

CLIMATE IMPACTS: NATIONAL & NYC SPOTLIGHT

Created for NYC Faith Sector Climate Adaptation Working Group on 04.24.25

Record flooding in Kentucky and Appalachia kills more victims as searches continue

JULY 29, 2022 · 2:56 PM ET

By [Shauneen Miranda](#)



AP

[WORLD](#) [U.S.](#) [ELECTION 2024](#) [POLITICS](#) [SPORTS](#) [OLYMPICS](#) [ENTERTAINMENT](#) [BUSINESS](#) [SCIENCE](#) [FACT CHECK](#) ...

Live: Hamas' Ismail Haniyeh killed

Venezuela election

Boar's Head recall

0

EVEN WHEN THE NEWS IS FREE, JOURNALISM IS NOT. SUPPORT INDEPENDENT, FACT-BASED JOURNALISM.

DONATE

U.S. NEWS

Record-breaking US heat wave scorches the Midwest and Northeast, bringing safety measures

FOX WEATHER

The FOX Weather App
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WEATHER NEWS | Published July 30, 2024 7:52am EDT | Updated July 30, 2024 9:59am EDT

Catastrophic flooding in Vermont washes away roads, traps terrified residents amid Flash Flood Emergencies



Weather [Add Topic +](#)

Severe thunderstorms to hit Midwest with damaging winds, golf ball-size hail on Tuesday

LA wildfire damages set to cost record \$135bn

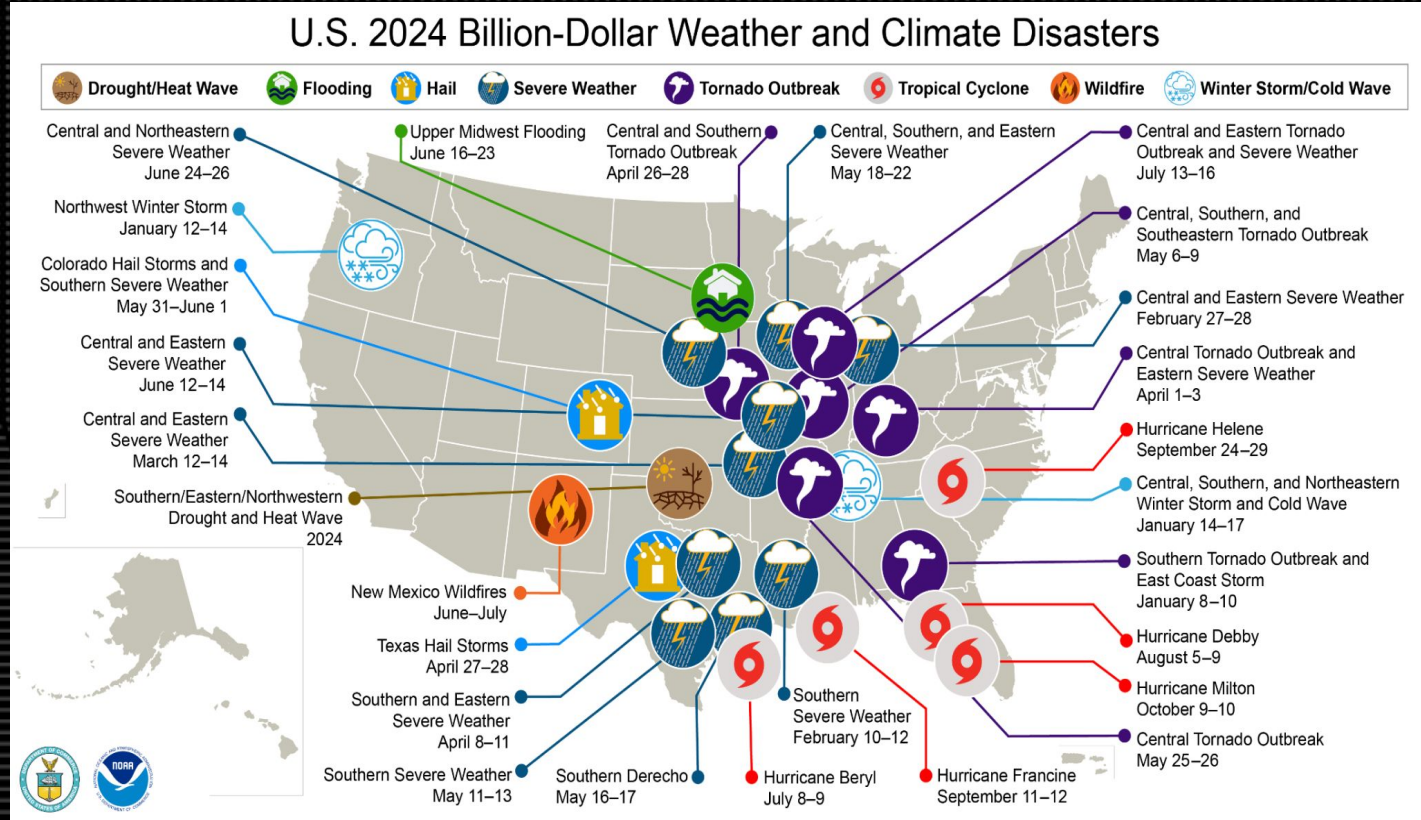
9 January 2025

Share Save

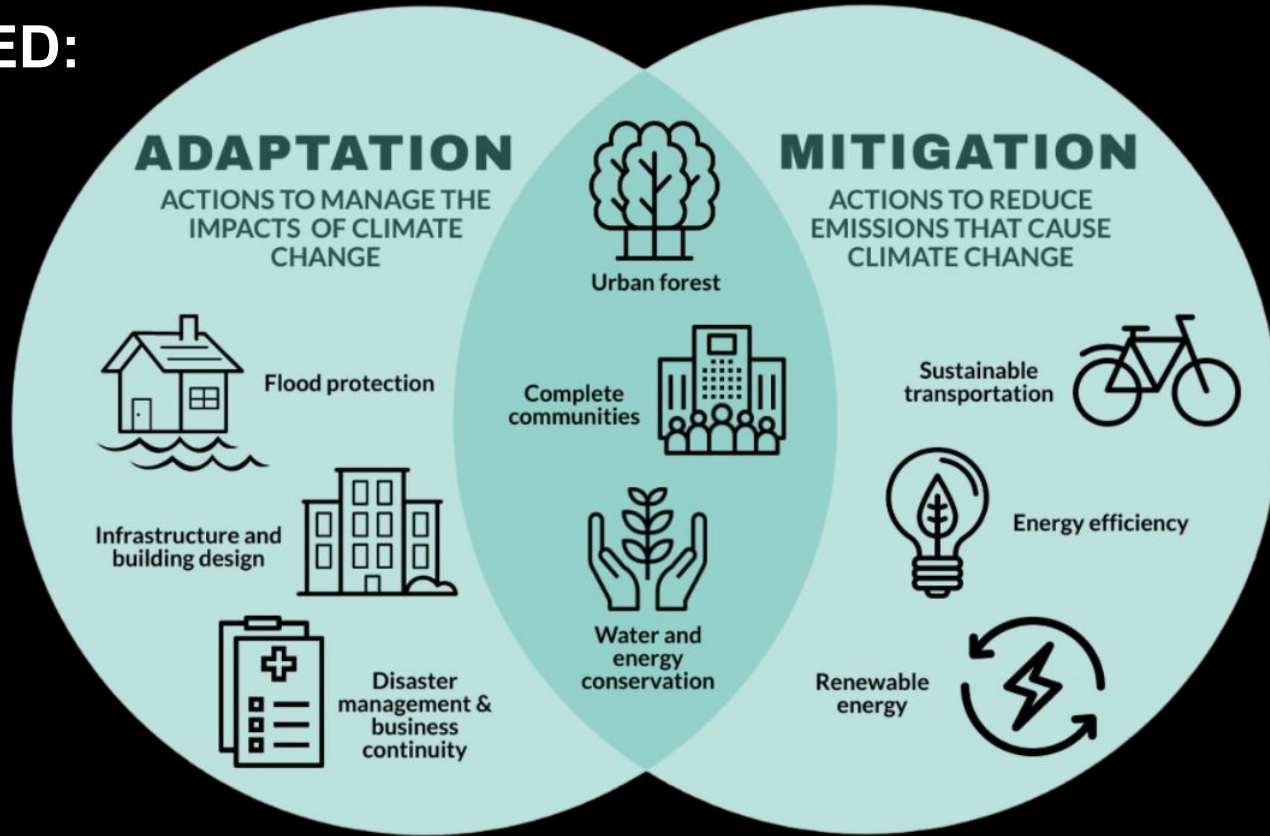
Natalie Sherman and Peter Hoskins
BBC News

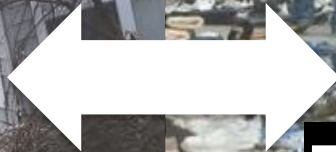


In 2024, the U.S. experienced 27 disasters, due to extreme weather, each exceeding \$1 billion, totaling \$182.7 billion in losses and 568 fatalities.



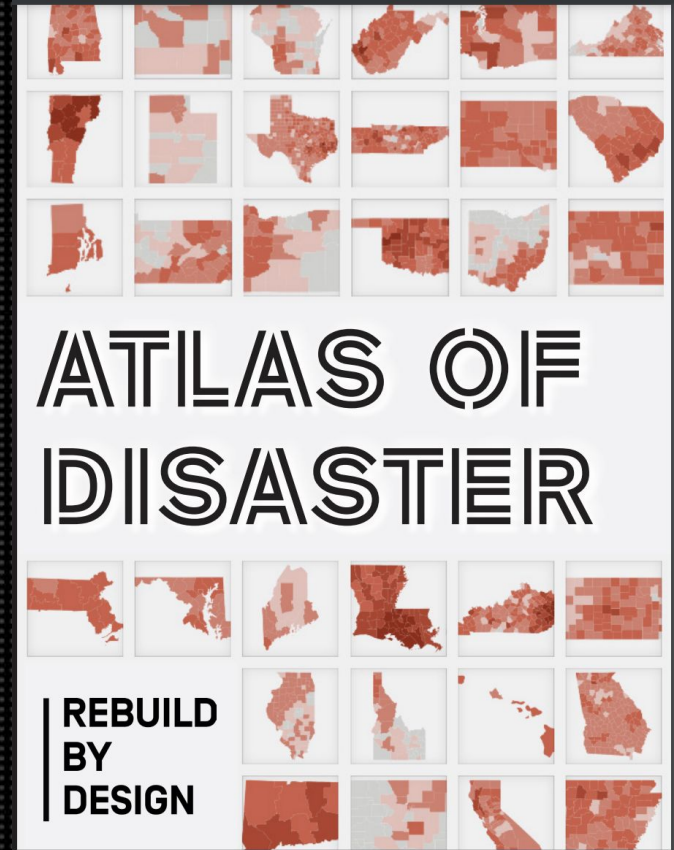
WE NEED:





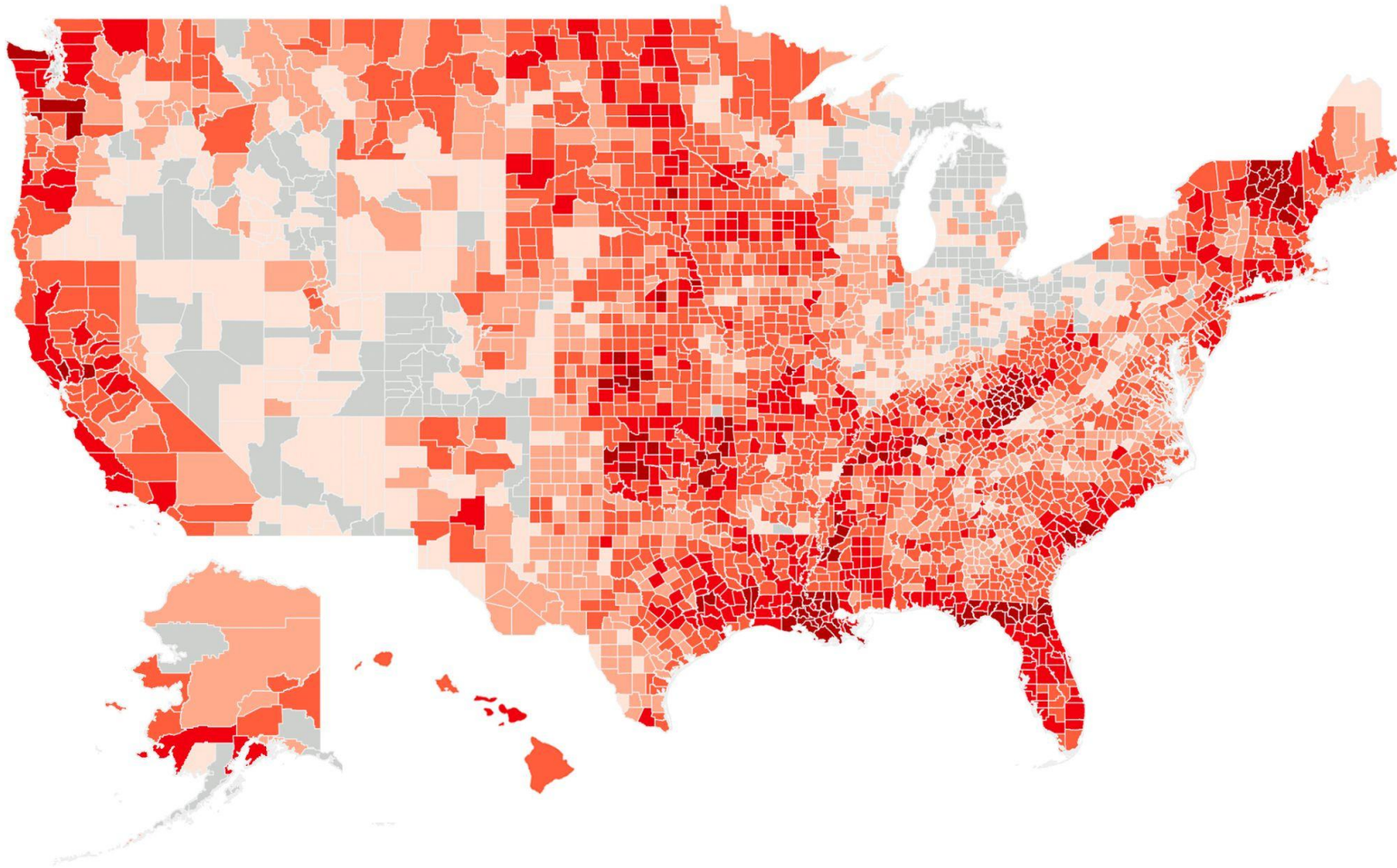
NATIONWIDE REPORT INCLUDES

1. County-level data for the entire U.S. - over 300 maps
2. Status of current disaster and adaptation practices, and discussion of what should be changed
3. Cost of Inaction
4. Guide for States to build a Collaborative Program
5. New Finance tools
6. Cost Benefit Reform
7. Recommendations



Created in partnership with APTIM and iParametrics
Philanthropic support from Siegel Family Endowment, Rockefeller Brothers Fund, and Tiger Global

COUNTY-LEVEL FEDERAL DISASTER DECLARATIONS (2011-2024)



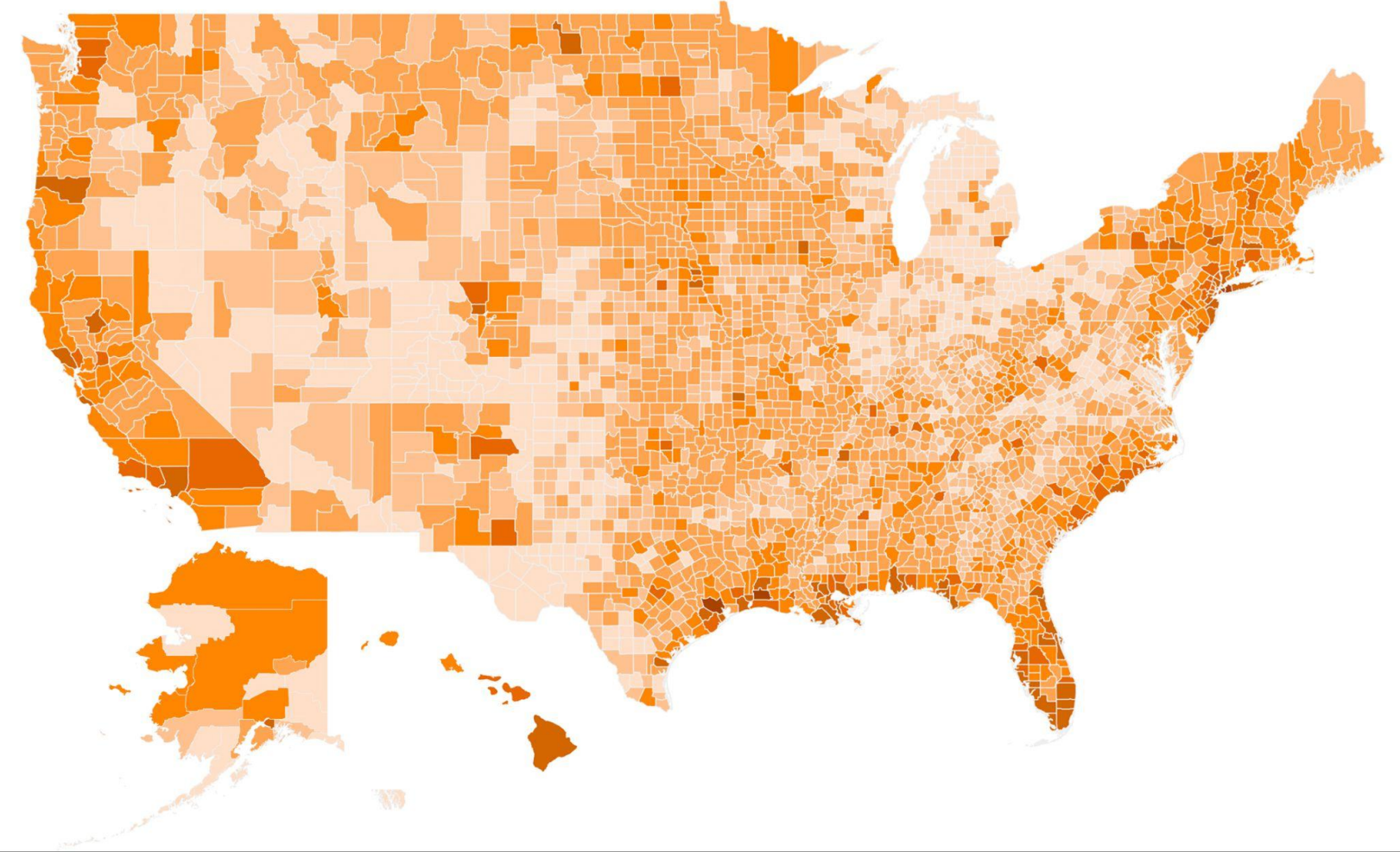


92% OF U.S. COUNTIES

**HAVE FACED AT LEAST ONE FEDERALLY
DECLARED WEATHER DISASTER
SINCE 2011.**

ONLY TWO DISTRICTS (OH-09 AND OH-13) HAVE NOT.

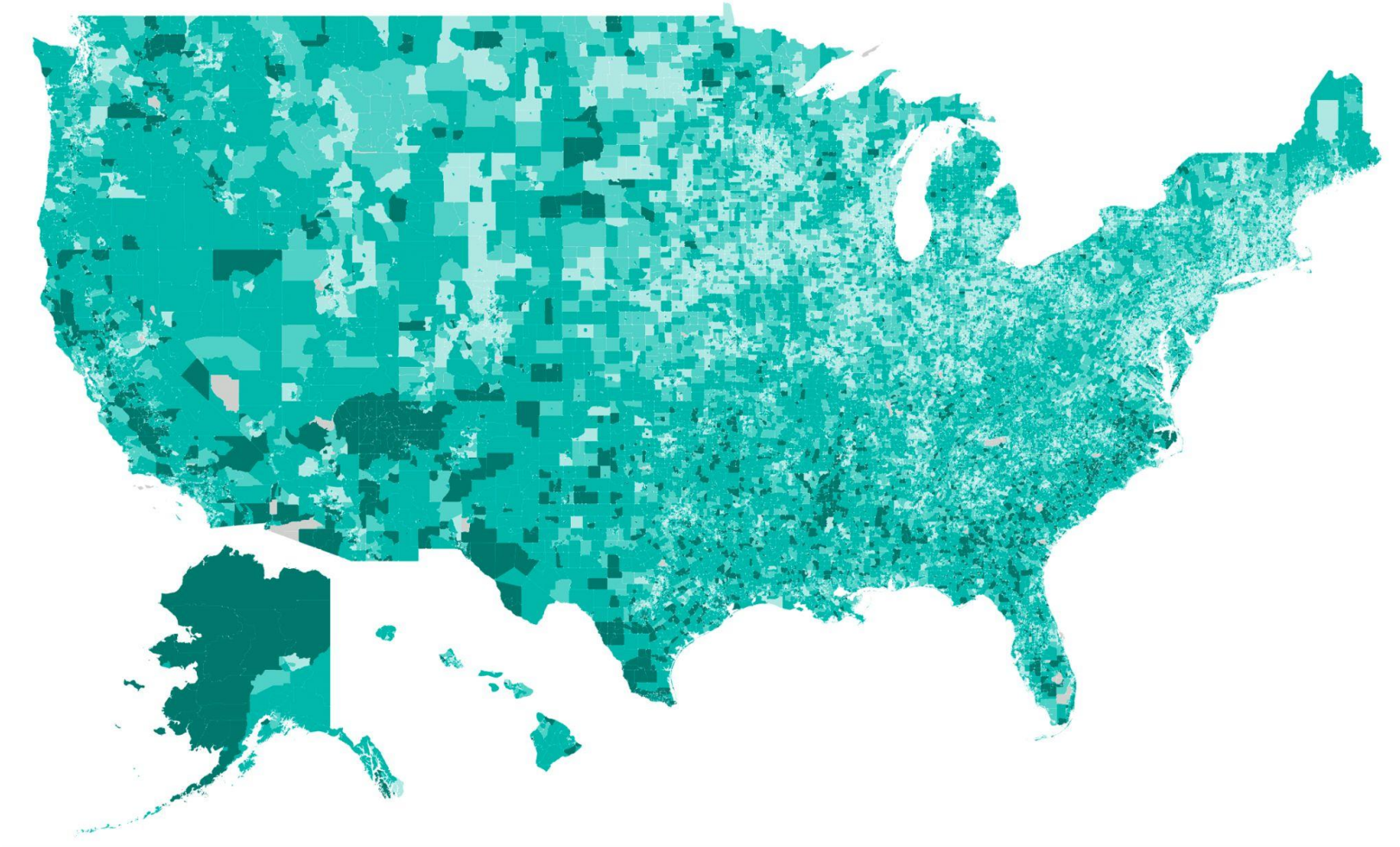
COUNTY-LEVEL FEMA OBLIGATIONS(2011-2024)





**SINCE 2011, THE FEDERAL
GOVERNMENT HAS ALLOCATED
\$117.9 BILLION FOR EXTREME WEATHER
DISASTERS, INCLUDING
\$72.7B FROM FEMA AND
\$45.2B FROM HUD CDBG-DR.**

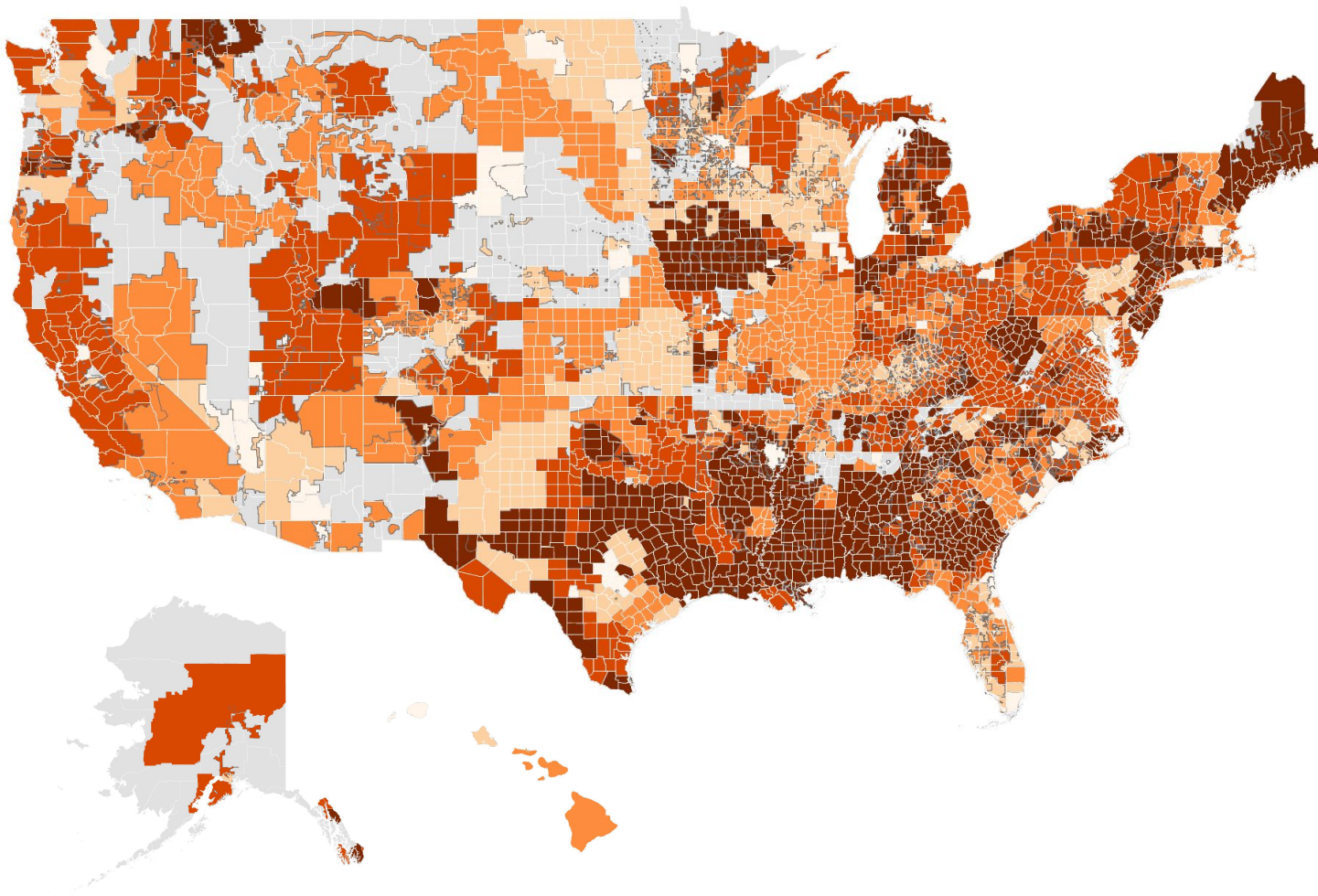
SOCIAL VULNERABILITY INDEX BY CENSUS TRACTS (2022)





**95.5% OF U.S. RESIDENTS
LIVE IN COUNTIES WITH
RECENT DISASTER
DECLARATIONS .**

COUNTY LEVEL ENERGY RELIABILITY MAP (2021)



**THE EFFECTS OF
CLIMATE CHANGE ARE
NOT EXPERIENCED
EQUALLY.**

RACIAL JUSTICE

- After 4 years, a medium-sized disaster has caused an average 31-point decline in credit scores for people living in communities of color, whereas people living in majority white communities experienced a 4-point decline (Urban Institute).
- After federal aid has been distributed to communities that have experienced a disaster, predominantly white, well-educated home-owners experience a significant increase in wealth. Conversely, communities of color, particularly renters experience a decline wealth (Howell & Elliott).

Why Does Disaster Aid Often Favor White People?

The federal government often gives less help to Black disaster survivors than their white neighbors. That's a challenge for President Biden, who has vowed to fight both inequality and climate change.



Roy Vaussine of Sulphur, La., whose home was damaged in Hurricane Laura last year, received \$17,000 from FEMA for repairs. Brandon Thibodeaux for The New York Times



Charlotte Biagas and her husband, Norman, of Lake Charles, La., suffered similar damage. FEMA paid them \$7,000. Brandon Thibodeaux for The New York Times

ECONOMIC JUSTICE

- A medium-sized natural disaster leads to a 5% increase in the share of people with debt collections after one year, which doubles to 10% after four years (Urban Institute).
- 90% of smaller companies fail within a year following a disaster, unless they can resume operations within 5 days (FEMA).

How Federal Disaster Money Favors The Rich

March 5, 2019 · 5:00 AM ET

Heard on *All Things Considered*

By Rebecca Hersher, Robert Benincasa

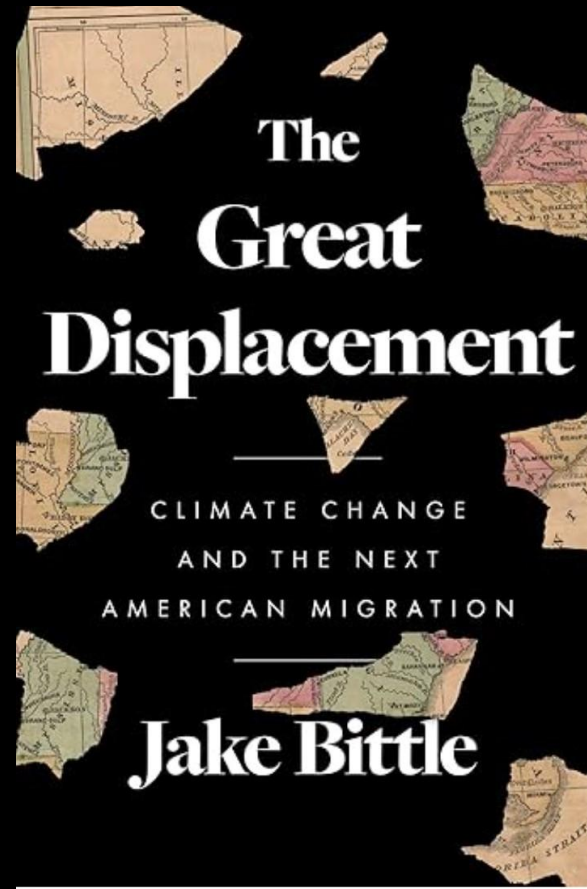


12-Minute Listen



HOUSING

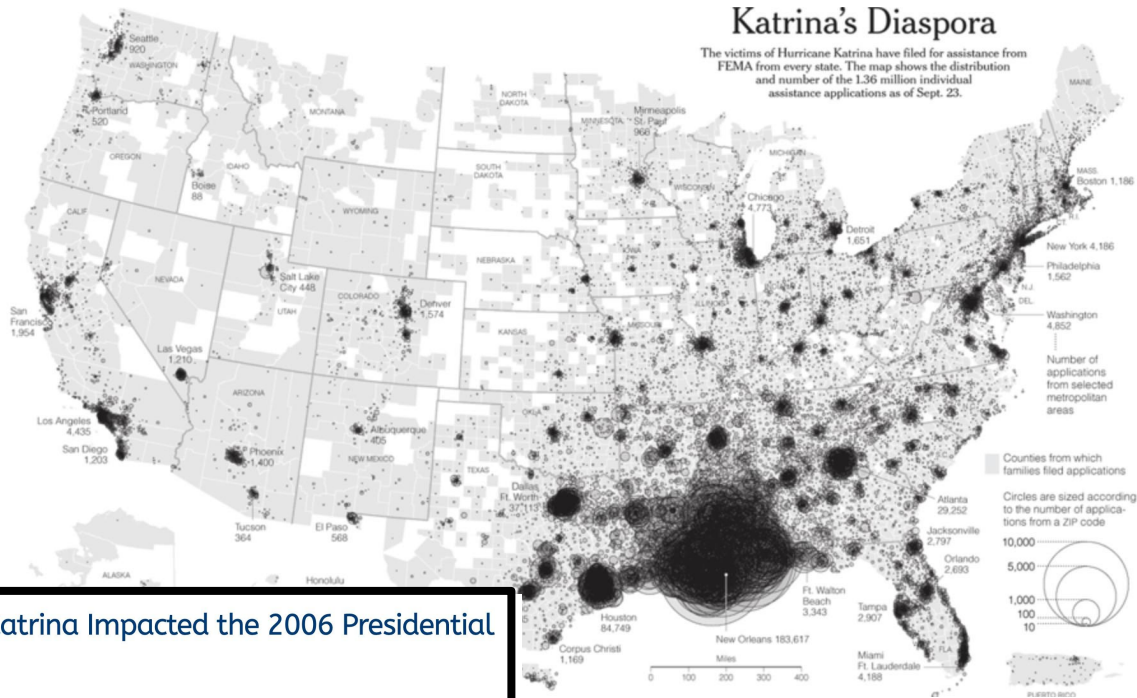
**OVER 4.5 MILLION AMERICAN
ADULTS REPORTED
DISPLACEMENT FROM AN
ENVIRONMENTAL DISASTER IN
THE 2024. (*U.S. Census*)**



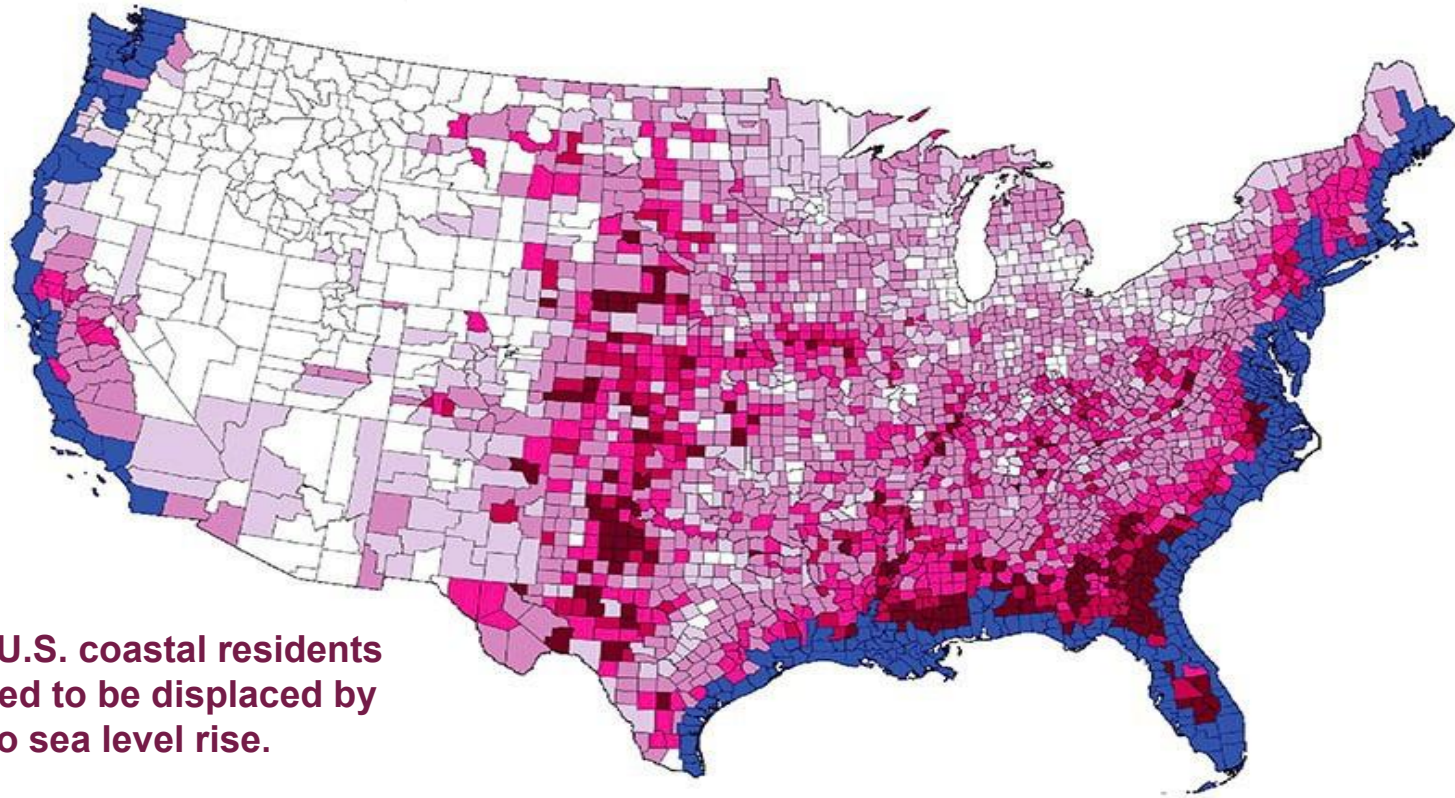
How 2005's Hurricane Katrina Impacted the 2006 Presidential Election

As the [CRS Report for Congress states](#), “More than 600,000 displaced Louisiana residents, nearly half of them from the city of New Orleans were scattered across the country. In Mississippi, an estimated 66,000 persons [were] unable to return to their Gulf Coast communities.”

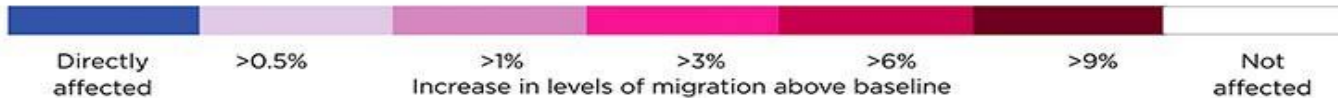
The victims of Hurricane Katrina have filed for assistance from FEMA from every state. The map shows the distribution and number of the 1.36 million individual assistance applications as of Sept. 23.



Projected Migration Patterns with Sea Level Rise



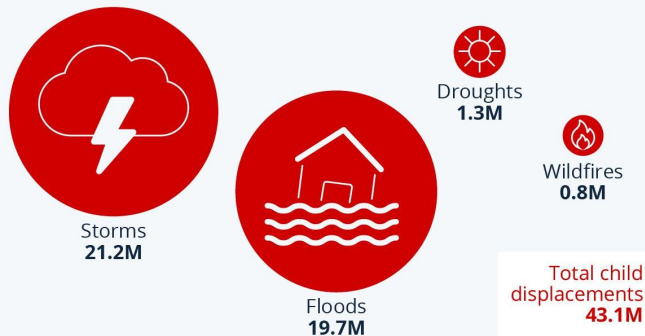
13 million U.S. coastal residents are expected to be displaced by 2100 due to sea level rise.



CHILDREN

Extreme Weather Displaced 43M Children in Six Years

Estimated number of children displaced due to weather-related disasters 2016-2021, by type



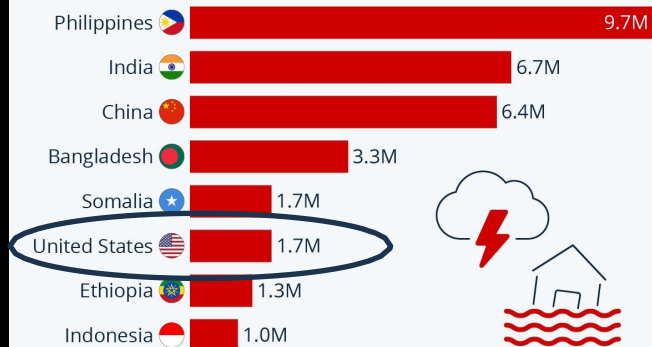
Figures do not exactly match the total shown due to rounding
Source: UNICEF



statista

Where Extreme Weather Has Displaced the Most Children

Estimated number of children displaced due to weather-related disasters 2016-2021, by country



Source: UNICEF

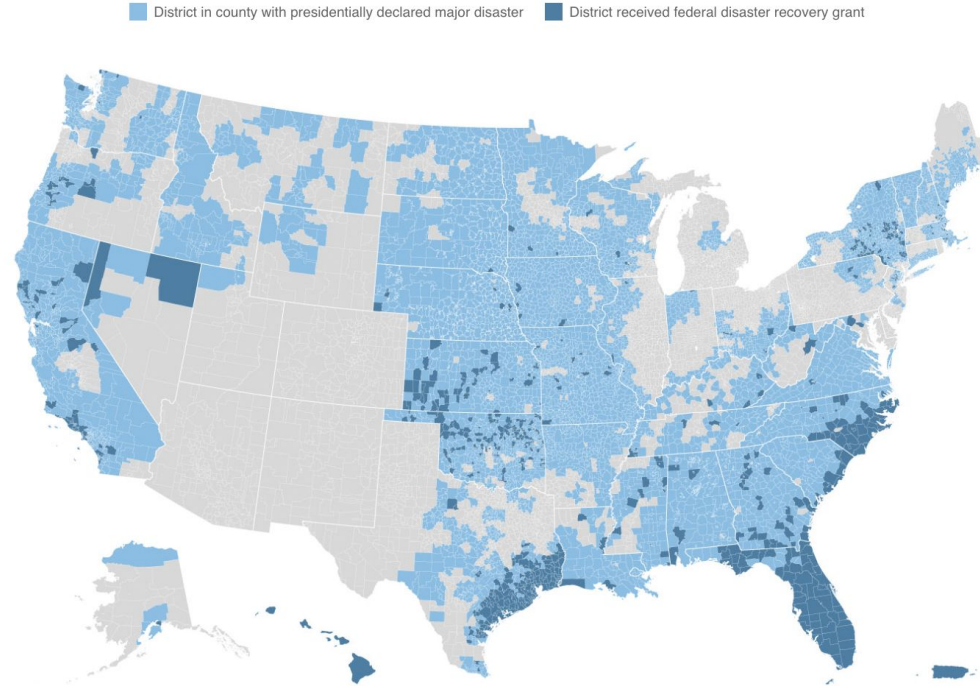


statista

EDUCATION

- Reduction in educational attainment, lower academic performance, and higher rates of absenteeism among children who have experienced climate shocks.
- In the long run, this may reduce lifetime earnings when these children reach adulthood.

School districts across the U.S. affected by major disasters in 2017-2019



Source: U.S. Government Accountability Office

Credit: Nick Underwood/NPR

GENDER

- During times of crisis, women and girls are more likely to shoulder additional burdens of household work.
- **80%** of people displaced by climate change globally are women (UN Environment).
- When disasters strike, women are less likely to survive and more likely to be injured due to long standing gender inequalities that have created disparities in information, mobility, decision-making, and access to resources and training (UN Women).

IN HER WORDS

The Climate Crisis Is Worse for Women. Here's Why.

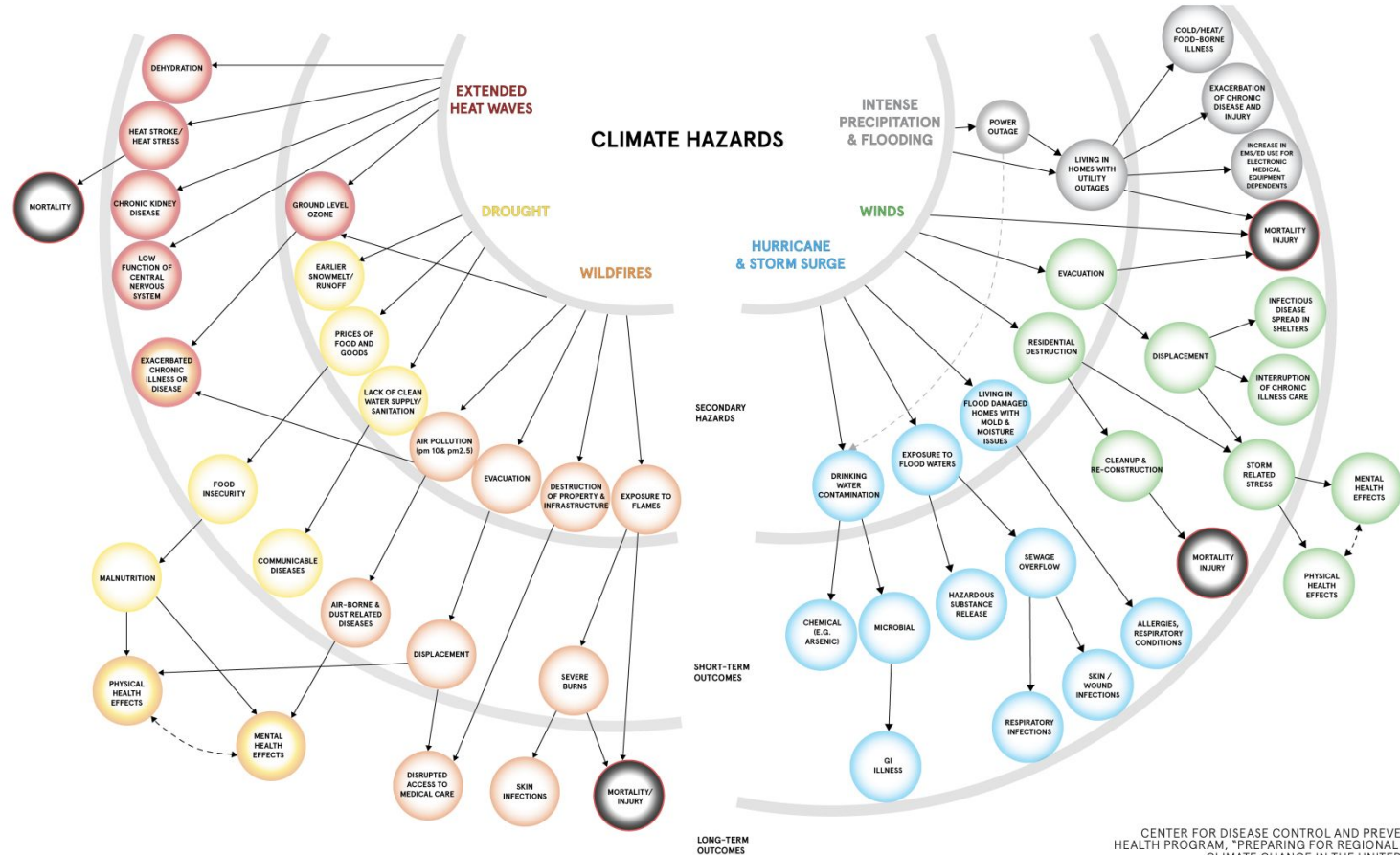
Although climate change is a collective problem, its burdens — displacement, homelessness, poverty, sexual violence, disease — weigh more heavily on women and girls.

 Give this article  



Paola Saliby

CASCADING IMPACTS OF CLIMATE EVENTS



RECOGNIZING THE ROLE OF FAITH COMMUNITIES



Religious communities can make the difference in winning the fight against climate change

Published: December 1, 2021 11:59am EST

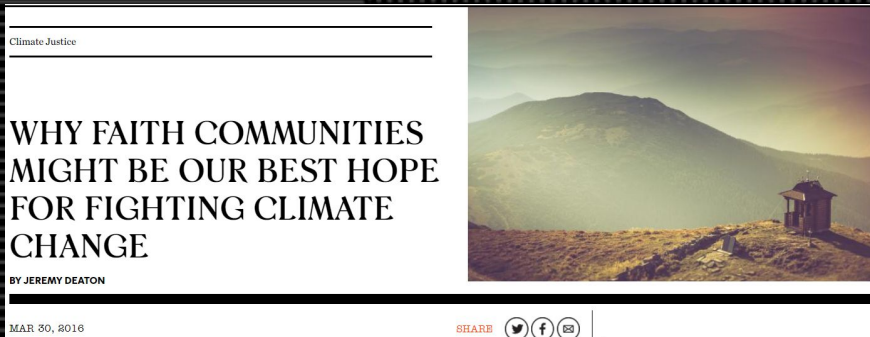
WORLD VIEW | 30 March 2021 | Correction [08 April 2021](#)

People of faith are allies to stall climate change



Together, religious groups and scientists can be a powerful force for a liveable planet.

[Tobias Müller](#)



Climate Justice

WHY FAITH COMMUNITIES MIGHT BE OUR BEST HOPE FOR FIGHTING CLIMATE CHANGE

BY JEREMY DEATON

MAR 30, 2016

SHARE



NEW YORK WILL BE **HOTTER**

NEW YORK WILL BE **COLDER**

NEW YORK WILL BE **WETTER**

AND WILL EXPERIENCE **MORE EXTREME**
CLIMATE EVENTS

AND

3-6 FEET OF SEA LEVEL RISE

NEW YORK WILL BE HOTTER

NYC HEAT VULNERABILITY INDEX

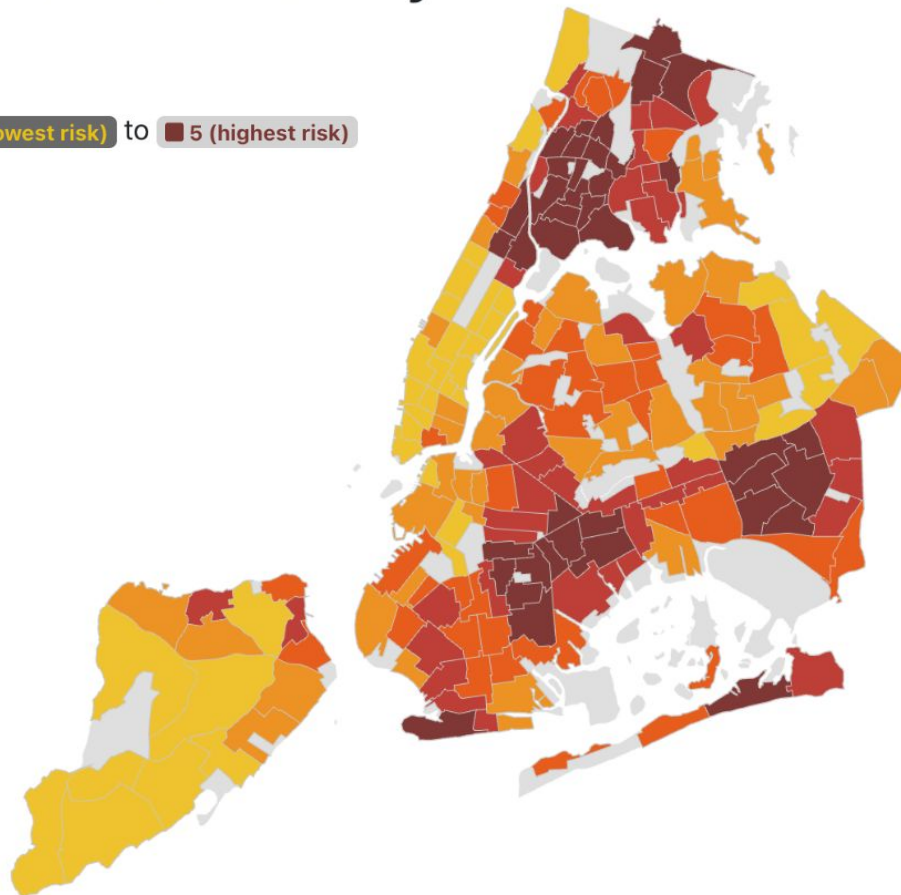
3.4 million people live in high heat vulnerability census tracts.

Each summer, an estimated **580 New Yorkers die prematurely** because of hot weather in New York City.

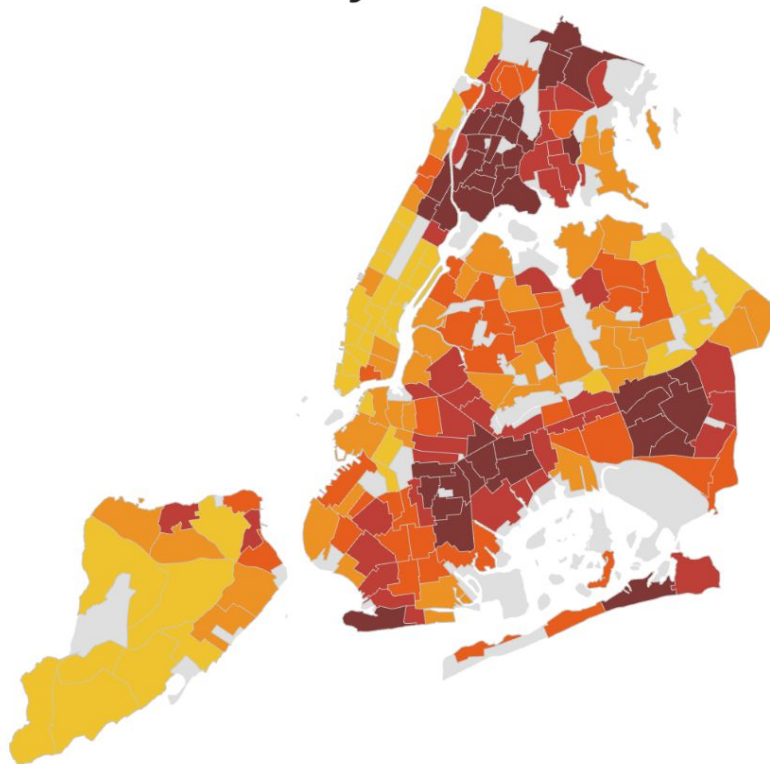
Source: NYC Mayor's Office

The Heat Vulnerability Index

1 (lowest risk) to 5 (highest risk)



The Heat Vulnerability Index



Enter a neighborhood to get data:

[About Neighborhood Tabulation Areas.](#)



ZIPs ---

Heat vulnerability: ---

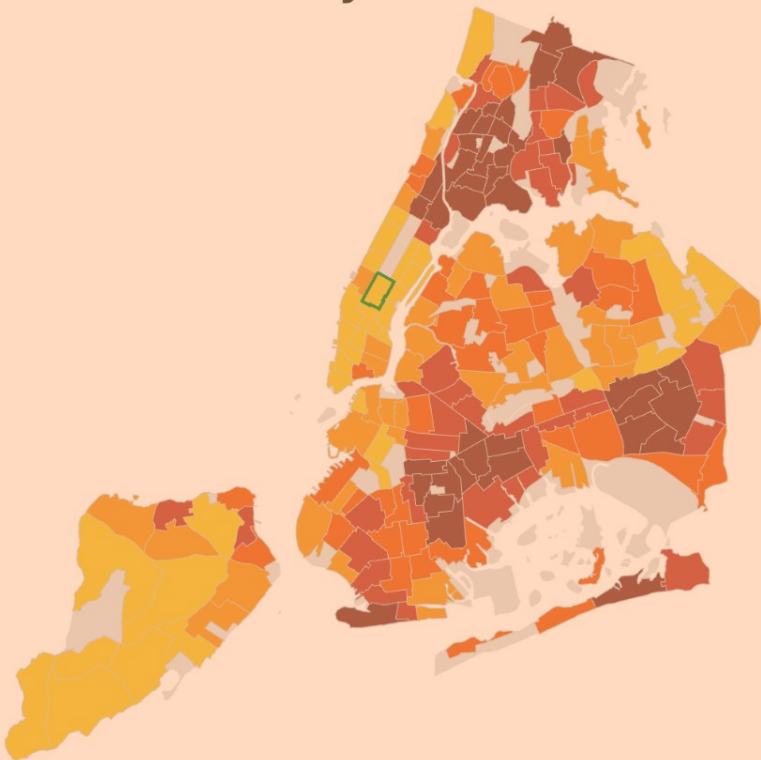
The Heat Vulnerability Index (HVI) shows neighborhoods whose residents are more at risk for dying during and immediately following extreme heat.

It uses a statistical model to summarize the most important factors of neighborhood heat risk: surface temperature, green space, home air conditioning, and income.

Neighborhoods are scored from 1 (lowest risk) to 5 (highest risk).

Remember, a neighborhood with low vulnerability does not mean no risk. All neighborhoods have residents at risk for heat illness and death.

The Heat Vulnerability Index



Enter a neighborhood to get data:

Midtown-Times Square

Clear

About Neighborhood Tabulation Areas.

☐ **Midtown-Times Square**

ZIPs 10001, 10016, 10017, 10018, 10019, 10020, 10022, 10036, 10055, 10060, 10072, 10087, 10090, 10095, 10099, 10101, 10102, 10103, 10104, 10105, 10106, 10107, 10108, 10109, 10110, 10111, 10112, 10117, 10118, 10119, 10120, 10121, 10122, 10123, 10124, 10125, 10126, 10129, 10130, 10138, 10149, 10150, 10151, 10152, 10153, 10154, 10155, 10156, 10157, 10158, 10161, 10163, 10164, 10165, 10166, 10167, 10168, 10169, 10172, 10173, 10174, 10175, 10176, 10177, 10178, 10179, 10185, 10197, 10259, 10261

Heat vulnerability: **1 out of 5**

The Heat Vulnerability Index (HVI) shows neighborhoods whose residents are more at risk for dying during and immediately following extreme heat.

It uses a statistical model to summarize the most important factors of neighborhood heat risk: surface temperature, green space, home air conditioning, and income.

What factors affect heat vulnerability in **your neighborhood?**

Temperature

Daytime summer surface temperature is different from air temperature, and varies more by neighborhood: some neighborhoods are hotter than others. A higher surface temperature is associated with a higher risk of death from heat waves. **Median neighborhood: 87.0° F**

The daytime summer surface temperature in your neighborhood is **82.4° F**.
This is **Lower than most NYC neighborhoods**.

Air conditioning

Air conditioning is as necessary during extreme heat as heating is in winter. A neighborhood with a high percentage of **households with air conditioners** means that more of its residents can be protected from extreme heat. **Citywide: 91.0%**

97.3% of households in your neighborhood have AC.
This is **more than most NYC neighborhoods**.

Green space

Green space is **tree, grass, or shrub cover**. Green space helps cool a neighborhood, address the **UHI**, and create a resilient city. It also has a small association with heat mortality, weaker than other components in the index. **Median neighborhood: 25.0%**

3.9% of your neighborhood is green space.
This is **less than most NYC neighborhoods**.

Median income

Low income is a social factor that places people at risk of death during heat waves for many reasons. One reason is that people with limited financial resources may be less likely to afford owning or using an air conditioner during heat waves. **Citywide: \$67,046**

The median income in your neighborhood is **\$153,141**.
This is **higher than most NYC neighborhoods**.

NEW YORK WILL BE COLDER



39


Deaths from
Winter Storm Elliott in Buf-
falo in December 2022.

ERIE COUNTY

A JANUARY NOR'EASTER BRINGS HEAVY SNOWFALL
TO DOWNTOWN BUFFALO, LEAVING RESIDENTS
TO SHOVEL OUT SEVERAL FEET OF SNOW

JANUARY 2022

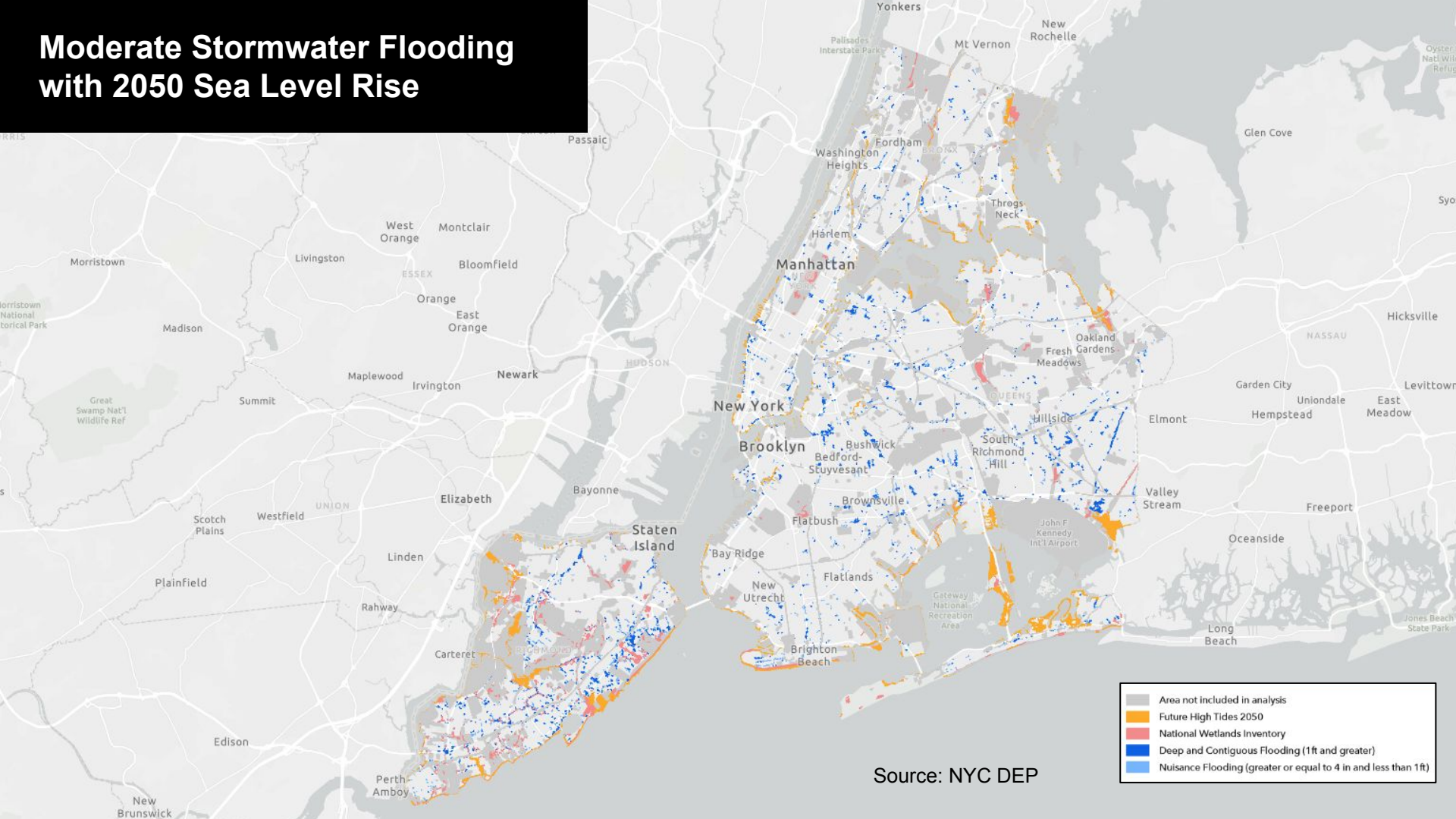
NEW YORK WILL BE WETTER



"It is evident to anyone who opens their eyes that we are in the midst of a climate crisis in this city and around the world, so it's time to think outside the box and determine how we can handle the crisis before it's too late."

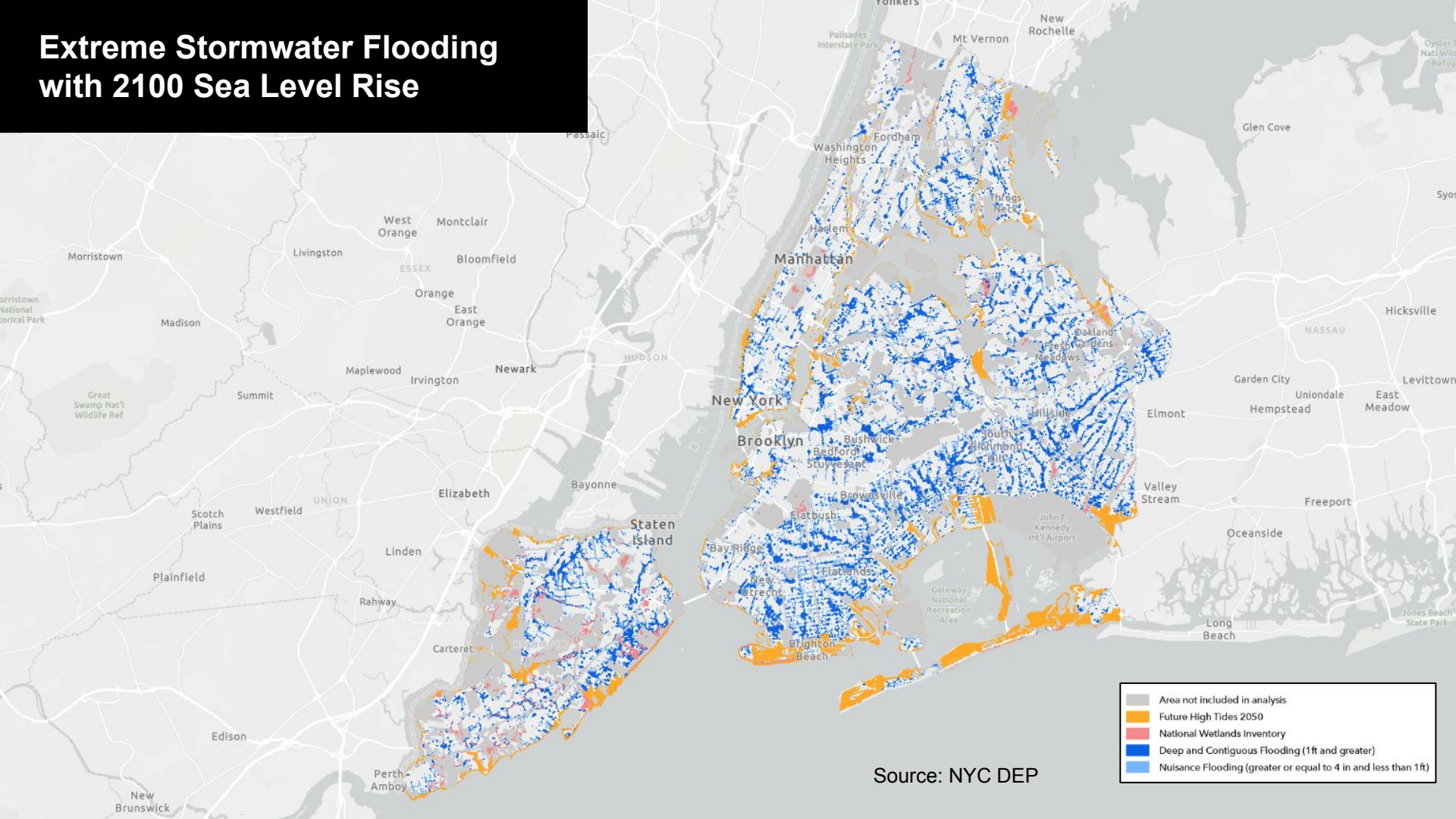
- Mayor Adams

Moderate Stormwater Flooding with 2050 Sea Level Rise



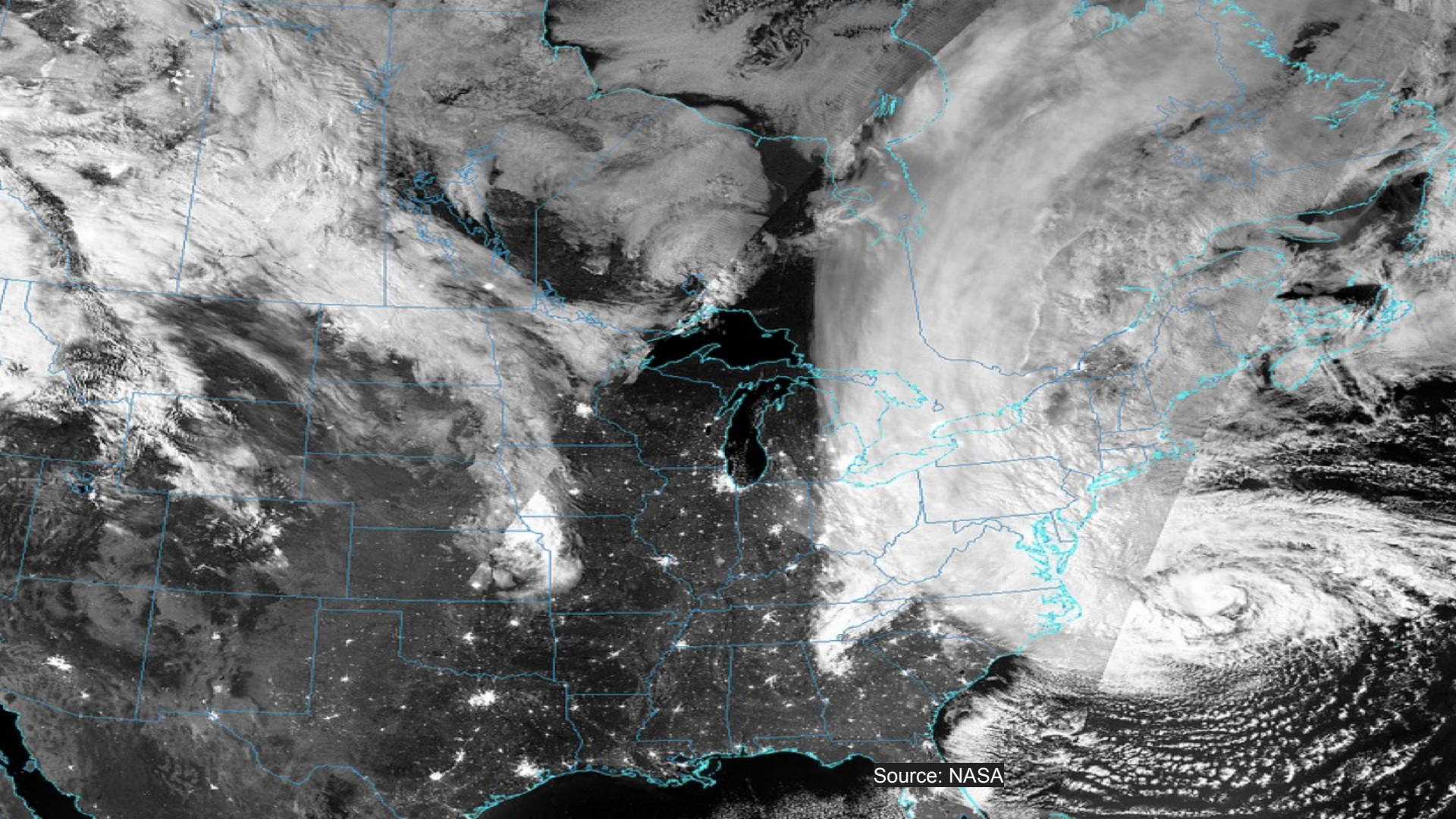
Source: NYC DEP

Extreme Stormwater Flooding with 2100 Sea Level Rise



Source: NYC DEP

**NEW YORK WILL HAVE MORE
EXTREME CLIMATE EVENTS**



Source: NASA



COASTAL FLOODING

Today, **1.3 million**
or 14% of residents
of NYC live within
or adjacent to the
floodplain.



COASTAL FLOODING

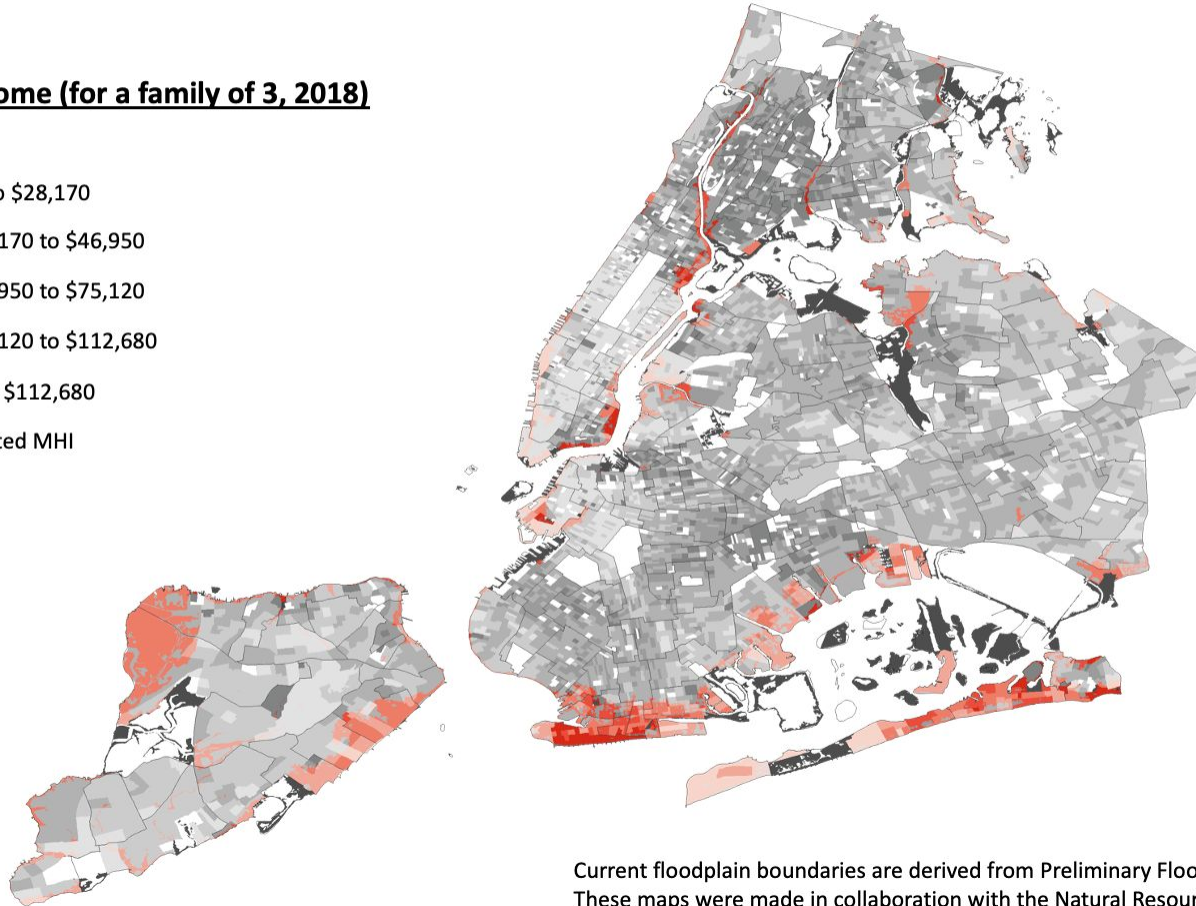
Left unabated,
this could rise to
2.2 million residents.



MEDIAN HOUSEHOLD INCOME OF RESIDENTS LIVING IN THE NYC FLOODPLAIN: 2015

Median Household Income (for a family of 3, 2018)

In the 100-year floodplain



Source: Rebuild by Design

Current floodplain boundaries are derived from Preliminary Flood Insurance Rate Maps (PFIRM). These maps were made in collaboration with the Natural Resources Defense Council (NRDC).

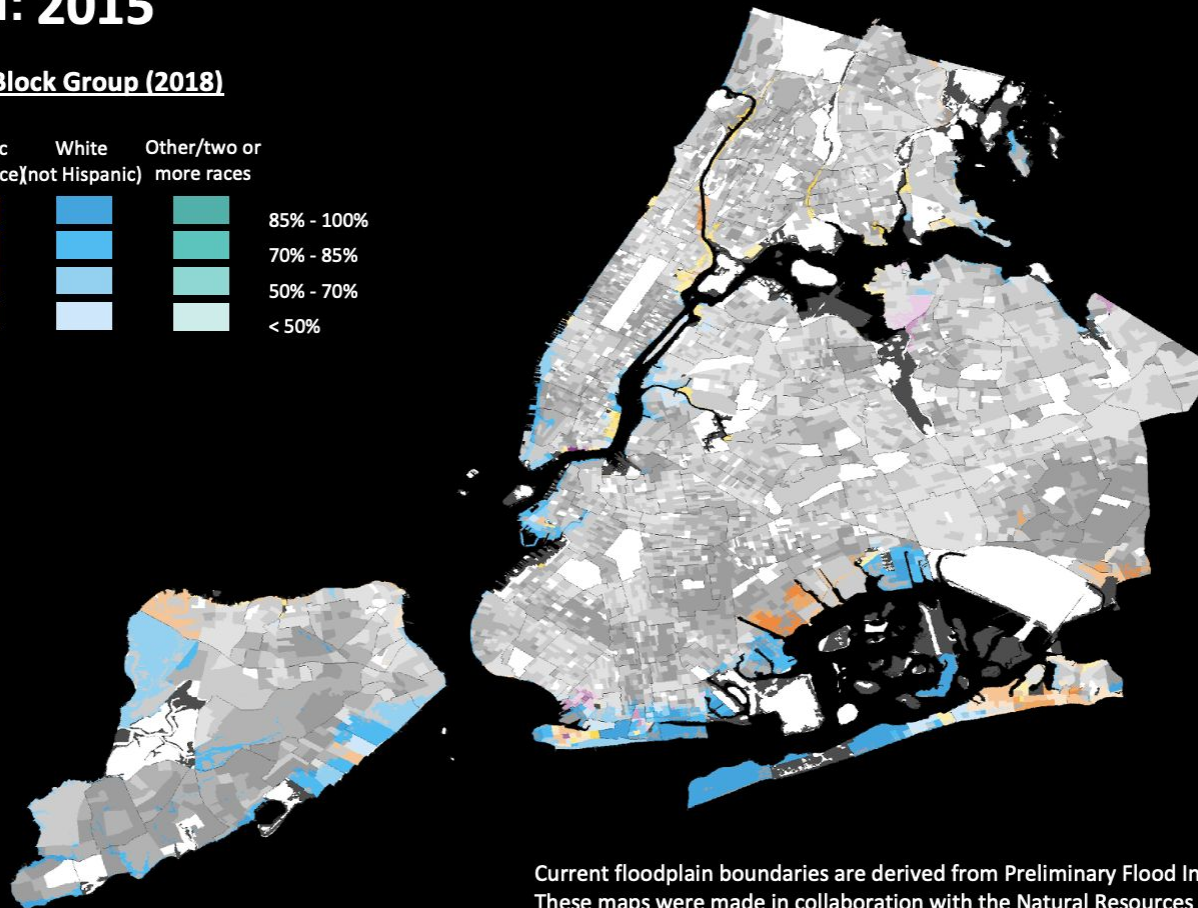
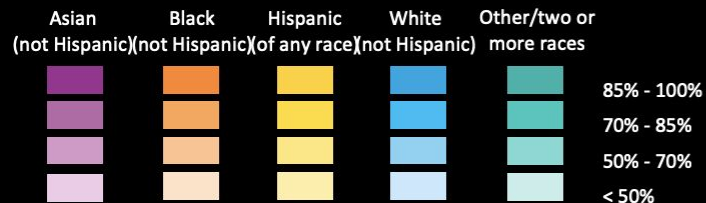
A map of New York State is shown in the background, with various regions shaded in different colors. A legend on the left side of the map consists of two columns of colored squares. The first column has five squares in shades of red and brown, and the second column has five squares in shades of gray and black. Overlaid on the map is the text "Over half live in areas considered low income by HUD." The words "low income" are highlighted in a red box.

Over half live in areas considered
low income by HUD.

RACIAL & ETHNIC BREAKDOWN OF RESIDENTS LIVING IN THE NYC FLOODPLAIN: 2015

Racial/Ethnic Plurality by Block Group (2018)

In the 100-year Floodplain



REBUILD
BY
DESIGN

Current floodplain boundaries are derived from Preliminary Flood Insurance Rate Maps (PFIRM) 2015. These maps were made in collaboration with the Natural Resources Defense Council (NRDC).

RACIAL & ETHNIC BREAKDOWN OF RESIDENTS LIVING IN THE NYC FLOODPLAIN: 2015

Racial/Ethnic Plurality by Block Group (2018)

In the 100-year Floodplain

Asian Black Hispanic White Other/two or
(not Hispanic)(not Hispanic)(of any race)(not Hispanic) more races



Approximately 56% of residents identify as non-white.

REBUILD
BY
DESIGN

Current floodplain boundaries are derived from Preliminary Flood Insurance Rate Maps (PFIRM) 2015. These maps were made in collaboration with the Natural Resources Defense Council (NRDC).

NYC Hurricane Evacuation Zone Finder



Evacuation Centers

Legend

If you are required to evacuate, it is recommended that you shelter at the home of friends or family outside of the evacuation area. If you wish to go to a public facility, select any evacuation center from the following list and click for travel directions.

All Centers

 Only Accessible Centers

IS 2

655 Parkside Avenue
Between Nostrand Avenue and Rogers Avenue
Brooklyn, NY 11226



Map



Directions



Details

PS 7

858 Jamaica Avenue
Between Hemlock Street and Crescent Street
Brooklyn, NY 11208



Map



Directions



Details

PS 12

430 Howard Avenue
Between St Marks Avenue and Prospect Place
Brooklyn, NY 11233



Map



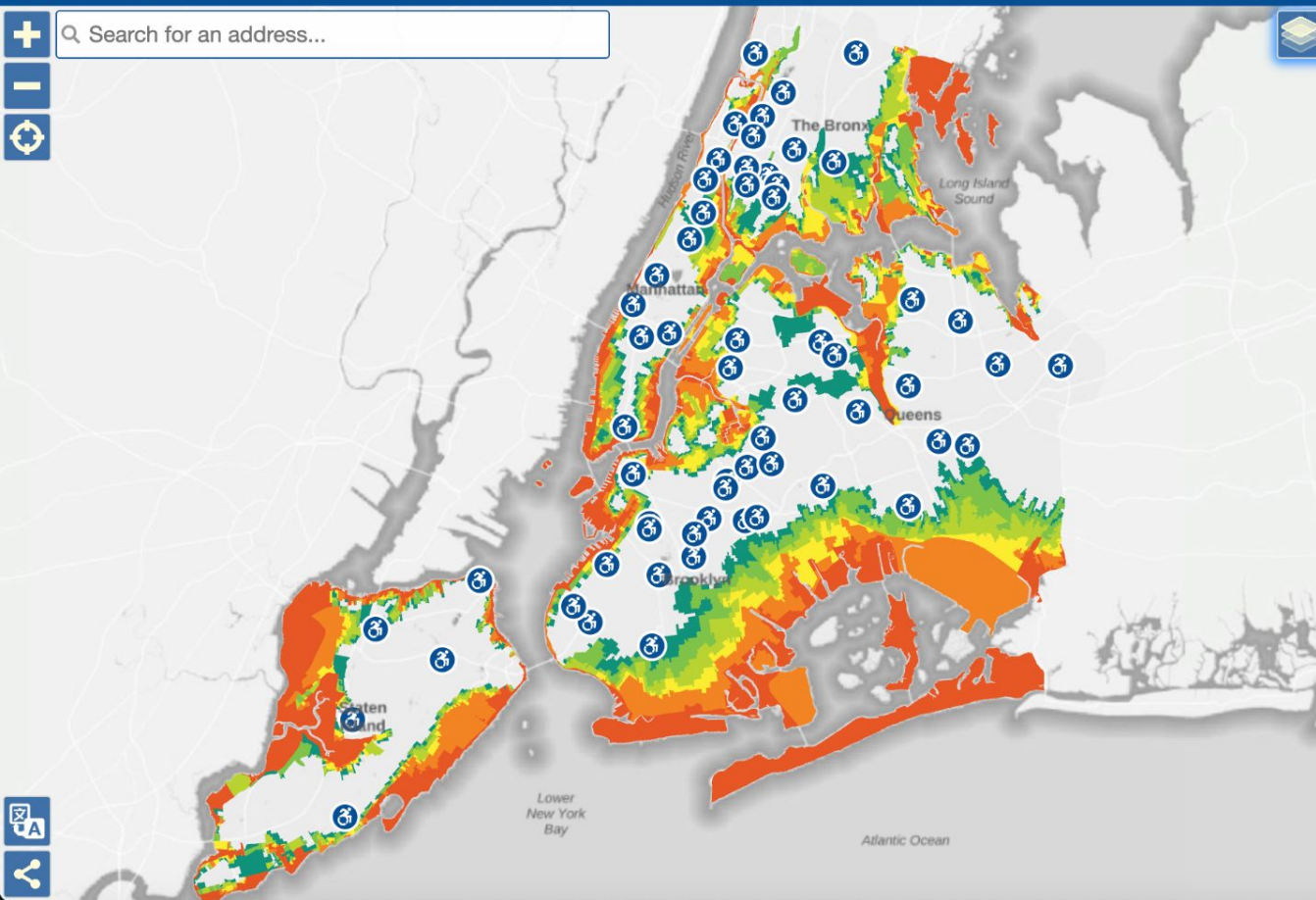
Directions



Details

PS 24

427 38 Street
Between 4 Avenue and 5 Avenue





Full Data Explorer

Access to Resources

Polluted Air

Hazardous Materials

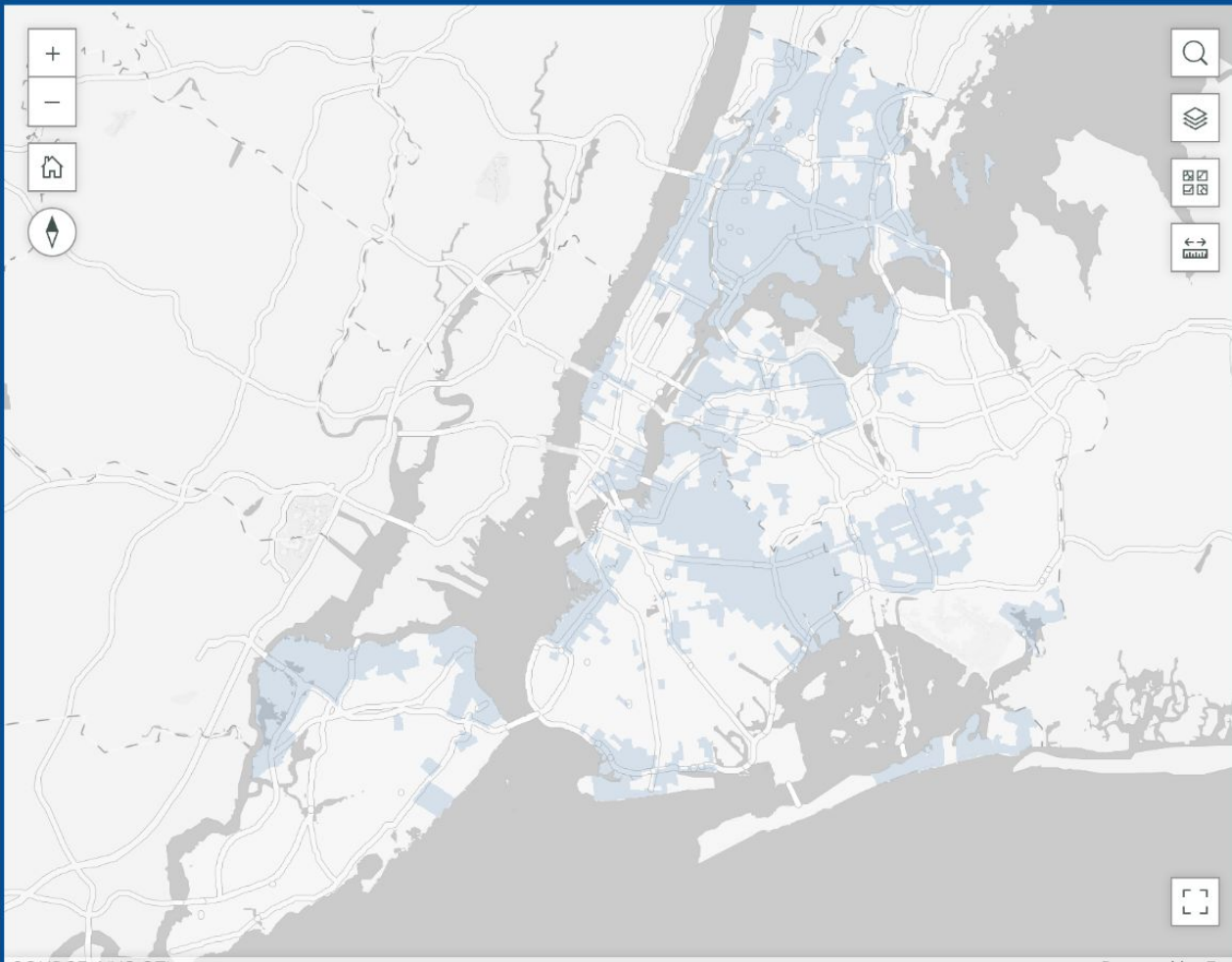
Safe & Healthy Housing

Polluted Water

Climate Change



How To Guide



Environmental Justice Areas

Environmental Justice Areas



Designated as DAC



Not Designated as DAC

- > ☒ Air Quality
- > ☒ Climate Change
- > ☒ Food & Nutrition
- > ☒ Hazardous Materials
- > ☒ Housing Quality
- > ☒ Parks & Open Space
- > ☒ Solid Waste
- > ☒ Transit
- > ☒ Water Quality
- > ☒ Contextual Overlays

 Full Data Explorer

Access to Resources

Polluted Air

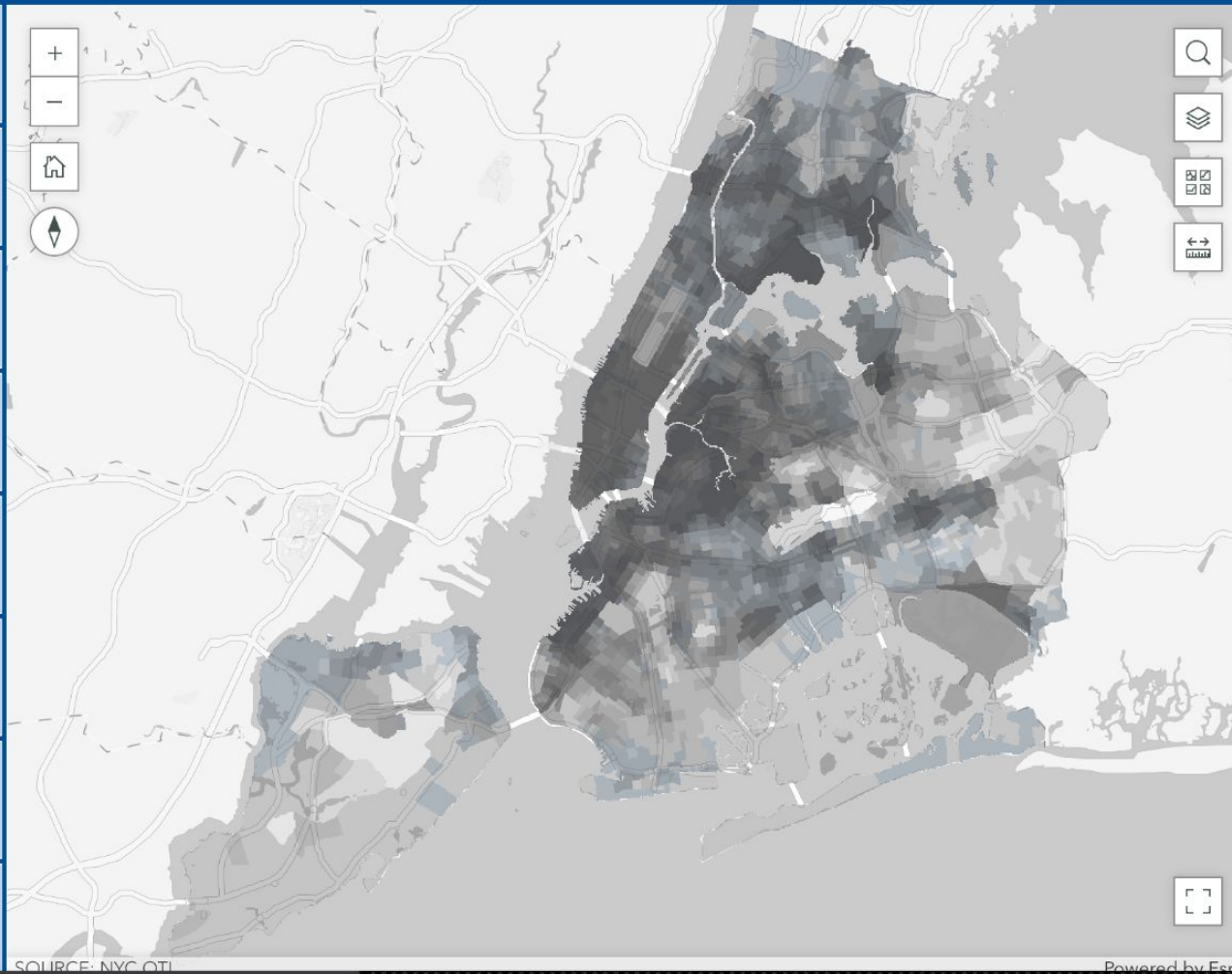
Hazardous Materials

Safe & Healthy Housing

Polluted Water

Climate Change





 How To Guide



Air Quality

Black Carbon

Black Carbon Levels

-  76th - 100th Percentile
-  51st - 75th Percentile
-  26th - 50th Percentile
-  Bottom 25th Percentile

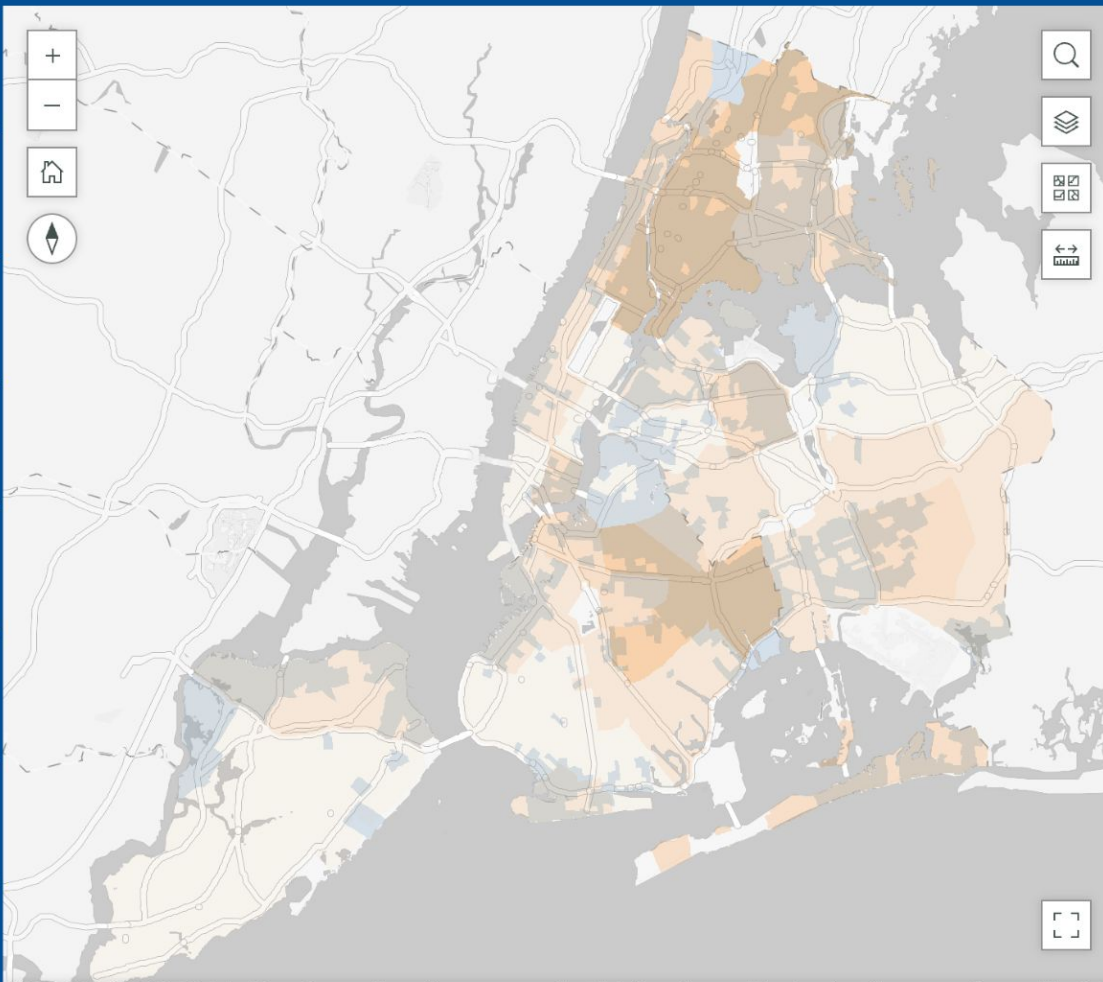
- ☒ Air Quality
 - ☒ Black Carbon
 - ☒ Ozone
 - ☒ Nitric Oxide
 - ☒ Nitrogen Dioxide
 - ☒ PM 2.5

☐ Airports

☐ Bus Depots

☐ DSNY Garages

☐ Last Mile Warehouse



☐ Premature Mortality

MULTI-HAZARD RISK TO HOUSING: ZILLOW & REDFIN

