial Counts]

The 2020 Census data displayed and reported in OnTheMap for Emergency Management are based on the Decennial Census of Population and Housing (DHC) which contains data compiled from 2020 Census questions asked of all people and about every housing unit. The data provide a basic set of standard population and housing statistics that may be useful for determining the number and location of people living within affected areas or for identifying potential impact to various demographic groups and sectors of the population.

Available variables include Population by Age, Population by Race, Population by Ethnicity, Population by Sex, Population by Housing, Housing Units

The data items utilized in OnTheMap for Emergency Management are provided nationally at the U.S. Census block level and have been integrated directly into the application.

## Useful Links

An overview of the 2020 Census is available at <https://www.census.gov/programs-surveys/decennial-census/decade/2020/2020-census-main.html>.

An overview of the Decennial Census of Population and Housing (DHC) data is available at <https://www.census.gov/programs-surveys/decennial-census/decade/2020/planning-management/release/about-2020-data-products.html#dhc>.

Detailed technical documentation about the DHC file can be found at <https://www2.census.gov/programs-surveys/decennial/2020/technical-documentation/complete-tech-docs/demographic-and-housing-characteristics-file-and-demographic-profile/2020census-demographic-and-housing-characteristics-file-and-demographic-profile-techdoc.pdf>.

## American Community Survey (ACS) Data [2017-2021 ACS Characteristics]

The ACS provides detailed demographic, social, economic, and housing related information not available from the Decennial Census data. A random sample of approximately 3.5 million addresses is drawn from the population each year. This sample is used to construct descriptive measures at levels of varying geographic detail over a 1-year, 3-year, and 5-year period. The 5-year estimates are available for statistical areas including the nation, all 50 states, DC, Puerto Rico, counties, places, census tracts, and block groups.

The ACS data displayed and reported in OnTheMap for Emergency Management are based on the 5-year estimates, and include a selected set of demographic, social, economic, and housing measures that may be useful for determining the number, location, and potential impact on various segments of the population living within affected areas. These data provide a more recent and expanded set of characteristics than those of the Decennial Census.

These data are integrated into the application through the Census Bureau API. Please visit <https://www.census.gov/developers/> for more information.

Data include: Household Type, Race, Hispanic or Latino Origin, Ability to Speak English by Age, Ability to Speak English by Language Spoken at Home, Disability Status by Poverty Status, Disability Status by Age, Ratio of Income to Poverty Level in the Past 12 Months, Poverty Status in the Past 12 Months, Population 65 Years and Over Living Alone, Households with One or More People 65 Years and Over, Earnings in the Past 12 Months for Households, Social Security Income in the Past 12 Months for Households, Supplemental Security Income in the Past 12 Months for Households, Supplemental Security Income (SSI) in the Past 1 Months for Households, Public Assistance Income in the Past 12 Months for Households, Retirement Income in the Past 12 Months for Households, Households Receiving Food Stamps/SNAP in the Past 12 Months, Year Structure Built, Aggregate Value of Owner Occupied Housing, House Heating Fuel

## Useful Links

For more information about the ACS, please visit <https://www.census.gov/programs-surveys/acs/>.

The main ACS documentation page can be found at <https://www.census.gov/programs-surveys/acs/technical-documentation.html>.

Data links for 2021 ACS 5-year summary files are available at [https://www2.census.gov/programs-surveys/acs/summary\\_file/2021/sequence-based-SF/data/](https://www2.census.gov/programs-surveys/acs/summary_file/2021/sequence-based-SF/data/).

Additional documentation for 2021 ACS 5-year summary files is available at [https://www2.census.gov/programs-surveys/acs/summary\\_file/2021/sequence-based-SF/documentation/](https://www2.census.gov/programs-surveys/acs/summary_file/2021/sequence-based-SF/documentation/).