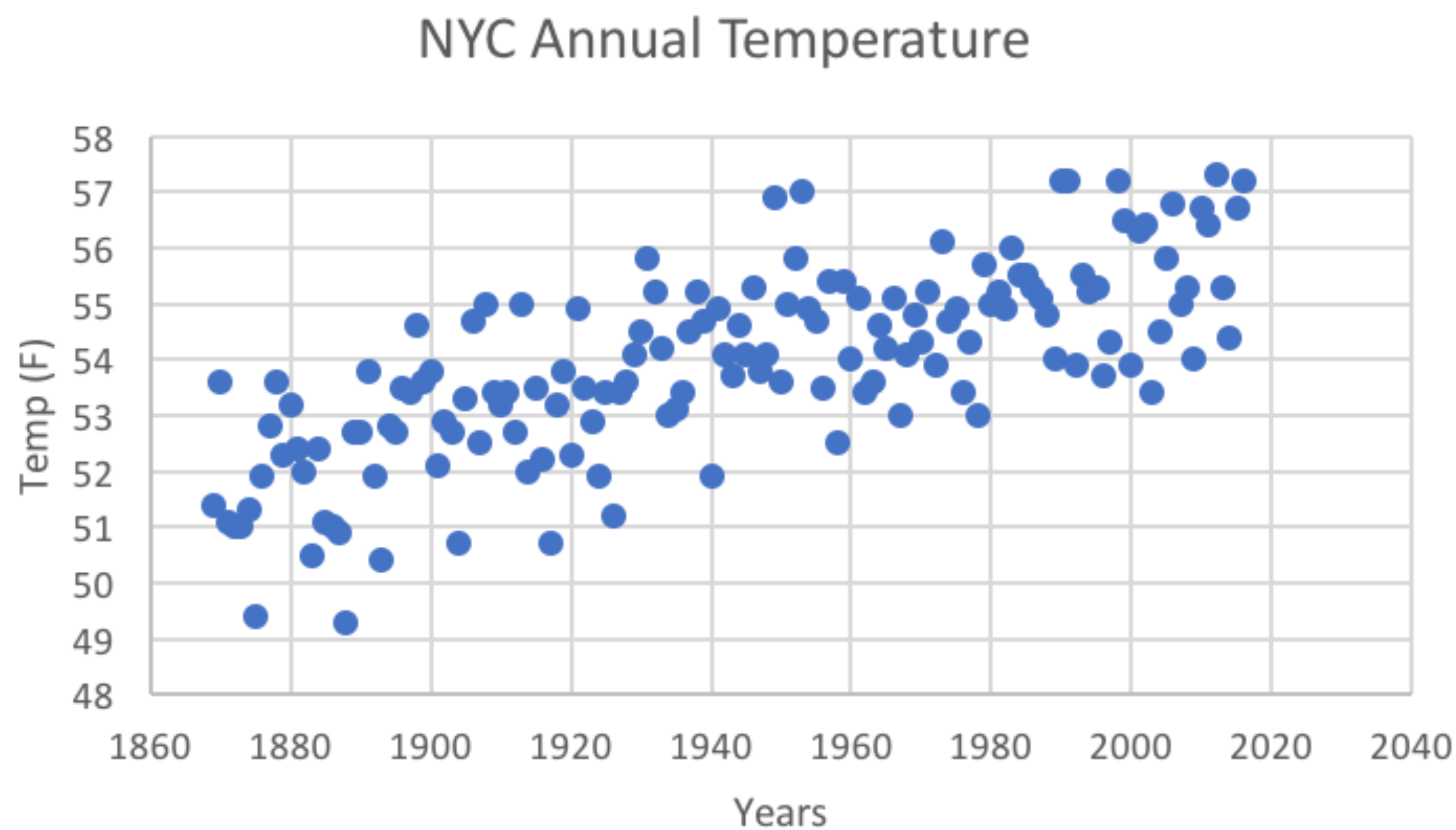


**How does climate change  
affect low-income  
neighborhoods in NYC?**

# annual temperature in NYC is rising

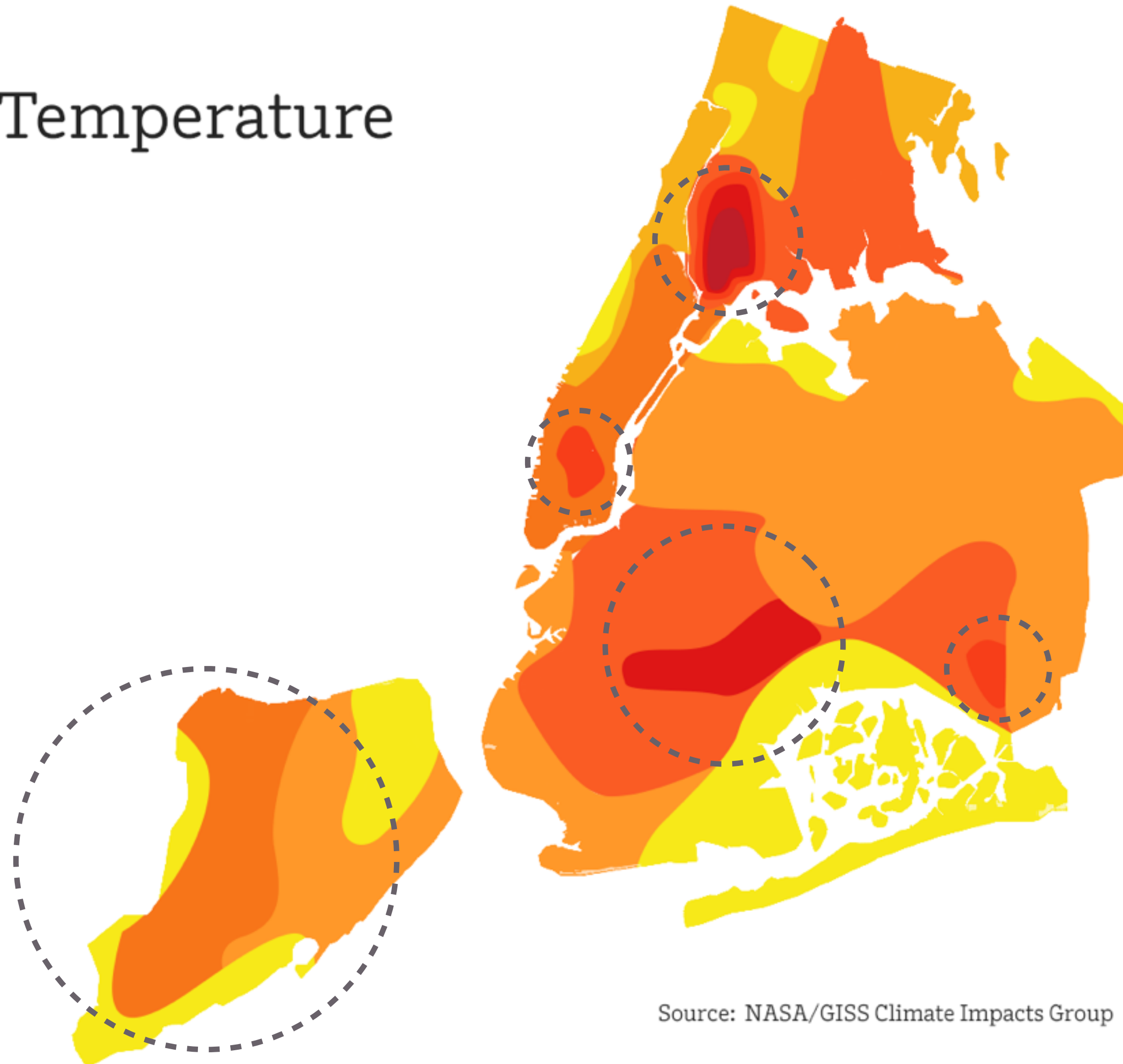
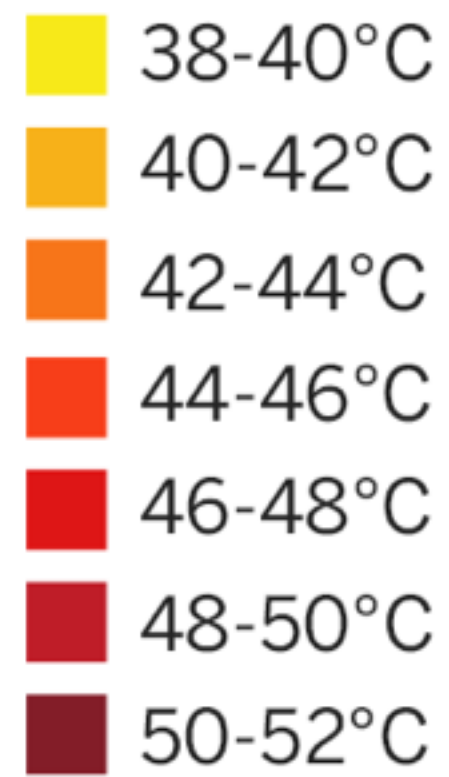


Source: weather.gov

**How are different  
neighborhoods in NYC  
affected by rising  
temperatures?**

# Urban Heat Island effect

## Surface Temperature



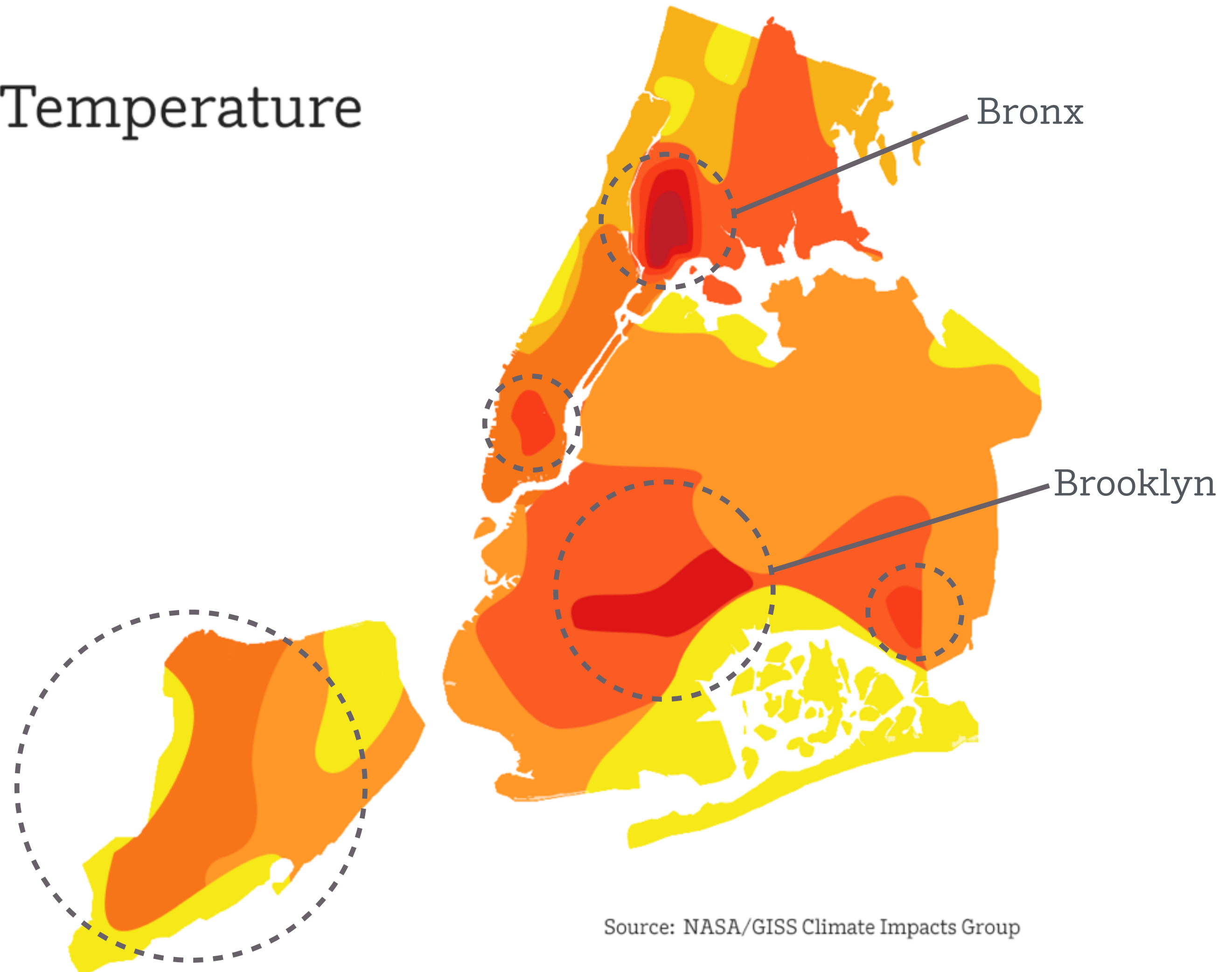
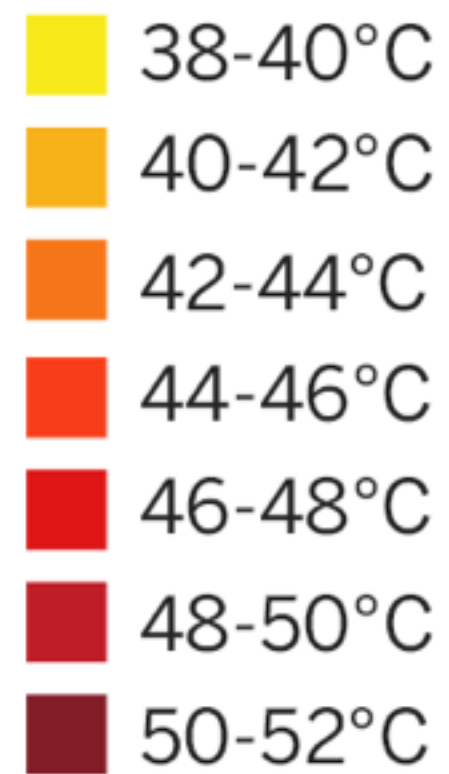
Source: NASA/GISS Climate Impacts Group

**What is  
Urban Heat Island effect?**

- **Found in environments with concrete buildings, roads, pavements, & sidewalks**
- **Environment absorbs heat from the sun & re-emits that energy as heat**
- **Not enough vegetation/trees to alleviate heat**
- **Resulting in higher temperature averages, especially in summer months**

# the hottest neighborhoods?

## Surface Temperature

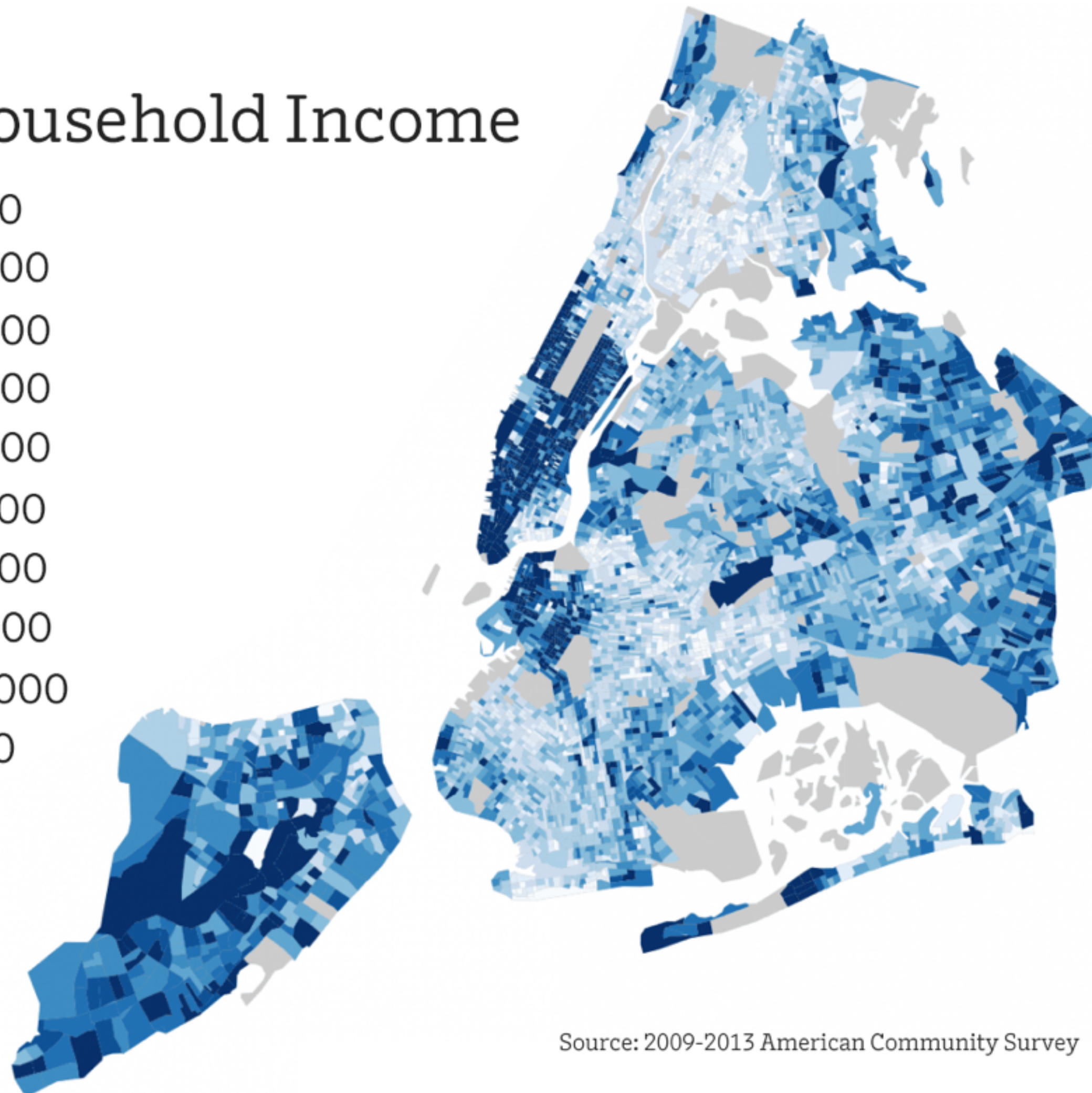
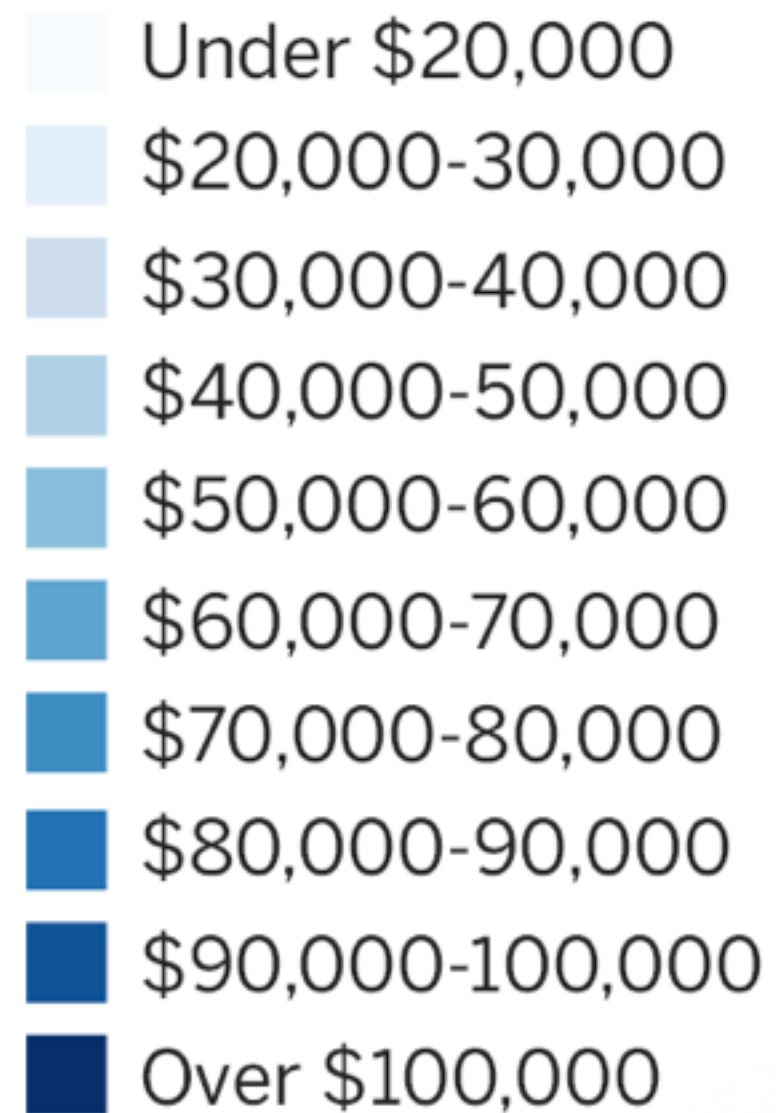


Source: NASA/GISS Climate Impacts Group



# how it correlates to income level?

## Median Household Income



Source: 2009-2013 American Community Survey



**How does  
Urban Heat Island effect  
impact low-income  
neighborhoods?**

# **Excessive exposure to high heat can cause:**

- **increased rates of heat stress**
- **heat stroke**
- **heat-associated mortality  
(due to cardiovascular or respiratory causes  
during hot weather)**

# **Low-income people are especially vulnerable because:**

- **Lack of public access to air conditioners**
- **More urban development**
- **Poor housing quality**

**What can we do?**

**Adding more green spaces to  
low-income neighborhoods**



# A study in Chicago shows:

- the city's trees filtered 234 tons of particulate pollution
- cleansed the air of 98 tons of nitrogen dioxide
- 93 tons of sulfur dioxide
- 17 tons of carbon monoxide
- Vegetated areas provide relief from the heat island effect caused by heat-trapping quality of asphalt, concrete, & building materials

# **Need for more data!**

**Not enough sufficient data to measure  
economic & ecological benefits green  
spaces specific to NYC**

**How would addressing the effects of Urban Heat Island effect improve the quality of life of low-income neighborhoods?**



# urban farming







**EDIBLE  
SCHOOLYARD  
NYC**



**a youth garden education program teaching school-aged kids the importance of nutrition, gardening, cooking, and healthy eating.**





**a comprehensive program that teaches people about urban farming, nutrition, and managing a farmers market**

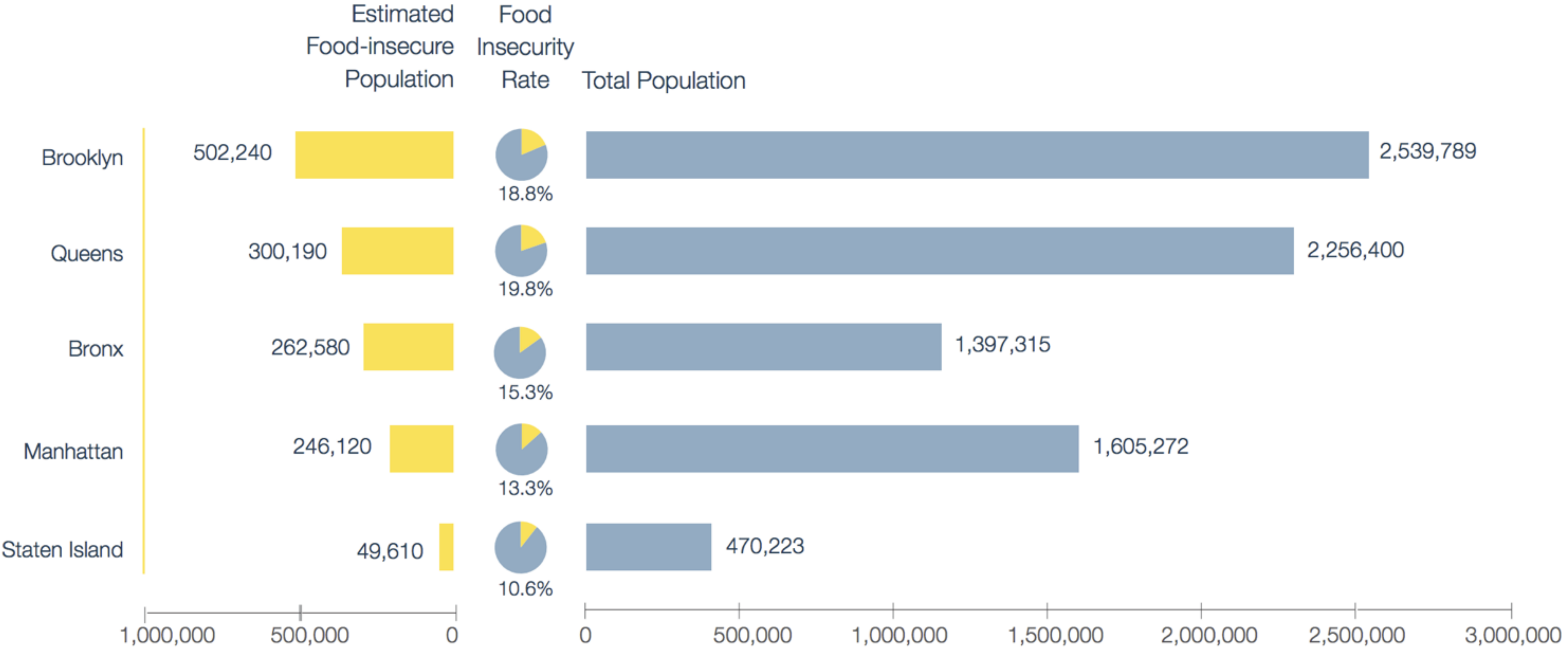


**Why urban farming?**

# Food Insecurity

**A lack of access to adequate nutritional foods for all members of a household. Families that fit in this category worry about food running out before buying more, eating less than what's recommended, and not being able to buy balanced meals**

# Food insecurity in NYC



# Urban agriculture impacts:

- **Increase food security**
- **Comprehensive nutritional education through farming**
- **Job creation and economic empowerment**
- **Decrease in health risks**
- **Minimizing need for transportation from other farms outside of the regions**



**What else can we do?**

- **Provide more data that shows the positive benefits for urban farming**
- **Work with established organizations, expanding their programs to other urbanized areas in NYC and beyond**
- **Create an online platform that helps connect these organizations. To share their proven methods of success & can encourage people to mobilize in their own communities**