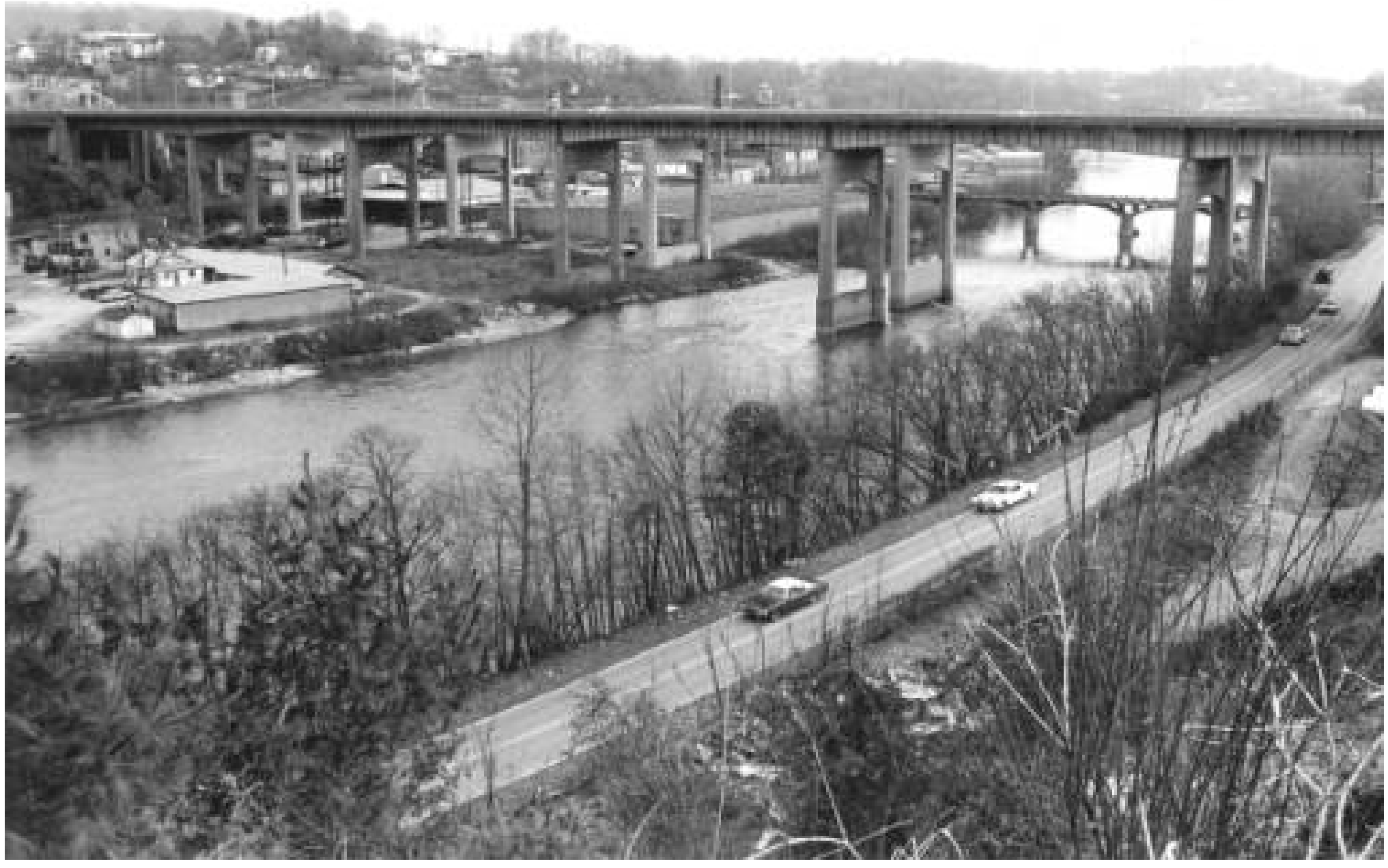
Climate Change & Asheville's Urban Forest

Building resilience in vulnerable communities

Dawn Chávez, Executive Director
Asheville GreenWorks

Climate Prediction Applications Science Workshop
May 10, 2023



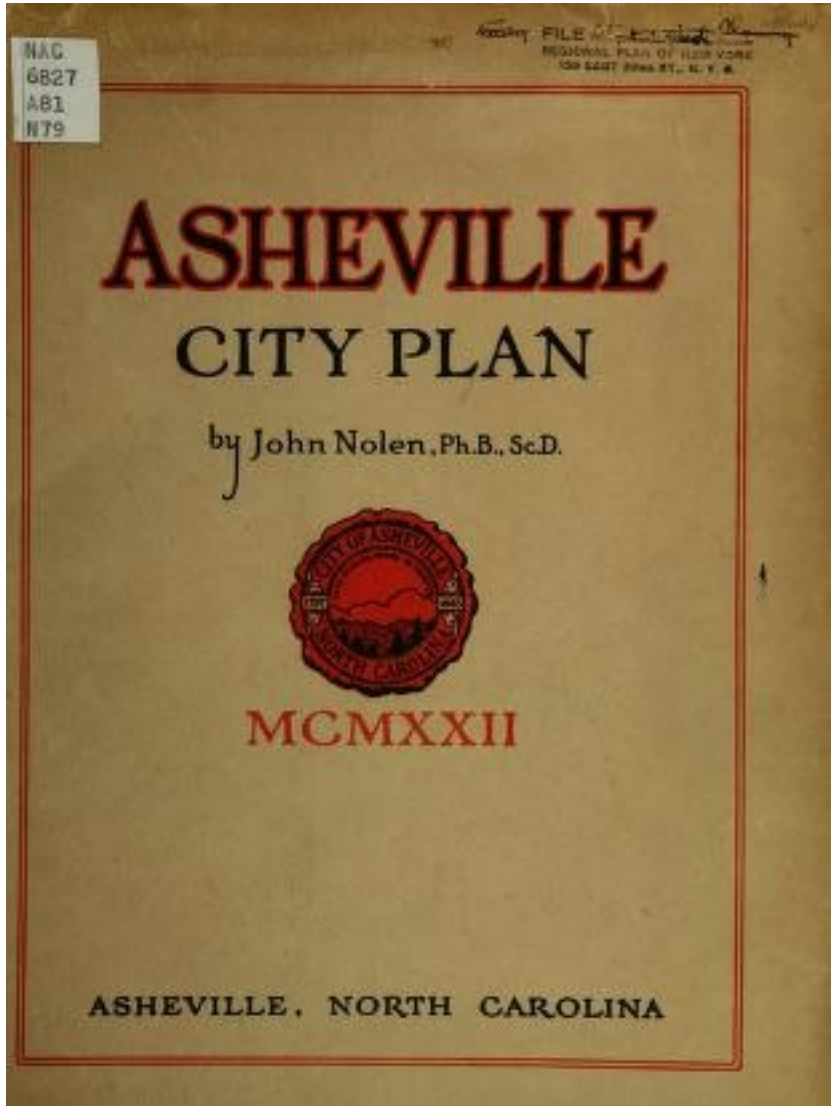
New Belgium Brewery under construction


10'-00"
DO
NOT
PASS

1922 – Asheville City Plan

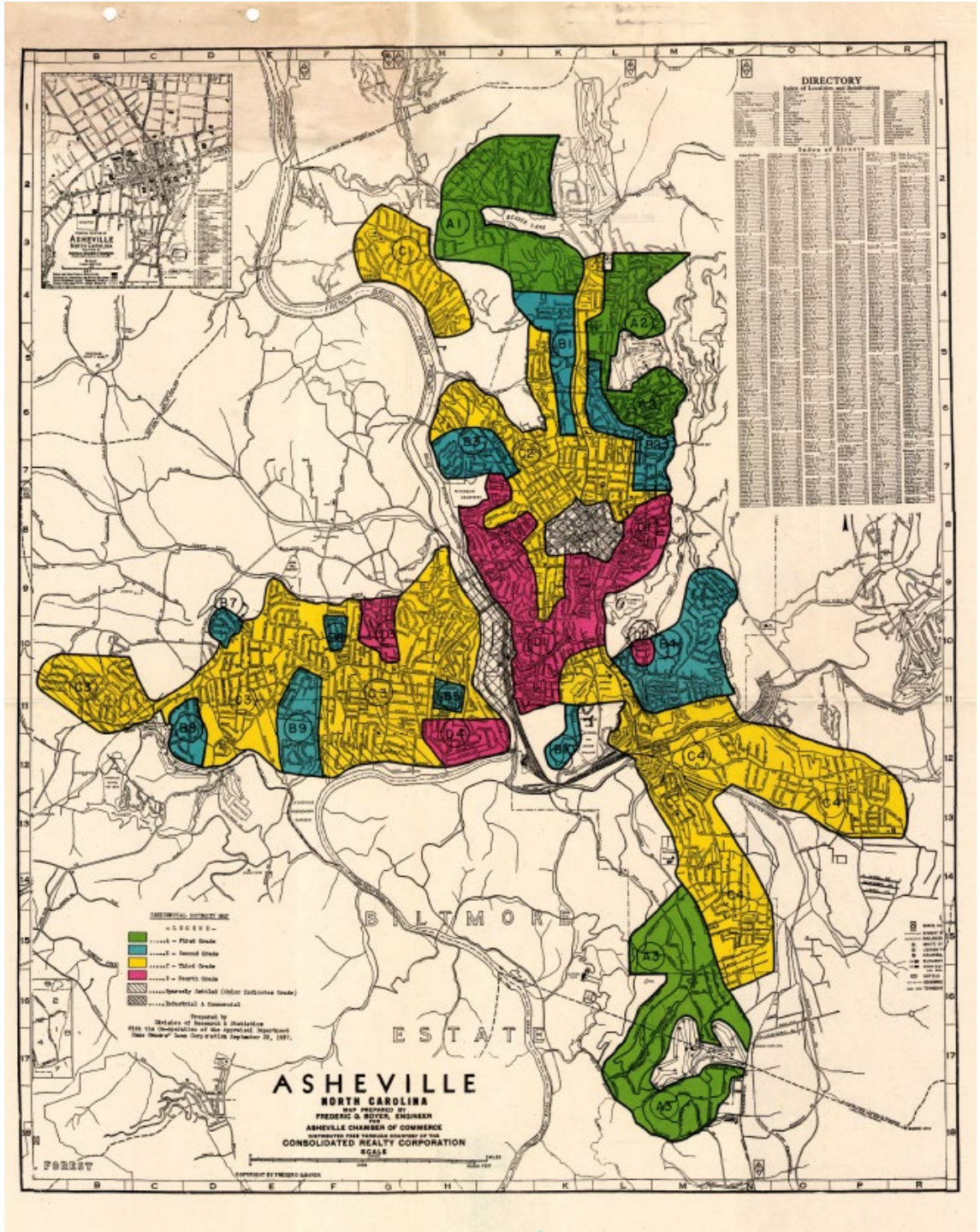
“The colored population of Asheville is about 33 percent…It is in most respects a distinct advantage to the negroes to be separated from the white population provided the areas in which they live are suitable in location and character…”

-Dr. John Nolen, 1922 Asheville City Plan



1930s Redlining in Asheville

Home Owners Loan Corporation (HOLC)



Priscilla Ndiaye, with her map of the homes demolished in the Southside neighborhood during urban renewal. She's standing on the site of the house her family lived in, condemned when she was nine. Photo by Max Cooper.


QUALITY
76


QUALITY FORWARD
WORKING FOR A CLEAN & GREEN
BUNCOMBE COUNTY


GreenWorks
50 YEARS

ASHEVILLE GreenWorks BUNCOMBE COUNTY

<u>Mission</u>: To inspire, equip and mobilize communities to create an equitable, climate-resilient future.

RESILIENCE

MITIGATION
&
ADAPTATION

Building resilience in vulnerable communities in Asheville


CLIMATE CHANGE
AFFECTS US
THE MOST!

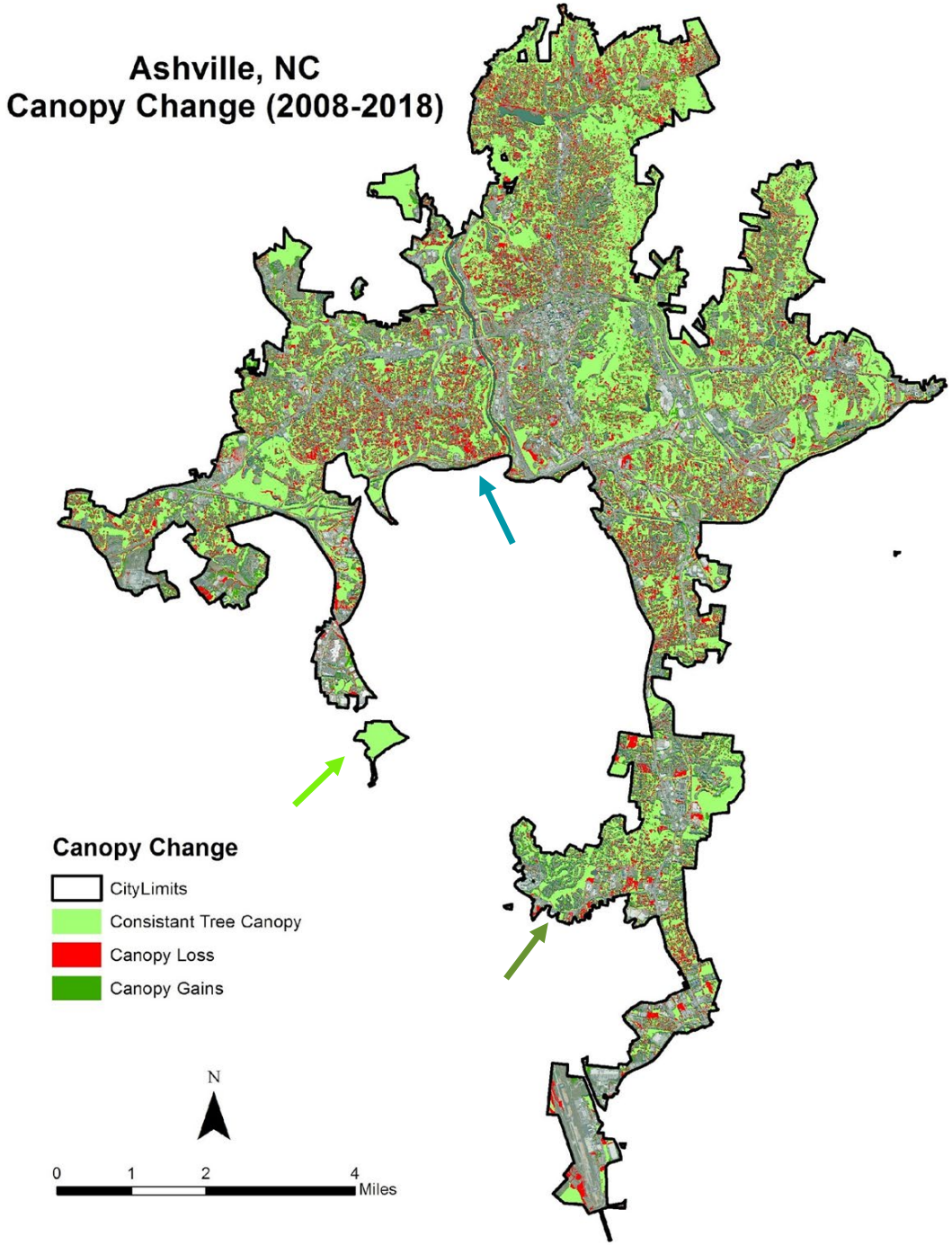
Urban Tree Canopy Study

Asheville, North Carolina

October, 2019

Prepared for:
City of Asheville, North Carolina

Prepared by:
Davey Resource Group
1500 North Mantua Street
Kent, Ohio 44240
800-828-8312



29,274.22 acres assessed

In a ten-year period in Asheville:

Tree Canopy Cover

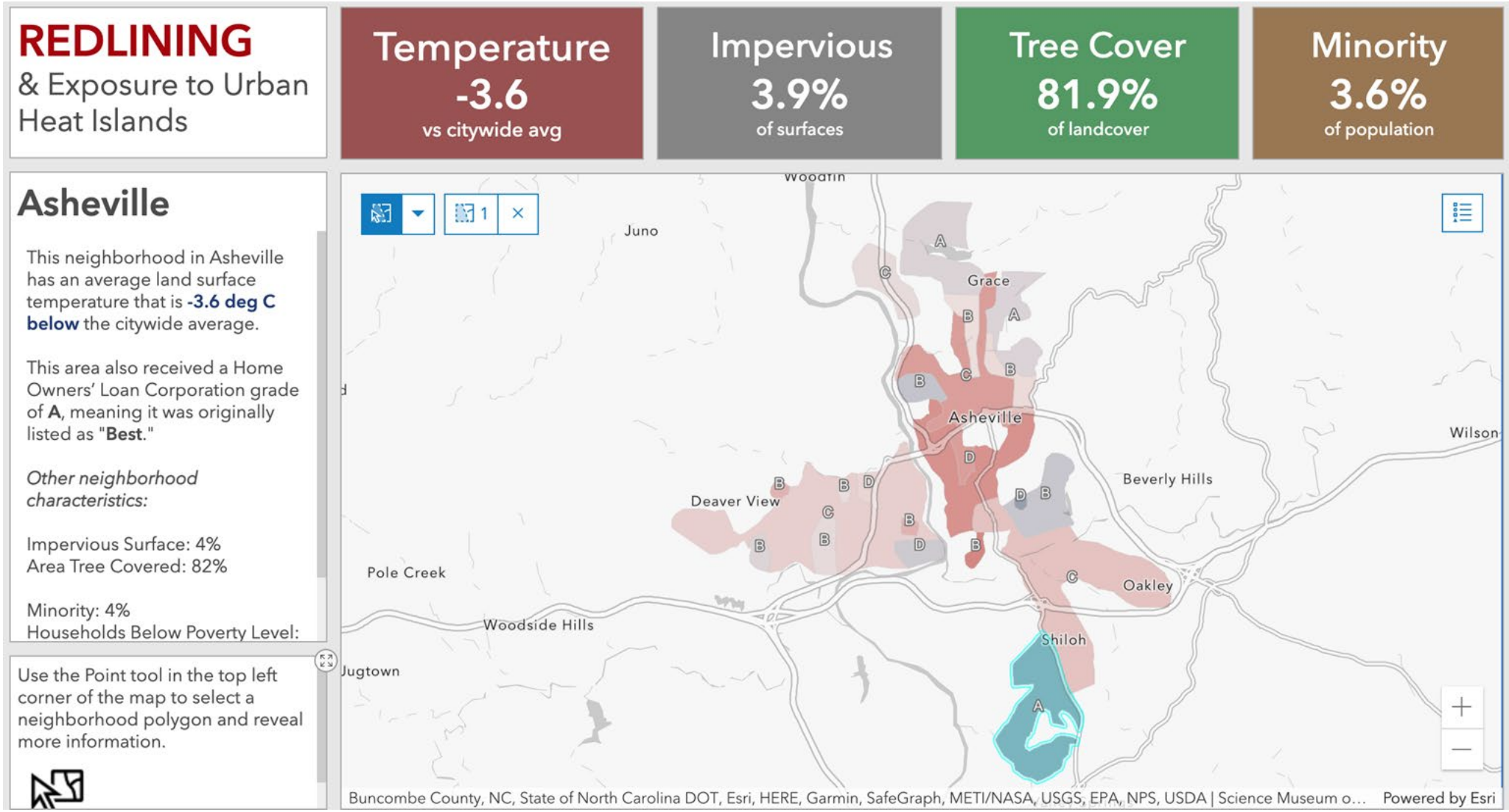
6.4%

Pollution and Runoff

$14 million

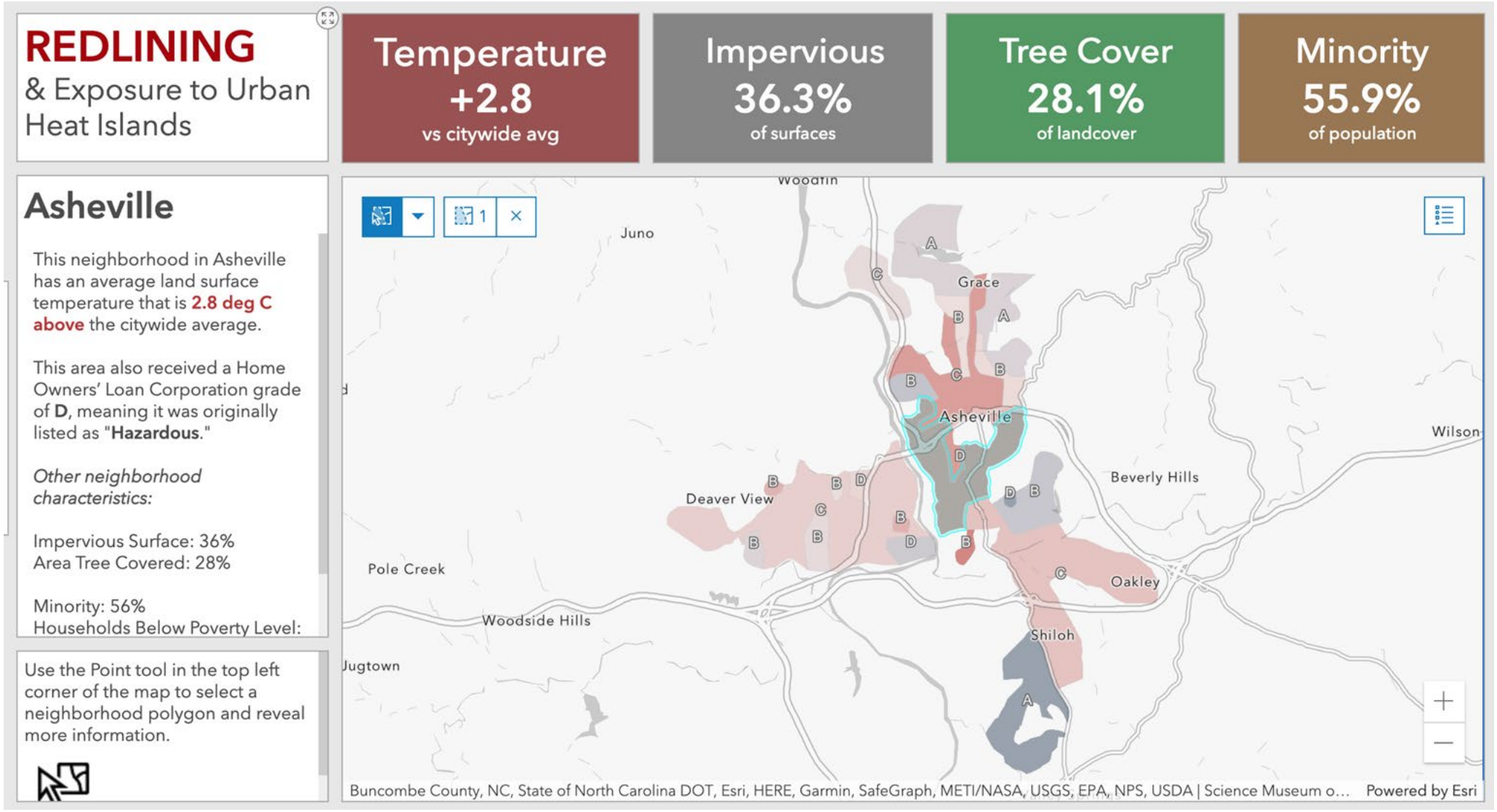
While neighborhoods had wide variety of change, lower income areas generally lost more canopy.

Biltmore Forest

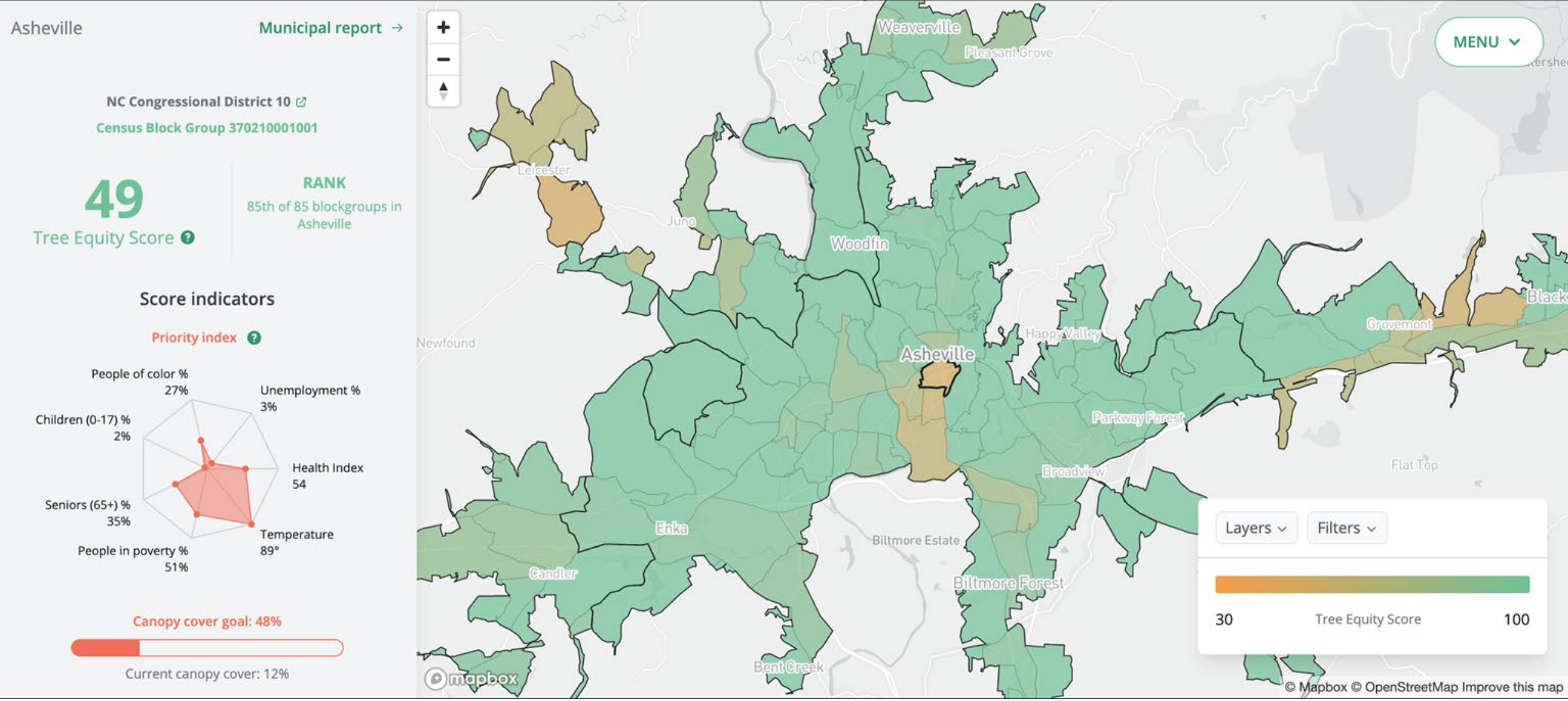


bit.ly/redhotcities

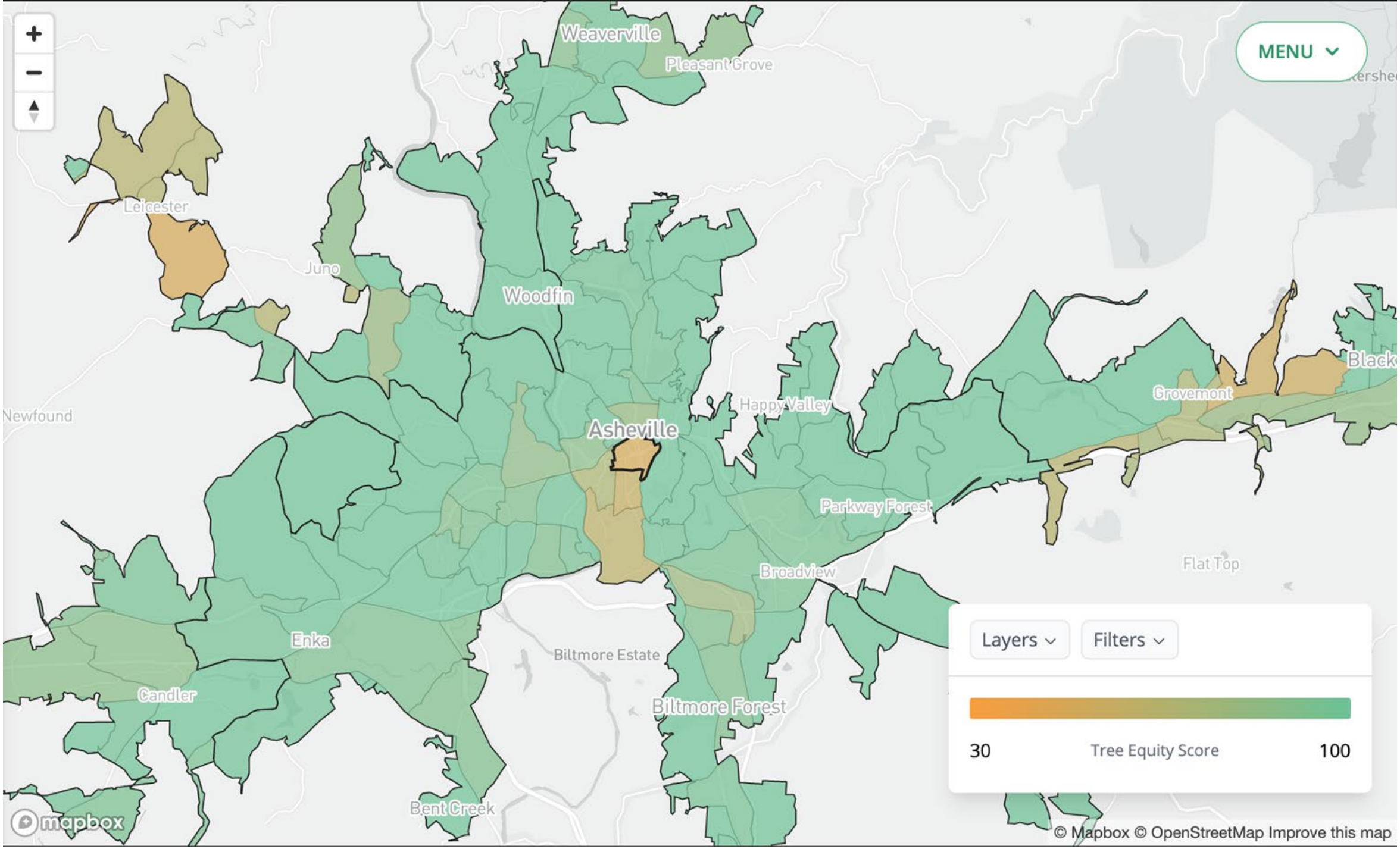
South Slope/South Side/South FB



bit.ly/redhotcities



treeequityscore.org


MENU
Weaverville
Pleasant Grove
Leicester
Juno
Woodfin
Asheville
Happy Valley
Grovemont
Parkway Forest
Broadview
Flat Top
Enka
Biltmore Estate
Candler
Biltmore Forest
Bent Creek
Layers
Filters
30
Tree Equity Score
100
mapbox
© Mapbox © OpenStreetMap Improve this map

Asheville

Municipal report →

NC Congressional District 10

Census Block Group 370210001001

49

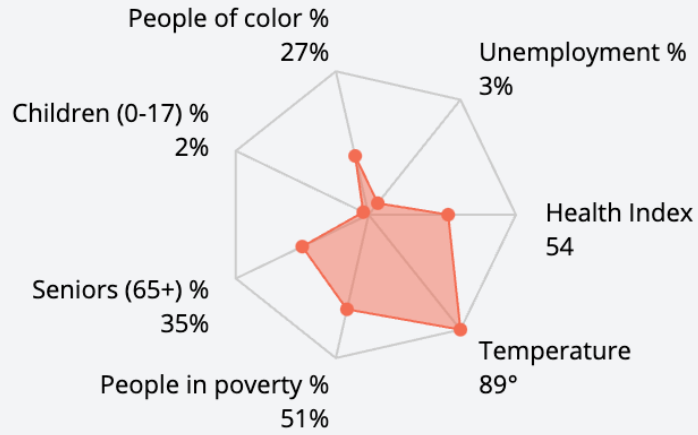
Tree Equity Score

RANK

85th of 85 blockgroups in Asheville

Score indicators

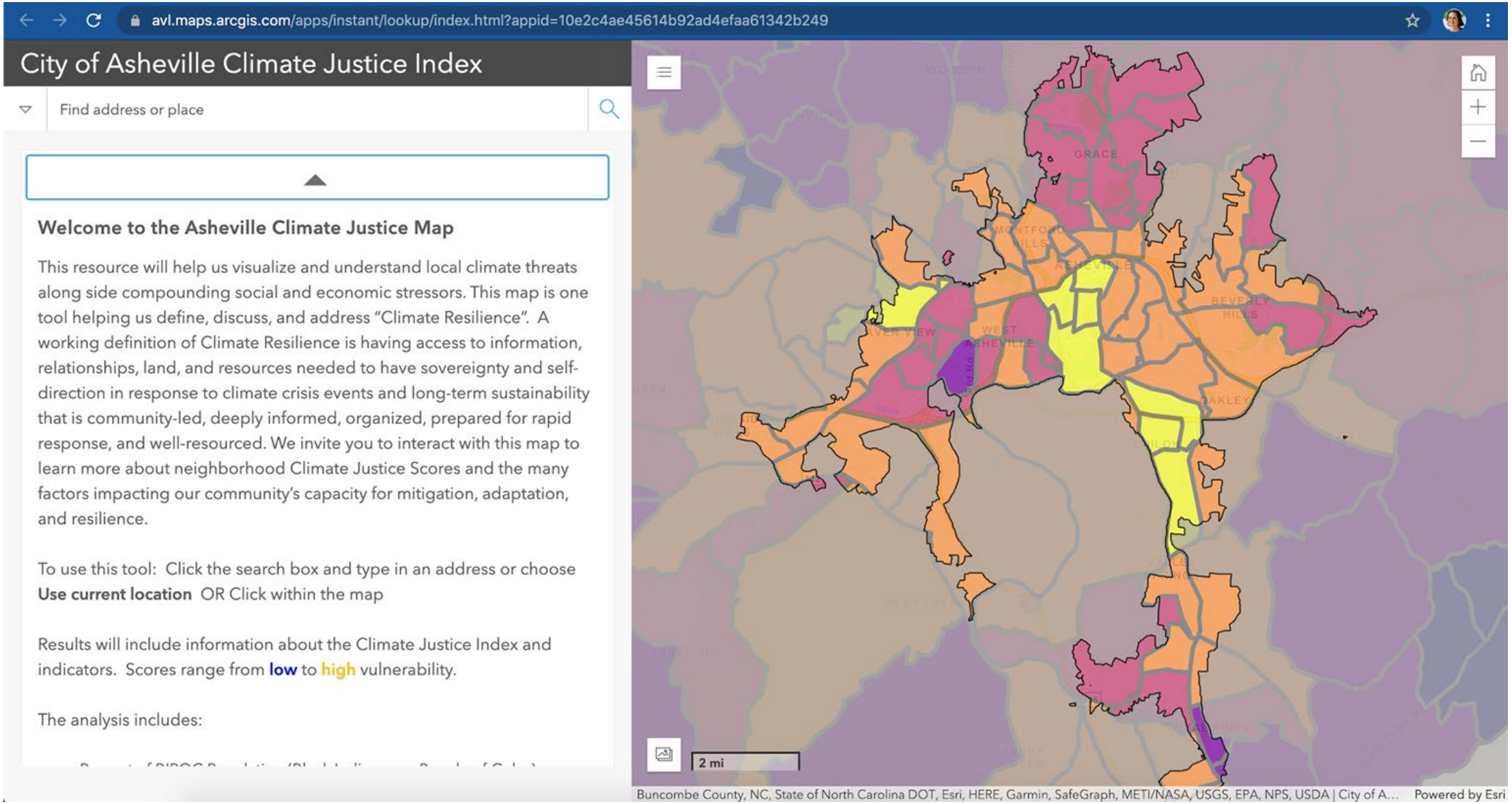
Priority index



Canopy cover goal: 48%

Current canopy cover: 12%

City of Asheville Climate Justice Map



Southside/Lee Walker Heights

City of Asheville Climate Justice Index

99999 SOUTHSIDE, ASHE, 28801

1 Asheville Urban Heat Vulnerability

Heat Vulnerability Index Value

This **heat vulnerability index** shows which parts of Asheville are vulnerable to extreme heat, taking into account **land surface temperature**, **tree cover**, **age**, and **poverty level**.

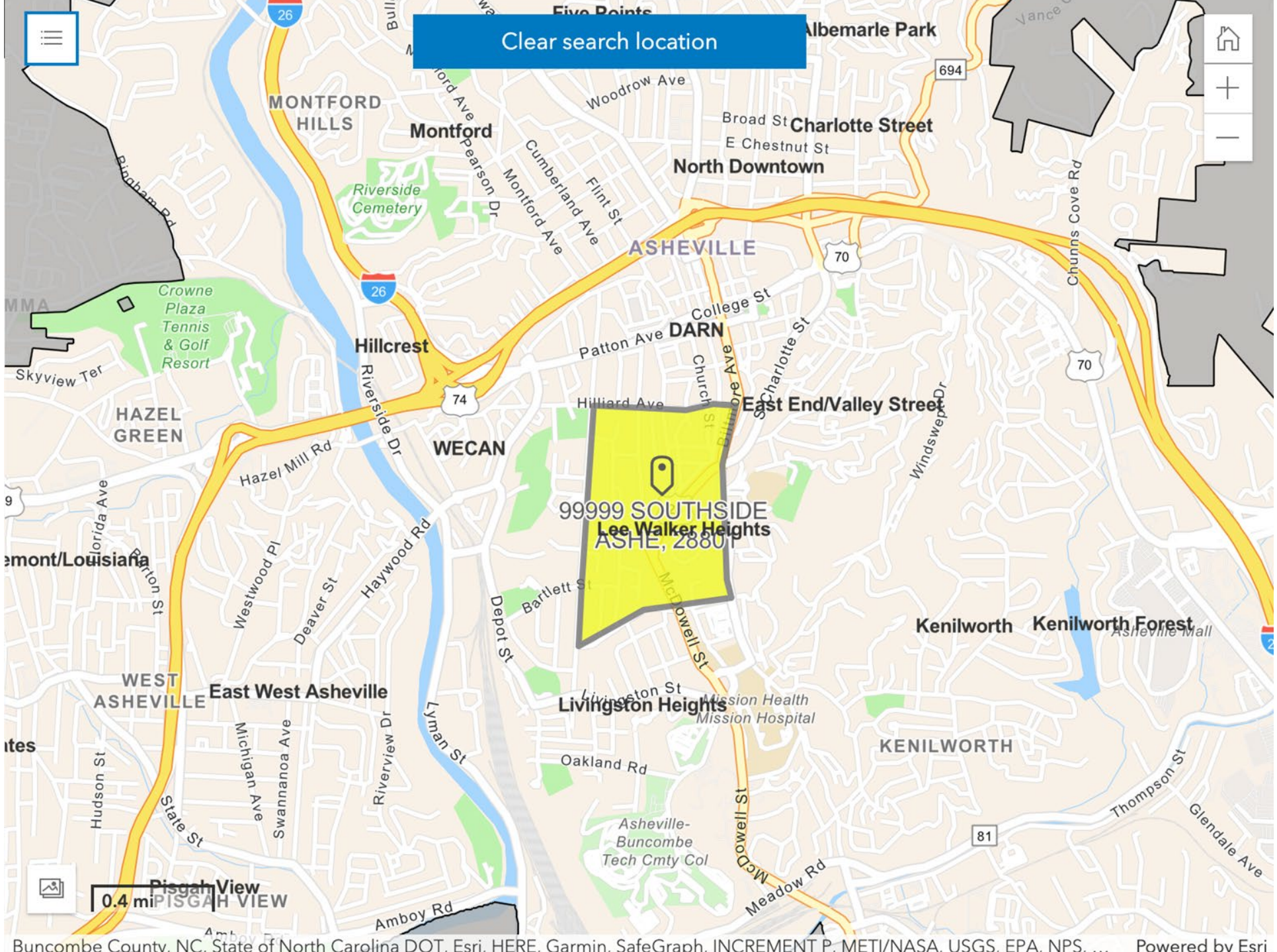
Overall Heat Vulnerability Index Value: 1.73
Land Surface Temperature Value: 0.63
Tree Cover Value: 0.70
Age and Poverty Value: 0.40

This block group's overall index value is 1.73. The closer this value is to 3, the more vulnerable it is, and the closer it is to 0, the less vulnerable it is.

This block group's value for land surface temperature is 0.63. The closer this value is to 1, the higher its maximum temperatures are, and the closer it is to 0, the lower they are.

This block group's value for tree cover is 0.70. The closer this value is to 1, the less tree cover is in the block group, and the closer it is to 0, the more tree cover there is.

This block group's value for age and poverty is 0.40. The closer this value is to 1, the more people there are who are over 65 or living under the poverty level. The closer it is to 0, the fewer people there are who are over 65 or living under the poverty level.

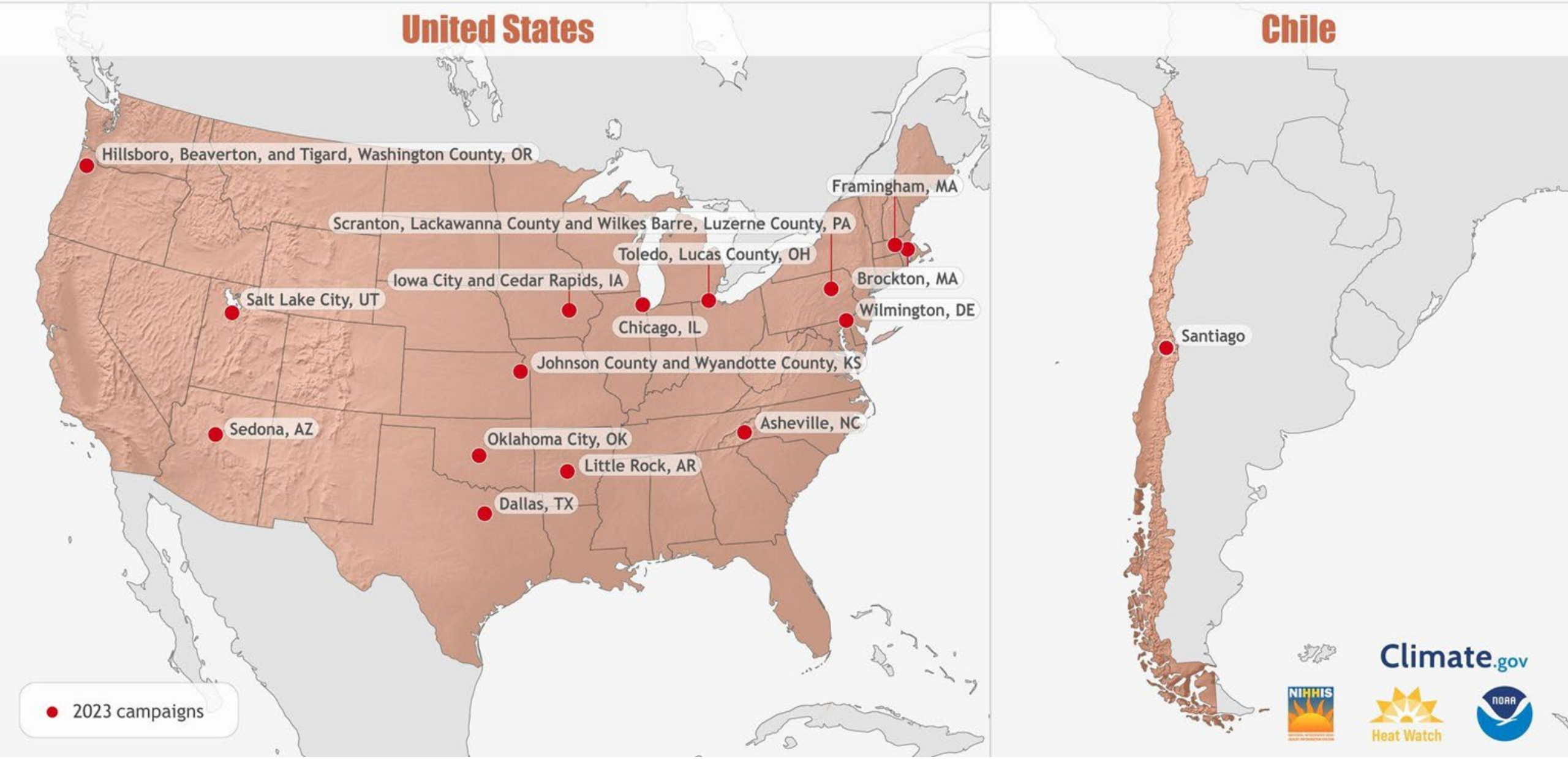

Clear search location
99999 SOUTHSIDE
ASHE, 28801
MONTFORD HILLS
Montford
Five Points
Albemarle Park
Woodrow Ave
Broad St
Charlotte Street
E Chestnut St
North Downtown
Riverside Cemetery
ASHEVILLE
Crowne Plaza Tennis & Golf Resort
Hillcrest
Patton Ave
DARN
College St
Skyview Ter
HAZEL GREEN
WECAN
Hilliard Ave
East End/Valley Street
Hazel Mill Rd
Riverside Dr
Lee Walker Heights
Kenilworth
Kenilworth Forest
Asheville Mall
WEST ASHEVILLE
East West Asheville
Livingston Heights
Mission Health
Mission Hospital
KENILWORTH
Oakland Rd
Asheville-Buncombe Tech Cmty Col
Meadow Rd
Pisgah View
PISGAH VIEW
Amboy Rd
Bartlett St
Depot St
Haywood Rd
Lyman St
Riverview Dr
Westwood Pl
Deaver St
Hudson St
State St
Michigan Ave
Swannanoa Ave
Thompson St
Glendale Ave
Chunns Cove Rd
Windsweep Dr
S Charlotte St
Church St
Biltmore Ave
Pearson Dr
Montford Ave
Cumberland Ave
Flint St
Bingham Rd
Florida Ave
Barton St
0.4 mi
26
74
70
694
81
Buncombe County, NC, State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, INCREMENT P, METI/NASA, USGS, EPA, NPS, ...
Powered by Esri


61.0 °C
60.0
55.0
50.0
45.0
40.0
35.0
30.0
25.0
25.0 °C
x 34.5 °C
x 61.0 °C

City Of Asheville, Urban Forestry Commission Team,NASA /

A map of Asheville created in 2019 using NASA Earth Observations to quantify the Impact of Urban Tree Canopy Cover on Urban Heat.

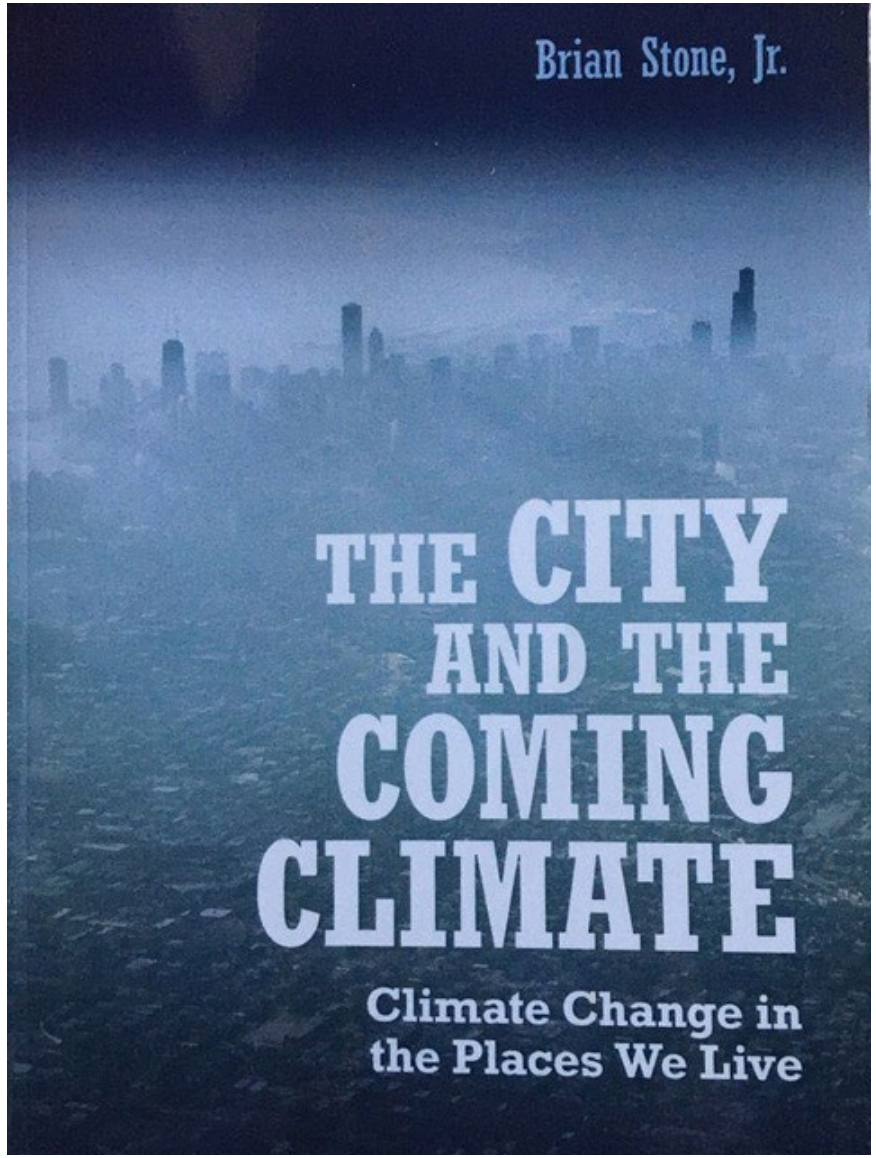
NOAA Urban Heat Island Mapping Campaigns: 2023 Locations




HEAT WATCH
SCIENCE IN MOTION

The City and the Coming Climate (2012)

by Brian Stone, Jr.



ASHEVILLE GreenWorks BUNCOMBE COUNTY


CAT


CAT


GreenWorks


CHARLOTTE
HORNETS

Thank you for attending!

ASHEVILLE GreenWorks BUNCOMBE COUNTY

www.ashevillegreenworks.org