

You've landed your first job, or maybe you've bought your first home. Or a job transfer or family need required that you relocate. This new place is the start of a new chapter in your life that also brings uncertainty. Reduce this ambiguity by knowing the risks inherent in your new location.

Your Community's Disasters: Tools and Tips for Knowing the Risks



RESILIENCE DESIGN



Overview

Knowing your surroundings may mean the difference between life and death. This knowledge saves you more than just time researching statistics and other information; it covers the self-education necessary to really know which kinds of disasters, natural or manmade, that have the potential to change your life forever.

A New York Times article reported on the catastrophic flooding that occurred, ironically, as a result of the government's flood mitigation protocol¹. The community of Cinco Ranch, a suburb west of Houston, Texas, was inundated with water when Hurricane Harvey's rainfall surpassed the 100 year flood level. The houses of Cinco Ranch were built on private property *directly adjacent* to a reservoir. Did homeowners know this? Would they have bought a house in a different location if they had (given that this real estate had remained dry throughout the previous decades)?

Knowing the risks inherent in where you live is like knowing the typical types of phishing campaigns aimed at getting you to mail money to a foreign prince. Once you know where to look, you find the information that helps you prioritize your preparedness. In fact, given the high-profile natural and manmade incidents which have occurred in the United States over the past several years (like hurricane Harvey, volcanic eruptions in Hawaii, and the 300+ mass casualty events across the country in 2018), preparedness tools are available to the public at many levels of the community². The real trick lies in which preparedness strategies to plan for adoption; and in order to wisely choose these strategies, you need to know which tragedies are *likely* to impact your community.

While these highly-publicized events have given insight into the likelihood of these kinds of events in their corresponding geographic location of the United States, there is a little deeper digging that needs to be done before you can fully understand those day-to-day disasters that may affect your community in the most local way. So you may want to ask yourself the following high-level questions about your community:

- **Do I live in a rural, urban, or suburban setting?** – Community cultures are in part defined by population concentrations. They also pose their own risks regarding disaster impact types (particularly manmade events). Public venues, like sports complexes and concert halls, and corporations may be viewed as targets by terrorist organizations. Additionally, higher concentrations of apartment complexes may increase the risk of residential fire spread, and social factors may lead to higher incidences of violent crime.
- **What's the current geopolitical climate like?** – The geopolitical climate of a location can manifest itself through a series of well-intentioned and safely-implemented civil disobedience.

¹ The New York Times, Wallace, T., Watkins, D., Park, H., Singhvi, A., and Williams, J., 2018. *How One Houston Suburb Ended Up In A Reservoir*. <https://www.nytimes.com/interactive/2018/03/22/us/houston-harvey-flooding-reservoir.html>

² Depending upon the resources available at these community levels, availability of these preparedness tools may vary by location and geographic region of the country

College campuses may have socioeconomic tensions that express themselves through demonstrations, while corporate office locations belonging to certain industries (financial or energy) may witness protests. And depending upon current events, government buildings could be the backdrops for demonstrations and rallies. While this behavior is certainly an expression of freedom, it's important to be aware of past similar activity that became violent through police intervention and rioting.

- **How's the lay of the land (literally)?** – Having a house or an apartment located alongside a body of water increases the risk for flooding, while depending upon water taken from far-off sources could increase drought risks. Additionally, living in the middle of a 'concrete jungle' could mean standing water issues coupled with the risk of diseases, whereas living along an active fault line could mean constant tremors or strong earthquakes from time to time.
- **What's the weather like?** – Perhaps one of the easiest factors to ascertain when living in a new location, the weather could constitute one of the most important pieces of knowledge to have about your new location. This is because weather can *often* be forecasted (giving you time to prepare), and tends to follow certain patterns (allowing for you to expect 'typical' year-round weather phenomena).

Knowing the answers to these questions allows you to spend your time preparing for events that are most likely to occur, without wasting your time on events that will rarely occur. But how do you actually find solid answers to these questions? The remainder of this paper will focus on precisely that: the tools you have at your disposal in order to gain the information needed to act intelligently.

Tool/Source #1

Source Name: **Data Visualization: Disaster Declarations for States and Counties**

Source Owner/Developer: **Federal Emergency Management Administration's (FEMA)**

Source Location: <https://www.fema.gov/data-visualization-disaster-declarations-states-and-counties>

A comprehensive (and very visual) resource available on the Federal Emergency Management Administration's (FEMA) website gives you that first, much-needed overview of not only which natural disasters have impacted your location, but how frequently they have occurred over a given timeframe (why prepare for that one-off hurricane that flooded a desert once in the past 90 years?).

In the example below, a quick glance at the data indicates that someone moving to Alabama would want to be prepared a flooding scenario (given the high numbers of severe storms, hurricanes, and floods reported in the state since 1953), particularly in the southern and north-central counties.

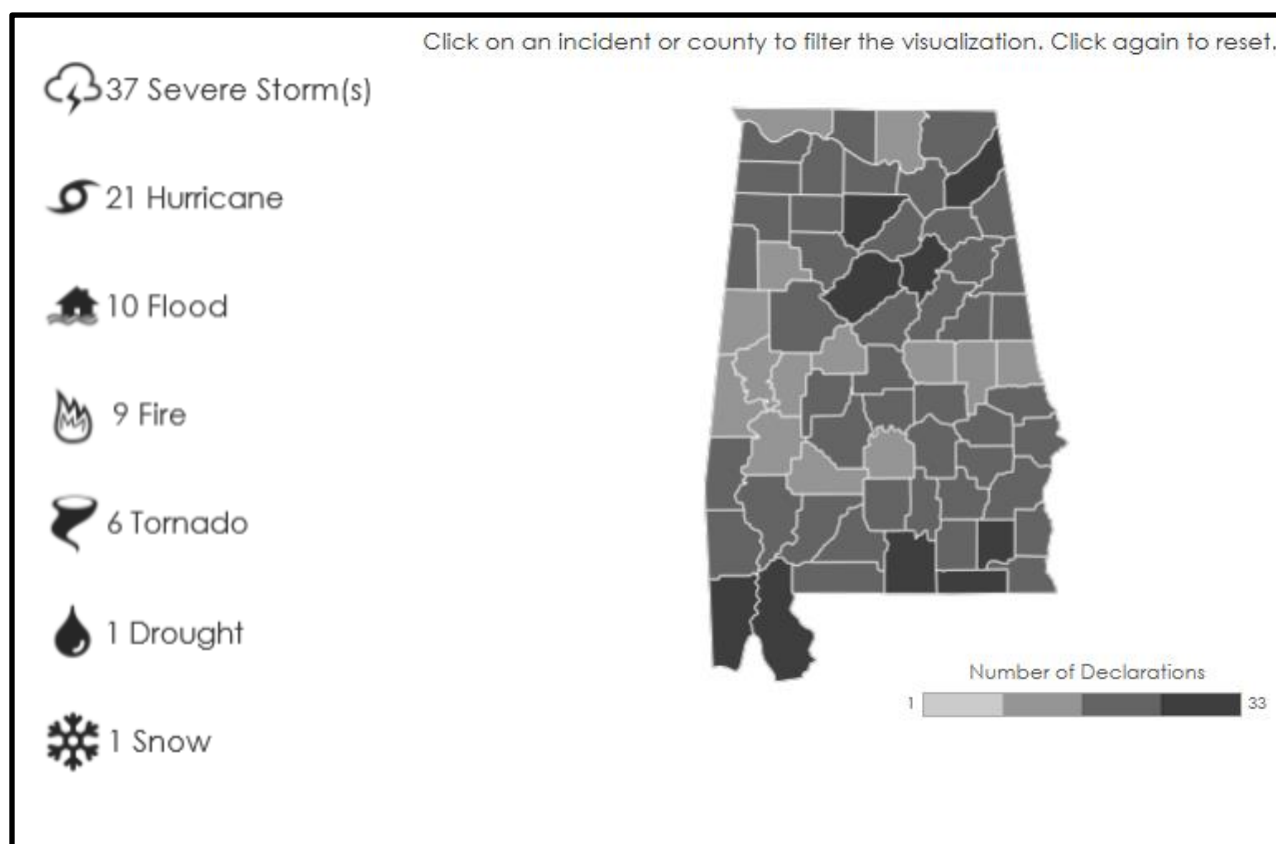


Figure 1 Extracted from FEMA's Data Visualization: Disaster Declarations for States and Counties, (2018)



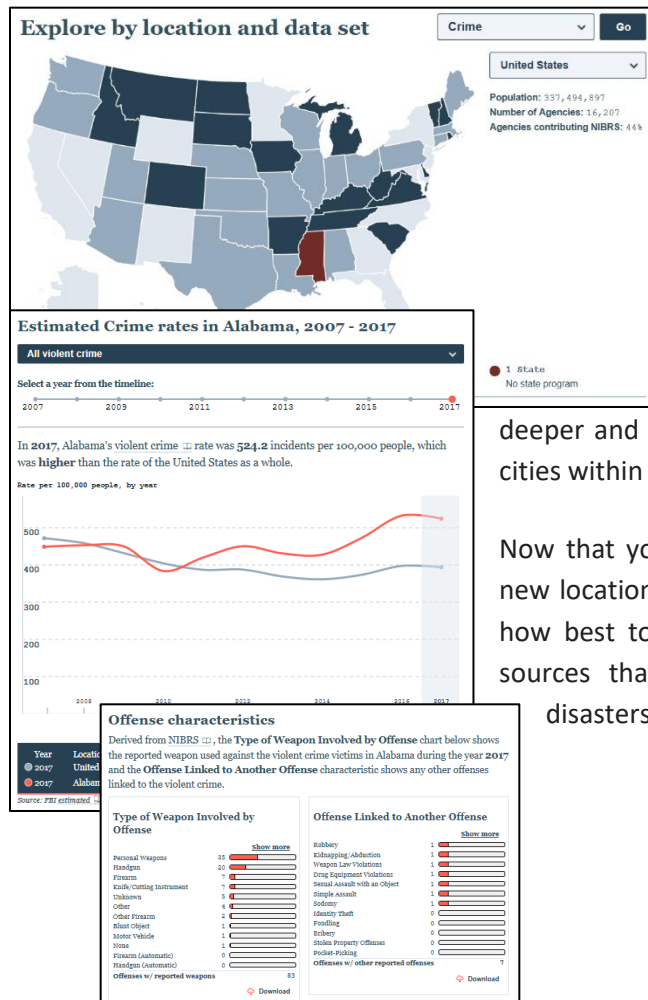
Tool/Source #2

Source Name: **FBI Crime Data Explorer**

Source Owner/Developer: **Federal Bureau of Investigation (FBI)**

Source Location: <https://crime-data-explorer.fr.cloud.gov/>

While the previous resource is useful for preparation for a natural disaster, this next resource helps you for understanding the particulars of crime-related statistics across the country.



This resource's website is useful for knowing crime rates for each state, how that rate compares to the country as a whole, and then gives you additional metrics about the reported crime. It also provides raw data for each data set, letting you contextualize the information even further.

Once this general information is known for a given state, you may decide to dig a little deeper and research the crime information related to certain cities within that state.

Now that you're aware of the overarching likelihood of your new location's most common disasters, you can now focus on how best to prepare to them. Below are a few well-known sources that provide multi-faceted advice for a range of disasters:

Figure 2 Extracted from <https://crime-data-explorer.fr.cloud.gov/>, (2019)

Tool/Source #3

Source Name: **How to Prepare for Emergencies**

Source Owner/Developer: **American Red Cross**

Source Location: <https://www.redcross.org/get-help/how-to-prepare-for-emergencies/types-of-emergencies.html>

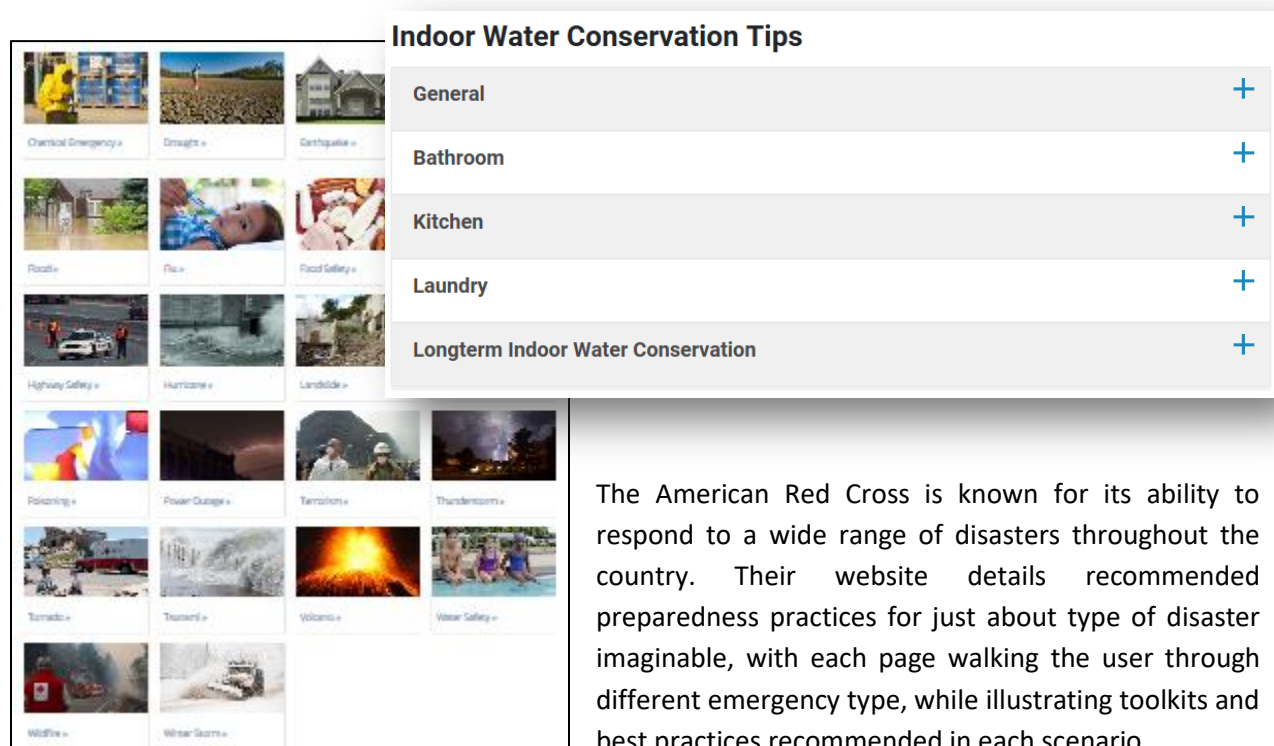


Figure 3 Extracted from American Red Cross: Types of Emergencies, 2018

The American Red Cross is known for its ability to respond to a wide range of disasters throughout the country. Their website details recommended preparedness practices for just about type of disaster imaginable, with each page walking the user through different emergency type, while illustrating toolkits and best practices recommended in each scenario.



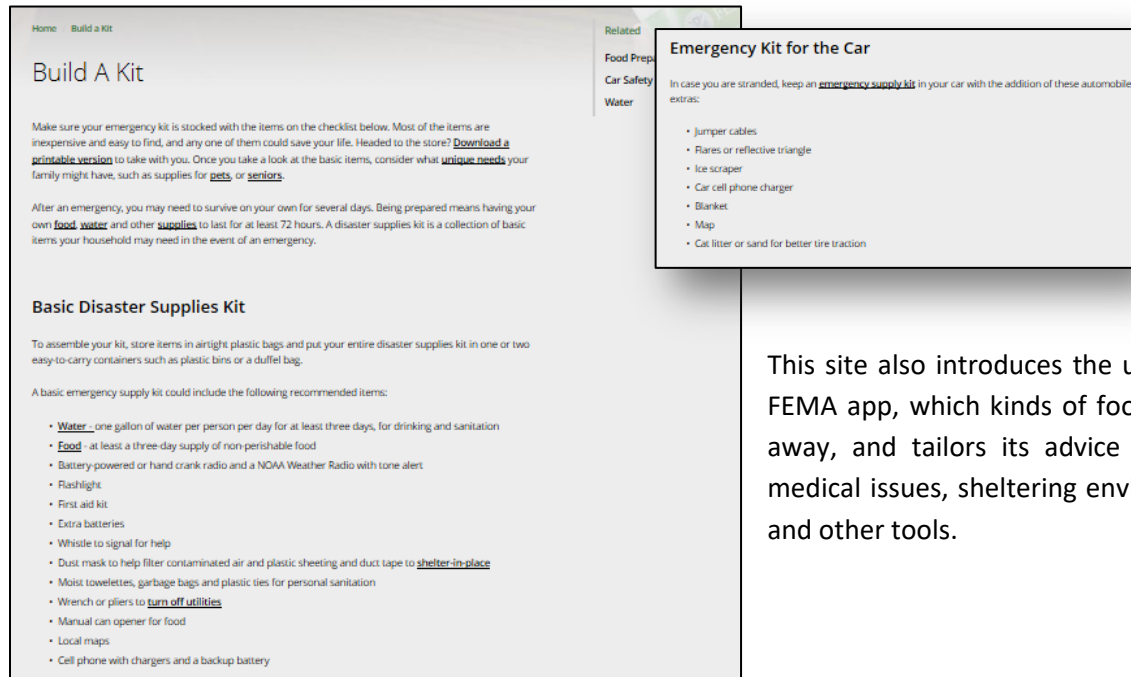
Tool/Source #4

Source Name: **Build a Kit**

Source Owner/Developer: **Ready.gov**

Source Location: <https://www.ready.gov/build-a-kit>

Ready.gov's *Build a Kit* website features all kinds of useful practices for building and maintaining a robust emergency kit used for food supply, medicine storage, pet care, and other items needed during an emergency. It details certain items like the amount of water required for an extended emergency and other things you may not have given much thought to, but are imperative to plan for in case of a disaster that lasts longer than just a day or two.



Home Build a Kit

Build A Kit

Make sure your emergency kit is stocked with the items on the checklist below. Most of the items are inexpensive and easy to find, and any one of them could save your life. Headed to the store? [Download a printable version](#) to take with you. Once you take a look at the basic items, consider what [unique needs](#) your family might have, such as supplies for [pets](#) or [seniors](#).

After an emergency, you may need to survive on your own for several days. Being prepared means having your own [food](#), [water](#) and other [supplies](#) to last for at least 72 hours. A disaster supplies kit is a collection of basic items your household may need in the event of an emergency.

Basic Disaster Supplies Kit

To assemble your kit, store items in airtight plastic bags and put your entire disaster supplies kit in one or two easy-to-carry containers such as plastic bins or a duffel bag.

A basic emergency supply kit could include the following recommended items:

- **Water** - one gallon of water per person per day for at least three days, for drinking and sanitation
- **Food** - at least a three-day supply of non-perishable food
- Battery-powered or hand crank radio and a NOAA Weather Radio with tone alert
- Flashlight
- First aid kit
- Extra batteries
- Whistle to signal for help
- Dust mask to help filter contaminated air and plastic sheeting and duct tape to [shelter-in-place](#)
- Moist towelettes, garbage bags and plastic ties for personal sanitation
- Wrench or pliers to [turn off utilities](#)
- Manual can opener for food
- Local maps
- Cell phone with chargers and a backup battery

Related

- Food Prep
- Car Safety
- Water

Emergency Kit for the Car

In case you are stranded, keep an [emergency supply kit](#) in your car with the addition of these automobile extras:

- Jumper cables
- Flares or reflective triangle
- Ice scraper
- Car cell phone charger
- Blankets
- Map
- Cat litter or sand for better tire traction

This site also introduces the user to the FEMA app, which kinds of food to stock away, and tailors its advice to certain medical issues, sheltering environments, and other tools.

Figure 4 Extracted from Ready.gov, 2018

Other Tools/Resources

In addition to the tools and resources detailed above, the following list provides some general guidance on other places to look for recommendations and best practices as they relate to preparing for the next disaster:

Source	Owner	Location
State level preparedness website	State Government	Typically located within the state's .gov website environment
Local-level preparedness website	City/County/Municipality Government	Typically located within the municipality's .gov website environment
Protecting Your Business	FEMA	https://www.fema.gov/protecting-your-businesses
Protecting Homes	FEMA	https://www.fema.gov/protecting-homes
Social Media Toolkits	Ready.gov	https://www.ready.gov/toolkits
Prepare My Family for a Disaster	Department of Homeland Security	https://www.dhs.gov/how-do-i/prepare-my-family-disaster

Resilience Design seeks to continually educate residents on the aspects of disaster management in hopes of building a more resilient community. Sometimes this education means teaching new facts while at other times it may include dispelling myths and incorrect assumptions. Be sure to look for future writings from us and visit us on LinkedIn or ResilienceDesign.org!