

#### **OVERVIEW**

The U.S. housing market, buffeted by higher mortgage rates and affordability challenges, is shifting. In 2023, relatively affordable cities dominate Zillow's predictions for the hottest housing markets. Yet affordability is not the only thing on the minds of homebuyers and homeowners. As the impacts of intensifying climate and environmental risks continue to grow, **58% of U.S.** homeowners have invested in making their homes more resilient to climate threats.<sup>1</sup>

Homebuyers and homeowners should be equipped with the information they need to make healthier and wiser choices.

AreaHub provides the tools to understand local environmental issues for any address in the United States. From pollution to industrial hazards, extreme weather, and more, people can uncover the impact that environmental hazards may have on their health and property values.

Using the "10 Hottest Housing Markets in 2023" ranking<sup>2</sup> by Zillow®, AreaHub aggregated environmental issues in these cities across multiple data topics to help people and businesses make more informed choices about the locations on their radar.

## \$165 billion

Last year was another intense year of costly disasters and extremes, with a price tag of at least \$165 billion in damages. According to NOAA's National Centers for Environmental Information, there were 18 weather or climate disaster events in the United States in 2022 with losses exceeding \$1 billion each.

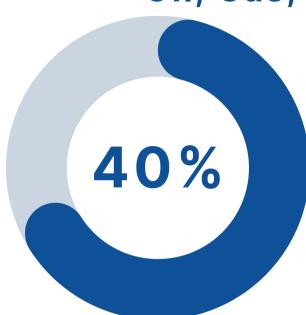


"In a world with a rapidly changing climate and increased environmental risks, we need reliable information about potential local hazards. Climate issues are becoming increasingly frequent and impactful. In 2022, damages from natural disasters totaled about \$165 billion in the U.S., according to NOAA. These climate issues may also exacerbate an area's pollution risks, such as if a contaminated site leaked toxic or hazardous chemicals due to flooding or wildfires."

Alison Gregory, AreaHub Co-Founder & CEO

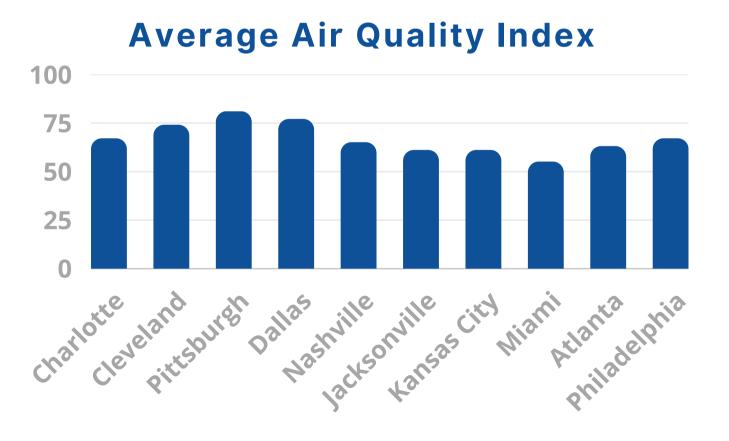
#### REPORT HIGHLIGHTS

Oil, Gas, or Fracking Wells



of the hottest real estate markets have oil, gas, or fracking wells nearby **40% of the markets** on Zillow's list **contain oil, gas, or fracking wells** within five miles of their center. Cleveland has the highest number of wells out of the other cities on the list, with 97 wells within five miles of its center. There may be elevated health risks to living near a well due to groundwater contamination or air pollution.

None of the hottest real estate markets have a "good" annual average air quality, which would be an annual average air quality index at or below 50. All of the cities that made the list recently had a "moderate" annual average air quality, with Pittsburgh taking a top spot for worst air quality at an average annual air quality index of 81.



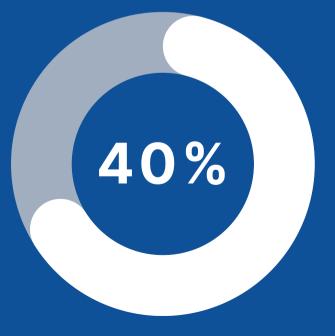
#### REPORT HIGHLIGHTS

70% of the markets on Zillow's list contain at least one Superfund site within five miles of their center. Superfund sites are contaminated hazardous waste sites that, in some cases, impact health and/or property values. Philadelphia has the highest number of Superfund sites out of the other cities on the list, with three sites near its center.

#### Superfund Sites



#### Indoor Radon



are located in counties with elevated average indoor radon levels

**40% of the top cities** are located in counties with **elevated average indoor radon levels**. Radon is an invisible and odorless gas that is responsible for over 20,000 cases of lung cancer annually, according to the EPA. Radon can affect everything from small houses to public housing projects. Modern homes, with fewer levels, high ceilings and more square footage, may actually be more likely to have higher concentrations of radon.

Here are some of the top environmental concerns for the hottest real estate markets of 2023 —

## 01. Charlotte, NC

#### Keep an eye out for...

Brownfields
Toxic Release Inventory Facilities\*
Solid Waste Landfills\*
Tornadoes
Ice Storms\*

Power Plants\*
High Voltage Lines
Air Quality

Charlotte is known for its small town feel, city skyline, and sizeable financial hub. With a lower-than-average cost of living and a large influx of job opportunities, Charlotte is predicted to be 2023's hottest housing market.

#### **Environmental Highlights**

Charlotte, also known as the 'Queen City,' has relatively **low industrial hazards** compared with other cities on Zillow' list. Although the city contains **31 brownfields**, it does not have Superfunds, wells, or natural gas pipelines within five miles of its city center. Brownfields are potentially contaminated properties that are often abandoned or unused. An Environmental Health Perspectives study<sup>5</sup> found higher mortality rates from cancer and respiratory diseases in communities with the highest density of brownfields. Learn more about brownfields <u>here</u>.

Additionally, Charlotte has **over 100 toxics release inventory (TRI) facilities**\* within five miles of its city center. The EPA's TRI tracks facilities that use, manufacture or process significant quantities of toxic chemicals. Not all facilities producing and using chemicals are dangerous since this does not mean they had any toxic spills, but vulnerable populations may want to take precautions. Learn more about the toxics release inventory <u>here</u>.

Other environmental considerations in Charlotte include solid waste landfills, tornadoes, ice storms, high voltage lines, natural gas pipelines, power plants, and air quality.

Cleveland, one of the major cities of the Great Lakes region, is home to several major cultural institutions and iconic sports teams.

#### **Environmental Highlights**

Cleveland, also known as 'Forest City,' has **97 oil, gas, or fracking wells**\* within five miles of its center, the most of any city on the list. Nearly 18 million Americans live within one mile of a well. Emerging evidence hints that living within a mile of a well may be associated with health issues possibly caused by air pollution or groundwater contamination. If you live near ongoing oil and gas activity, it is a good idea to find out what type of activity is taking place and, if necessary, consider water filtration and/or a quality <u>air purifier</u> in your home. Learn more about wells <u>here</u>.

Cleveland doesn't only rank first for wells, it also has **the most toxics release inventory (TRI) facilities**\*compared to others on the list, with 180 facilities within five miles of its city center. Not all TRI facilities are dangerous since this does not mean they had any toxic spills, but vulnerable populations (like pregnant mothers and children) may want to take precautions. Learn more about TRI facilities <a href="here">here</a>.

Other environmental considerations in Cleveland include power plants\*, Superfund sites, natural gas pipelines, high voltage lines, cell towers, solid waste landfills\*, and indoor radon.

# O2. Cleveland, OH Keep an eye out for...



Pittsburgh, a historical industrial hub, boasts beautiful bridges, top-ranked universities, and passionate sports fans.

#### **Environmental Highlights**

Pittsburgh, also known as 'Steel City,' had an **average air quality index of 81 (moderate)**, the poorest out of any city on the list.

Moderate air quality is considered acceptable by the EPA, but there may be a risk for those unusually sensitive to air pollution. Breathing polluted air may have health effects. Prolonged exposure to higher levels of air pollution is known to cause permanent lung damage and reduce lifespan. To limit the effects of air pollution on your health, keep track of the AQI and reduce your exposure and exertion levels when air pollution levels are high. Learn more about air pollution here.

Pittsburgh is also a Radon Zone 1, which means there is a **high potential for unsafe indoor radon levels**. Radon is an invisible and odorless gas that is responsible for over 20,000 cases of lung cancer annually, according to the EPA. Radon can invade a home or business, so test regularly to monitor radon levels. Learn more about radon <u>here</u>.

Other environmental considerations in Pittsburgh include brownfields. natural gas pipelines, oil, gas, and fracking wells\*, toxic release inventory facilities\*, power plants\*, and solid waste landfills\*.

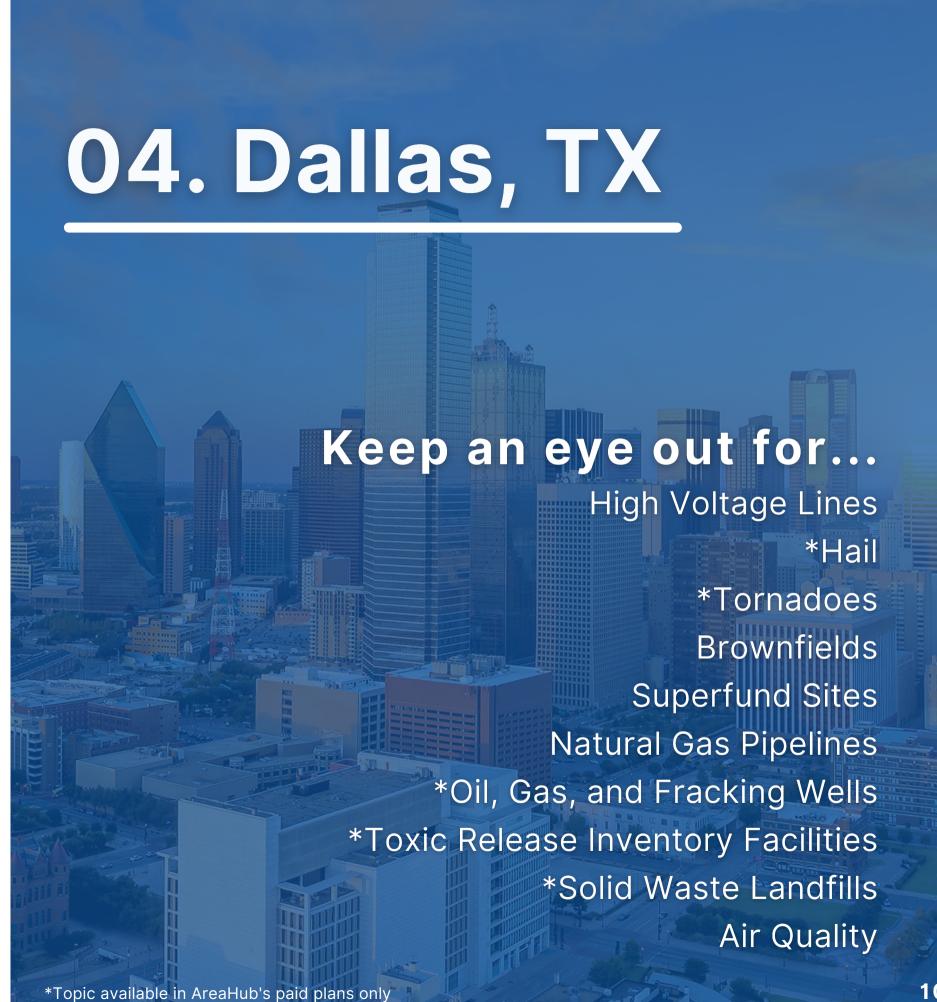
One of the largest metropolitan areas in the country, Dallas is known for its Texas barbecue, lively restaurant scene and nightlife, and historic landmarks.

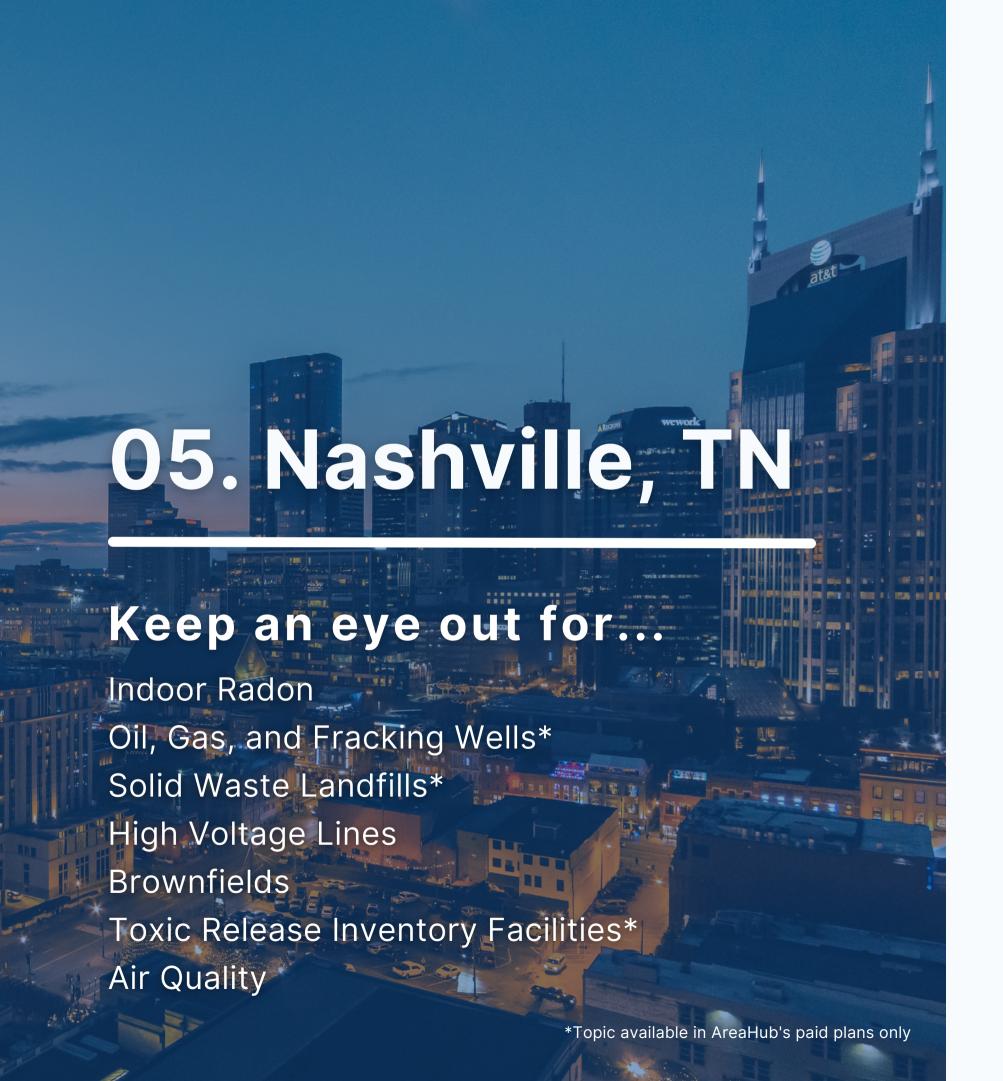
#### **Environmental Highlights**

Dallas, the third largest city in Texas, has a high density of high voltage lines within five miles of its center, compared to other cities on the list. Although there is no evidence of a clear link to health risks, research has not demonstrated living near high voltage lines is entirely safe, either. Learn more about high voltage lines here.

Dallas is also **prone to hail**, with a very high annual frequency of hail occurrences compared to other cities nationwide, according to FEMA's National Risk Index. The city also has a high risk of tornadoes\*.

Other environmental considerations in Dallas include air quality, brownfields, natural gas pipelines, oil, gas, and fracking wells,\* toxic release inventory facilities, power plants, and solid waste landfills\*





Nashville, widely known as 'Music City,' is the home to country music and a variety of restaurants, distilleries, and a thriving entertainment scene.

#### **Environmental Highlights**

Although Tennessee's capital doesn't take the top spot for any hazards on the list, it does have a number of environmental hazards to watch out for. For instance, Nashville has a **high potential for unsafe indoor radon levels**. Radon is an invisible and odorless gas that is the leading cause of lung cancer among non-smokers in the U.S. Radon can invade a home or business, so if you are buying a property, insist on a radon test. The EPA estimates that nearly one in 15 U.S. homes have elevated radon levels, so test regularly to monitor radon levels. Learn more about radon here.

Nashville also has **10 oil, gas, or fracking wells**\* and **many high voltage lines** within five miles of its center, higher than most cities on the list. Additionally, it has a **high risk of riverine floods and tornadoes**\*, according to FEMA's National Risk Index.

Other environmental considerations in Nashville include solid waste landfills\*, brownfields, air quality, and toxic release inventory facilities\*

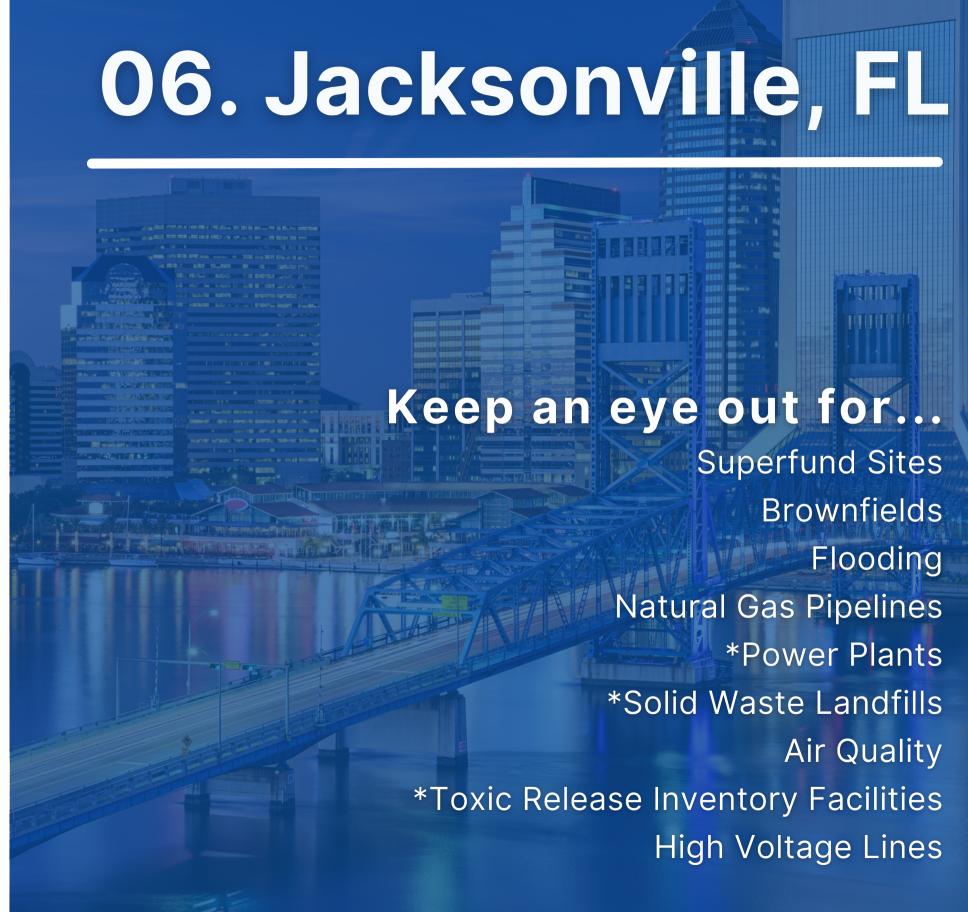
Located on Florida's Atlantic shoreline, Jacksonville has more than 22 miles of beach and access to the St. Johns River. The city is known for its thriving art scene, craft beer, and fresh seafood.

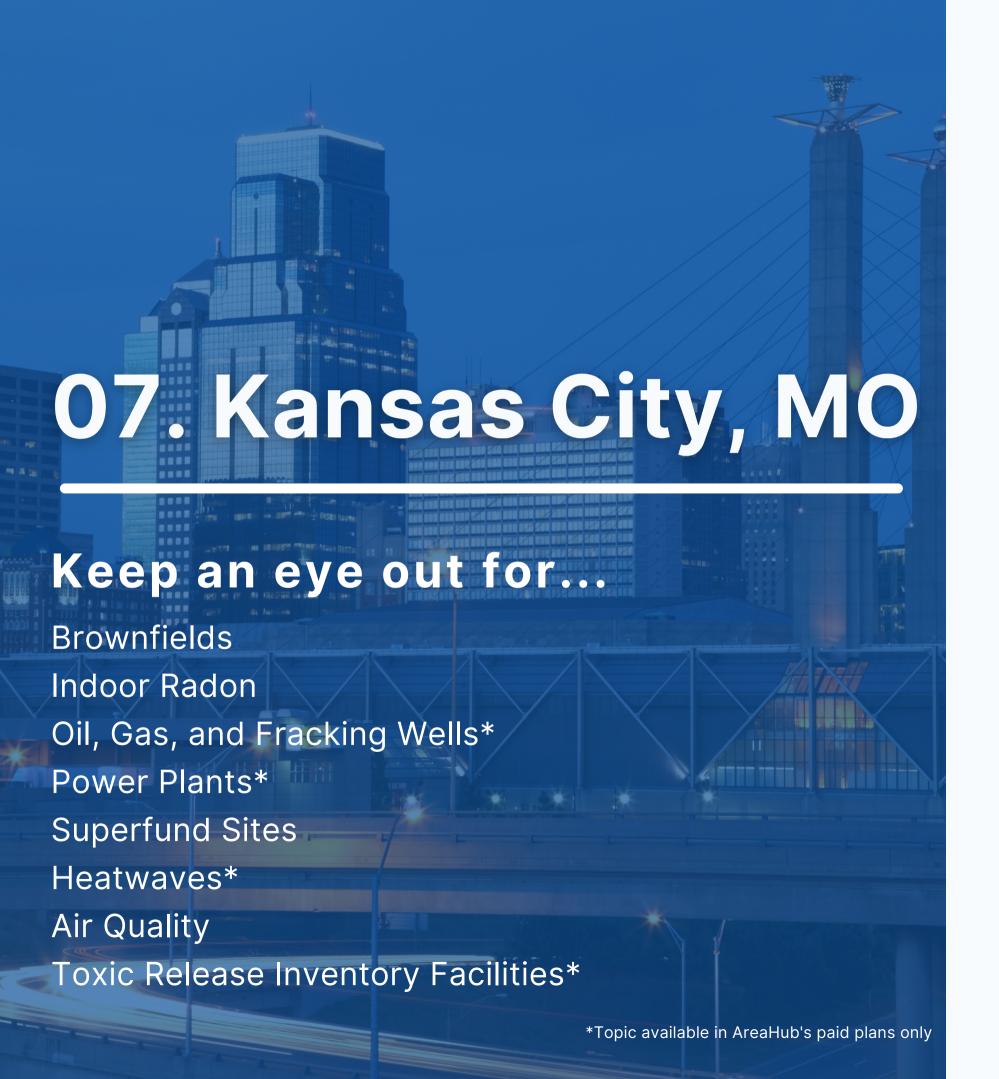
#### **Environmental Highlights**

Although Jacksonville doesn't take the top spot for any hazards considered on the list, it does have a number of environmental hazards to watch out for. For instance, Jacksonville has **two Superfund sites** and **12 brownfields** within five miles of its center. Superfund sites are contaminated hazardous waste sites. The national Superfund list includes abandoned factories, mining operations, toxic waste dumps, and other sites with uncontained materials deemed dangerous. Learn more about Superfunds <a href="here">here</a>. Brownfields are potentially contaminated properties that are often abandoned or unused. Learn more about brownfields <a href="here">here</a>.

The most populous city in Florida also has a **moderate risk of riverine and coastal flooding**. Floods are the most widespread of all weather-related natural disasters.<sup>12</sup> Read more about floods <u>here</u>.

Other environmental considerations in Jacksonville include power plants\*, natural gas pipelines, solid waste landfills\*, facilities in the toxics release inventory\*, air quality, and high voltage lines.





Kansas City, also known as the 'Barbecue Capital of the World' is famous for its more than 200 fountains, vibrant jazz scene, and of course, barbecue restaurants.

#### **Environmental Highlights**

There are **399 brownfield sites** within five miles of Kansas City's center, the most of any city on the list. Brownfields are potentially contaminated properties that are often abandoned or unused. The three most common contaminants found in brownfields are lead, petroleum, and asbestos. A study published in Environmental Health Perspectives found significantly higher rates of mortality from cancer and respiratory diseases in communities with the highest density of brownfield sites. Although brownfields can devalue nearby properties, nearby property values can rebound once the brownfield is cleaned up and redeveloped. Learn more about brownfields here.

Kansas City also has **five power plants**\* and **four oil, gas, or fracking wells**\* within five miles of its center, higher than many other cities on the list. Additionally, it has a **high risk of heatwaves**\* and a moderate risk for tornadoes\*, strong winds\*, ice storms\*, and winter weather, according to FEMA's National Risk Index.

Other environmental considerations in Kansas City include **high average indoor radon**, Superfund sites, natural gas pipelines, toxic release inventory facilities\*, and high voltage lines.

Miami is beloved for its sparkling beaches, year-round warm weather, thriving nightlife, and Latin American influence.

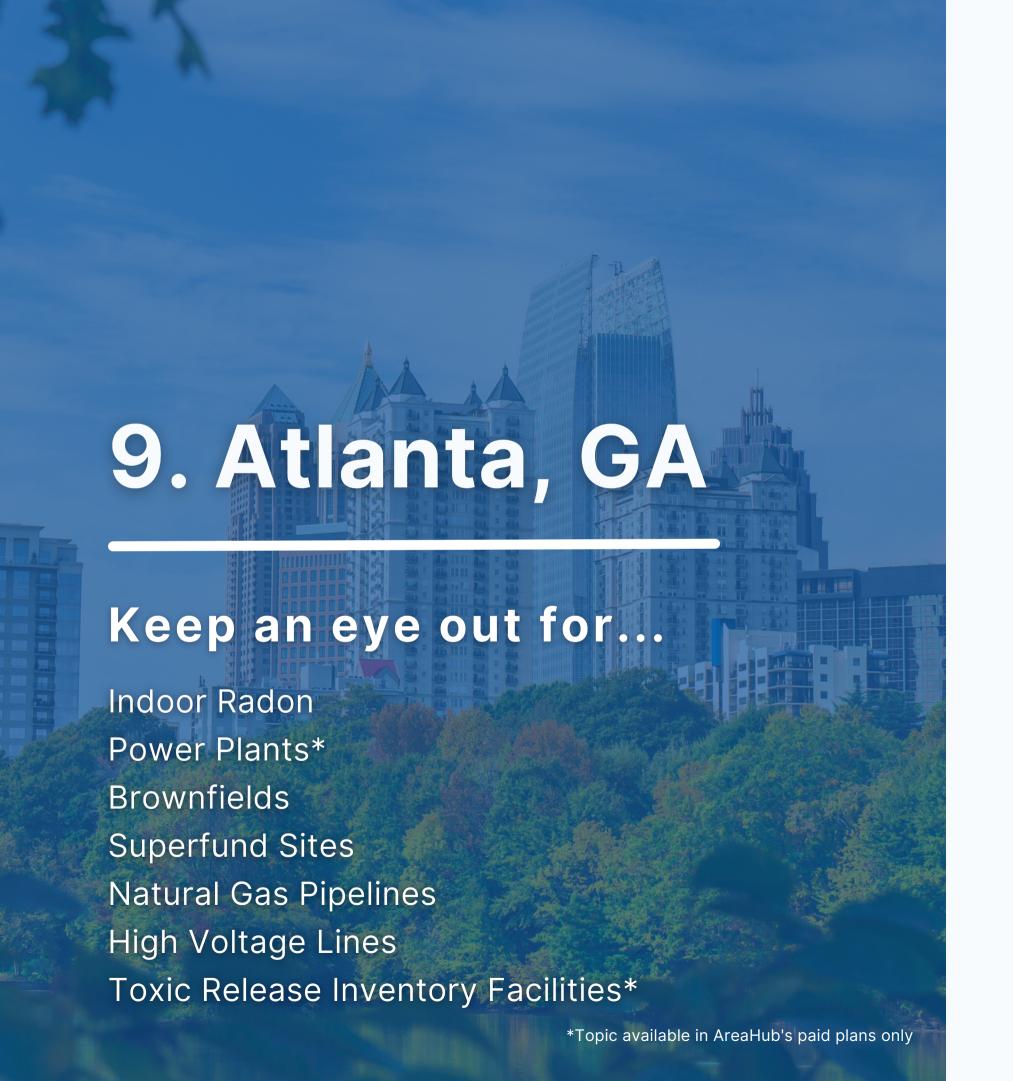
#### **Environmental Highlights**

Miami has seven solid waste landfills within five miles of its city center, tied with Philadelphia for the most of any city on the list. A solid waste landfill is "a discrete area of land or excavation that receives household waste" and may also receive other types of nonhazardous waste, according to the EPA<sup>14</sup> Some studies suggest living near landfills may be tied to an increase in the risk of adverse health effects.

The city, famously referred to as 'the 305,' also has 337 brownfields and two Superfund sites within five miles of its city center, along with two power plants and one natural gas pipeline. Additionally, while Miami has a moderate risk of hurricanes and tornadoes, it has a high risk of flooding. Flooding causes an average of \$5 billion in damage each year in the US, more than any other severe weatherrelated event. Read more about extreme weather events here.

Other environmental considerations in Miami include facilities in the toxic release inventory, air quality, average indoor radon, high voltage lines and cell towers.

## 08. Miami, FL Keep an eye out for... \*Solid Waste Landfills Superfund Sites Brownfields \*Power Plants Flooding Hurricanes \*Tornadoes Natural Gas Pipelines \*Topic available in AreaHub's paid plans only



Sometimes referred to as the 'Hollywood of the South,' Atlanta is a city rich in history and culture with a lively food and entertainment scene.

#### **Environmental Highlights**

Although Georgia's capital doesn't take the top spot for any hazards on the list, it does have a number of environmental issues to watch out for. For instance, Atlanta has **10 power plants**\*, **six solid waste landfills**\*, and **82 brownfields** within five miles of its city center, along with one Superfund site and one natural gas pipeline.

Atlanta also has a **high potential for unsafe indoor radon levels**. Radon is an invisible and odorless gas that is responsible for over 20,000 cases of lung cancer annually, according to the EPA. Radon can invade a home or business, so if you are buying a property, insist on a radon test. Also, test regularly to monitor radon levels. Learn more about radon <u>here</u>.

Other environmental considerations in Atlanta include hail, toxic release inventory facilities, high voltage lines, and cell towers.

Philadelphia, one of the country's most preeminent historical cities, is famously known for its iconic Liberty Bell and cheesesteaks.

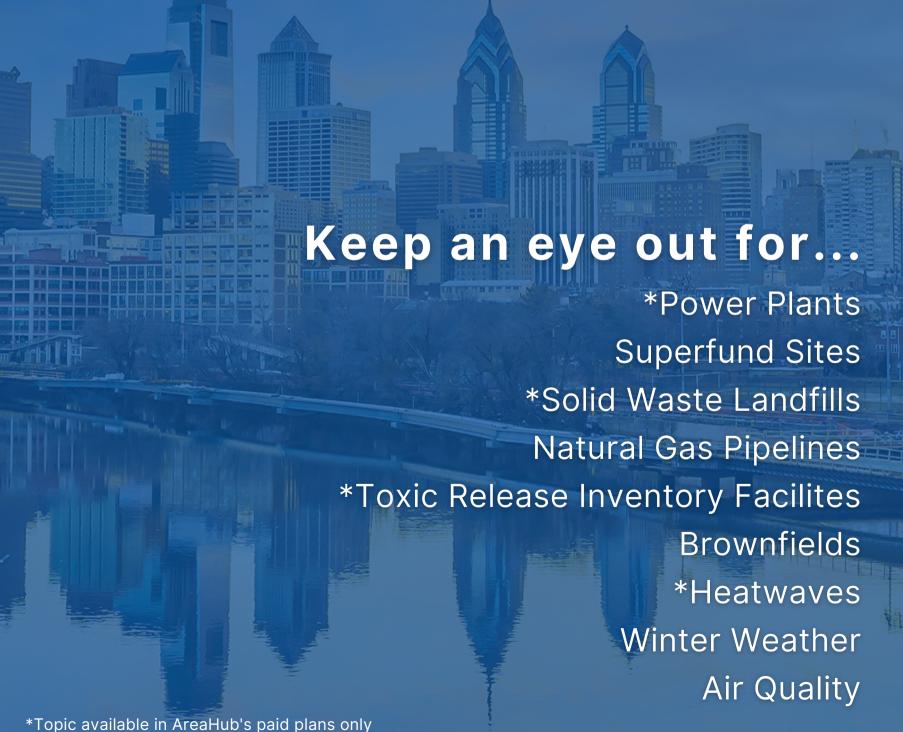
#### **Environmental Highlights**

Philadelphia has the most power plants out of any city on the list, with 14 power plants within five miles of its center. Most are natural gas plants or solar plants, along with a few petroleum plants and one biomass plant. While some power plants are cleaner than others, many may have an impact on the environment and surrounding areas. When living near a power plant, it's important to know its type of activity and the emissions that may be released from it. Learn more about power plants <a href="https://example.com/here/beauty-september-plants-be-en-biomes-pl

Additionally, Philadelphia has three Superfund sites within five miles of its center, the most of any city on the list. Superfund sites are contaminated hazardous waste sites. The national Superfund list includes abandoned factories, mining operations, toxic waste dumps, and other sites with uncontained materials deemed dangerous. If you live near a Superfund, you may want to learn about the hazardous materials there, how much has been cleaned up, and consider if you want to take any steps to mitigate your risk from exposure. Learn more about Superfund sites <a href="here">here</a>.

Other environmental considerations in Philadelphia include **solid** waste landfills, natural gas pipelines, brownfields, heatwaves, winter weather, air quality, and toxic release inventory facilities.

## 10. Philadelphia, PA





## About AreaHub

AreaHub's climate and environmental platform informs individuals and businesses with clearly presented, scientific, and locally-relevant climate and environmental information to help them make more informed decisions. AreaHub is a tool to prepare "for what nature might throw at you.<sup>17</sup>"

By leveraging their managerial, data processing, and startup experience, the co-founders launched AreaHub to help people and businesses make healthier and wiser decisions in a world with intensifying natural hazards and increasing environmental risks.

AreaHub offers Basic, Pro, Premium, and Enterprise plans with different levels of information and features. To find out more about AreaHub's plans, <u>click here</u>.

To learn more about AreaHub, visit AreaHub.com

### Data Topics

<u>AreaHub</u> aggregates dozens of credibly-sourced, science-based datasets to provide climate and environmental health information for 30+ data topics

#### NATURAL

ice storms\* coastal flooding landslides\* cold waves\*\* lightning\*\* droughts riverine flooding earthquakes strong winds\* hail\* tornadoes\* heat waves\* winter weather high winds\*\* wildfires hurricanes

#### INDUSTRIAL

superfund sites
brownfields
natural gas pipelines
oil, gas & fracking wells\*

#### POLLUTION

radon
air quality
ground level ozone\*
particulate matter\*
toxic releases\*

#### INFRASTRUCTURE

cell towers
high voltage lines
solid waste landfills\*
nuclear reactors\*
power plants\*
underground storage tanks\*\*

## Methodology & Disclaimer

AreaHub aggregated environmental issues across multiple data topics for the cities on Zillow's "10 Hottest Housing Markets in 2023" ranking. Using publicly available datasets provided by credible sources, AreaHub uses a proprietary geospatial algorithm that incorporates data from a variety of accepted third-party sources. The report results depend on location and the availability and accuracy of the data available in a particular region. Some areas have more detailed information than others.

Additionally, some datasets are more location-specific than others. For example, natural hazard results are based on census tracts, while industrial hazard results are based on a 5-mile radius from the center point of the search.

This report is for informational purposes, as of March 2023, and is not intended for use as marketing material or in connection with any offering. Nothing in this document or its related discussion should be construed or relied upon as legal, financial, or other advice. This report may contain information and material derived or taken from unaffiliated third-party sources, including but not limited to federal or other governmental documents, official reports, academic articles, and other public materials. If third party material is included, it is believed to be accurate and reliable. However, none of the information contained herein, including any third-party information, should be relied upon without independent verification. While the information in this presentation is believed to be accurate and reliable, the Company and its advisors, directors, officers and employees make no representations or warranties, expressed or implied as to the accuracy of such information and the Company expressly disclaims any and all liability that may be based on such information or errors or omissions thereof. All information contained in this document is believed to be current as of the date indicated or earlier, if applicable for that search or dataset, and is subject to change without notice. No assurance can be given that any forward-looking statements or estimates will prove accurate.

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