



# BEAT THE HEAT

JACKSONVILLE, FLORIDA



## Demographics

### Top Five Racial and Ethnic Groups\*

- 50.4% White (Non-Hispanic)
- 30.3% Black (Non-Hispanic)
- 7.68% White (Hispanic)
- 4.72% Asian (Non-Hispanic)
- 3.26% Two+ Races (Non-Hispanic)
- \$54,269 Median Household Income



\*Source: 2018 Data USA, at: <https://datausa.io/profile/geo/jacksonville-fl>

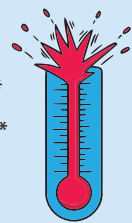
## Urban Forest

- 55.5% Current tree canopy
- 63.3% Potential tree canopy
- 7.8% Potential canopy increase
- 18.6% Impervious surfaces
- 23,827 Acres of Potential Planting Area (PPA)



## Urban Heat

- 98°F Average surface temperature\*
- Projected future days above 100°F\*\*
  - 16 days Historically (1971 – 2000)
  - 83 days Mid-century (2036 – 2065)
  - 121 days Late century (2070 – 2099)



\*across study area on June 9, 2016  
\*\* Data source: Union of Concerned Scientists, Killer Heat in the United States, at: <https://www.ucsusa.org/resources/killer-heat-united-states-0>

## Overview

Jacksonville is the largest city in Duvall County and technically they operate as a single entity following a court-ordered merger many years ago. This means that the area has characteristics of a dense city while some areas are actually rural. This study of urban heat is focused on the urban area within Jacksonville City. The city currently has a program to plant trees by request in city-owned rights-of-way and partnerships with JEA (the power company) and the Garden Club (to name a few groups) in tree giveaways and plantings (for more see: <https://www.coj.net/departments/public-works/urban-forestry/partners>). However, getting trees planted on private property can be challenging because of restrictions on how public monies can be spent and also for rental properties, where landlords may not be local or open to planting more trees.



Multi-family housing is often underplanted with trees and residents are frequently left out of tree giveaway programs, which tend to focus more on single-family and owner-occupied housing. Although the city is currently doing tree giveaways and street tree plantings, specific outreach is needed to these housing authority sites.



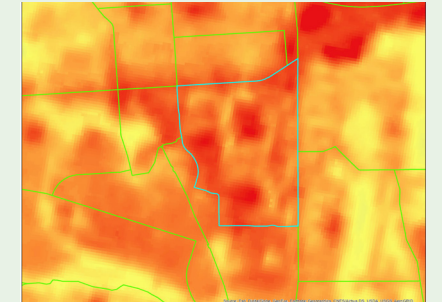
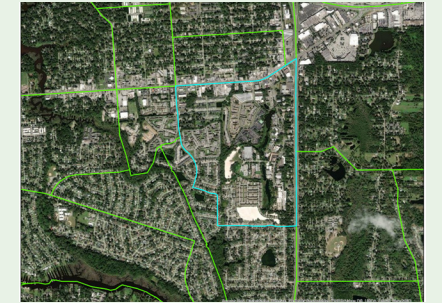
The Holiday Hill neighborhood contains approximately 55% impervious surface area and averages 108°F. The current canopy is 25%, with an additional 8% possible if all planting areas were filled with trees. The neighborhood is 27% below the median household income (at \$39,800) for Jacksonville-Duval County and is 54% people of color (POC). Several large multi-family housing complexes, such as the Dessert Winds Apartments and Shore House Apartments, have large planting areas where shade trees could be added (see step-wise strategy for identifying communities). However, engaging with multi-family housing residents around tree planting can look much different than a typical tree planting campaign where, most often, single-family and owner-occupied housing residents are engaged as planters or are the recipients of trees.

One equity-related challenge for tree planting at multi-family housing sites is how to reach and engage property management and the landowner. In some cases, the latter is not physically located in the area or is a national or multi-national business, which makes outreach and contact more difficult. But it is a difficulty that could be overcome by citing facts that trees reduce crime rates (Troy, et al. 2012). However, in doing these projects, a coordinator may want to consider how adding trees could affect tenants' current or future rent. Studies show trees increase single-family residential home values and properties sell faster and for more money in neighborhoods with more trees (Wolf 2007). A landlord might decide to increase rent once the property is better landscaped and more desirable, so any funding that goes to support new tree plantings should guarantee rent will not increase until after an agreed period of time.

Property management will also need to be on board to maintain and care for the trees. This has been done in some other places in the U.S. such as the Trees for Keys Initiative, launched by HITT Contracting's Multifamily team in 2017. HITT operates multi-family apartment complexes across the Southern U.S. and it has pledged to plant a tree for every individual unit they complete in a multifamily building. When they began the project, they had 2,050 apartments under construction and they pledged to plant trees for all future units turned over, as well as for past units constructed. This amounted to about 1,219 trees in all, thanks to a partnership with the National Forest Foundation and Casey Trees. Many hundreds of trees have been planted since the initiative began, with more trees on the way!

## Step-Wise Strategy to Identify Communities and Mitigation Opportunities

1. Use maps to identify hot spot(s) in the city with low canopy.
2. Identify vulnerable or underserved populations of interest.
3. Prioritize areas that meet the first two criteria.
4. Outreach and engage with the community.
5. Identify hottest planting areas within the multi-family complex.
6. Identify all planting spots.
7. Strategically identify planting spots that will cool buildings.



GIC has developed a tool to show the most advantageous places to plant trees to cool buildings. Contact GIC at [www.gicinc.org](http://www.gicinc.org) to learn more.