

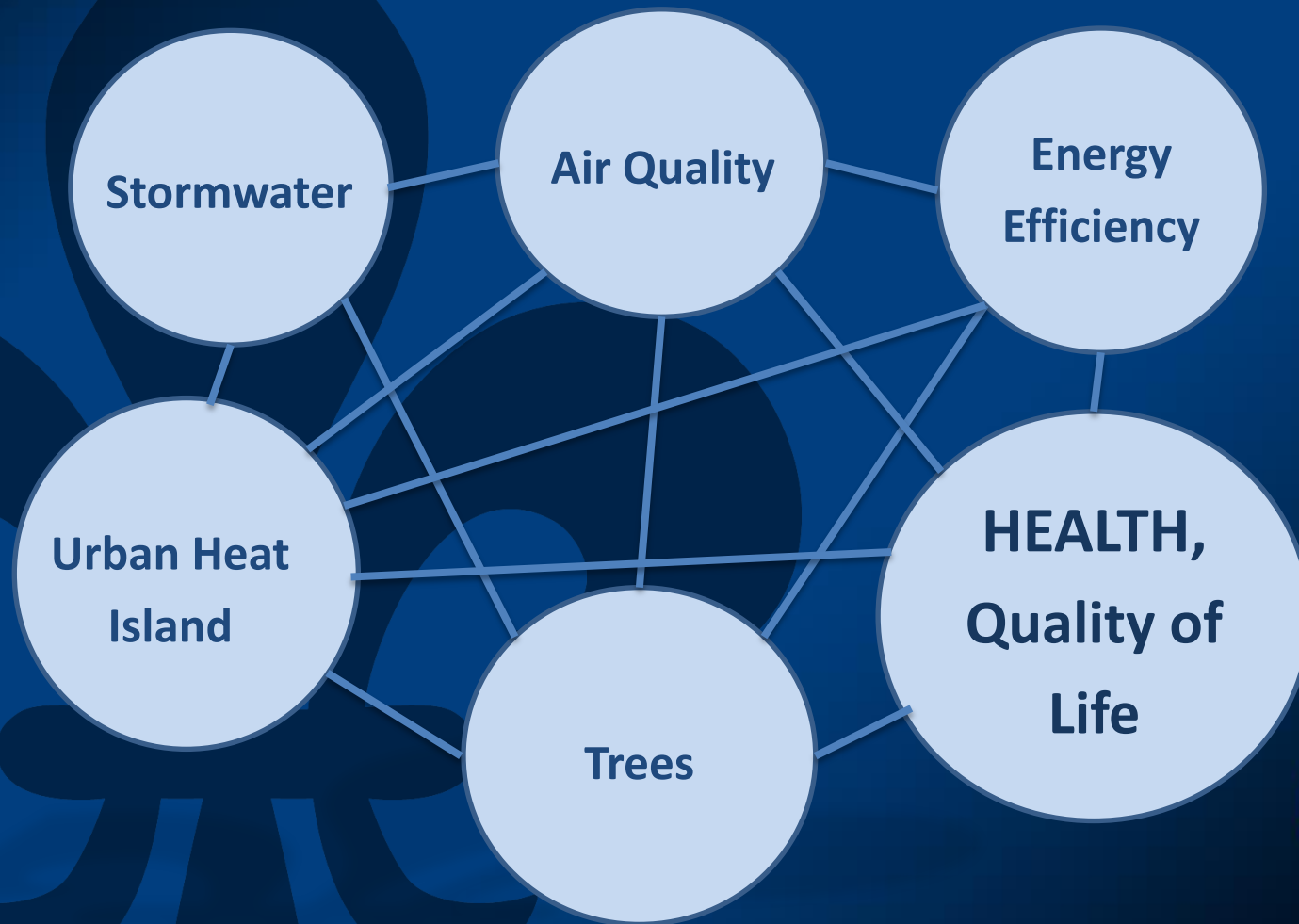
Louisville Metro Government Office of Sustainability

The Nature Conservancy Urban Heat Island Study Overview March 8, 2016

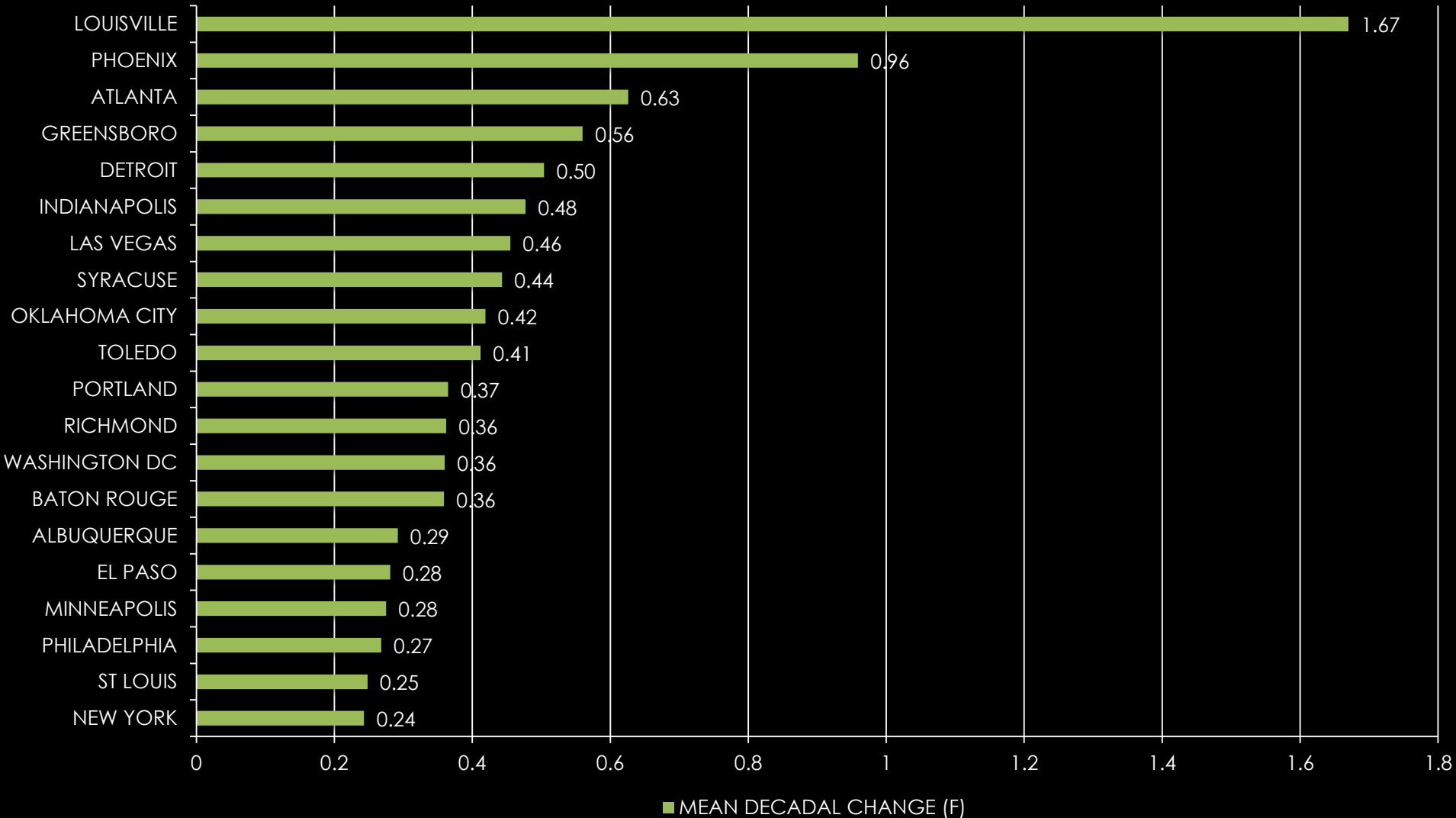


OFFICE OF
SUSTAINABILITY
A DIVISION OF DEVELOP LOUISVILLE

Sustain Louisville



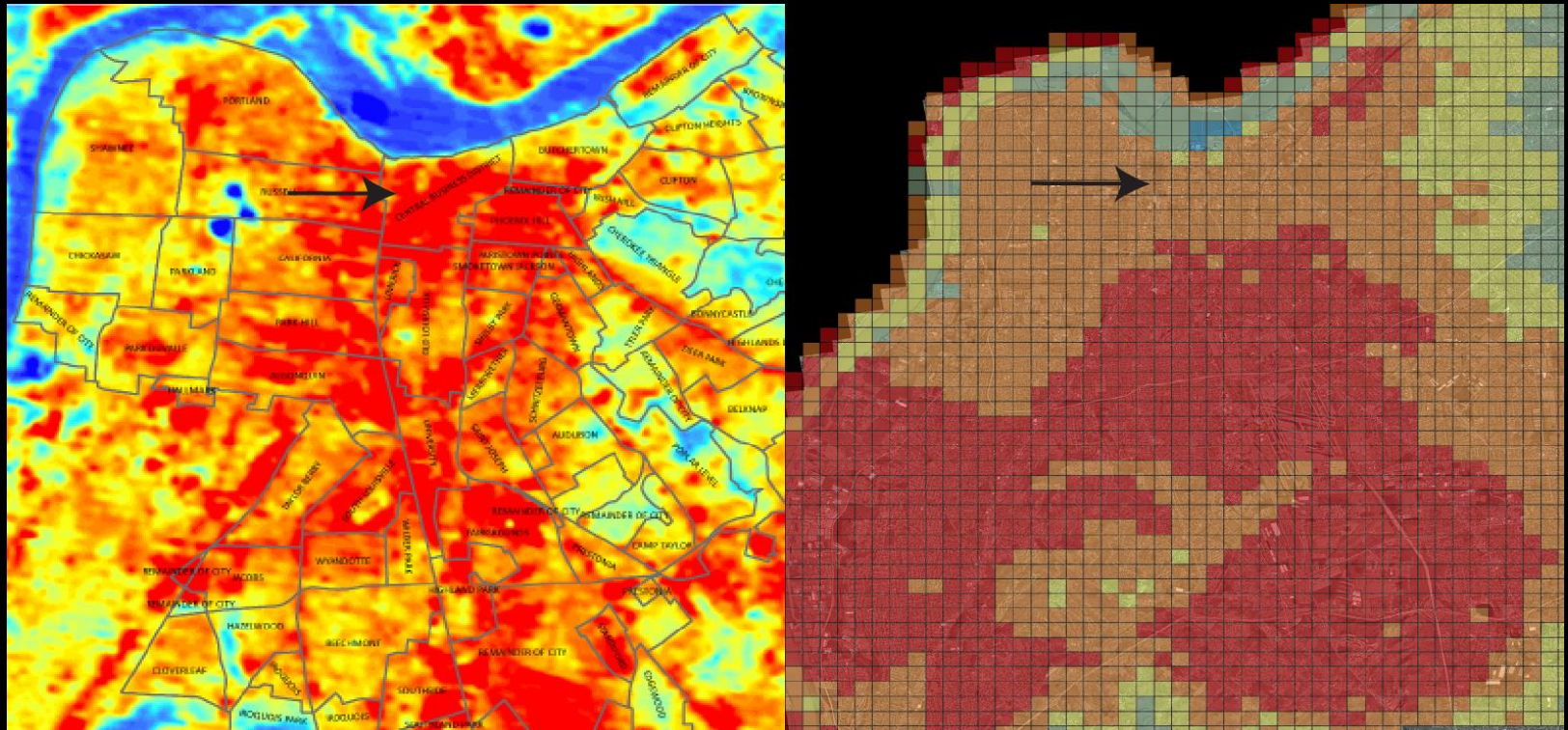
TOP 20 MOST RAPIDLY GROWING URBAN HEAT ISLANDS IN UNITED STATES: 1961-2010



SOURCE: URBAN CLIMATE LAB, GEORGIA INSTITUTE OF TECHNOLOGY

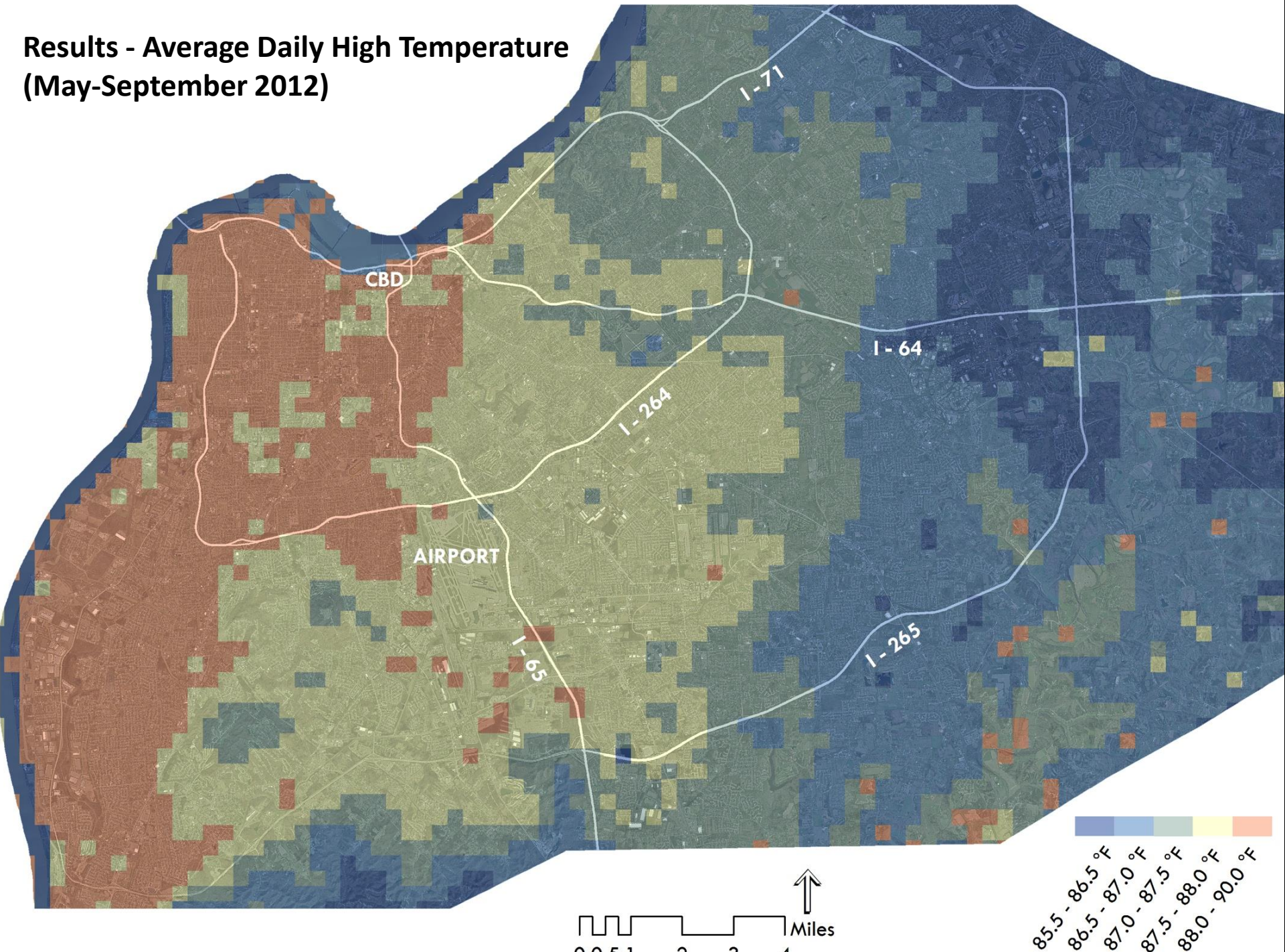
Urban Heat Management Study

“...the first comprehensive heat adaptation assessment performed for any major city in the US and it will serve as a national and international model for responding to the growing hazard of extreme heat.”

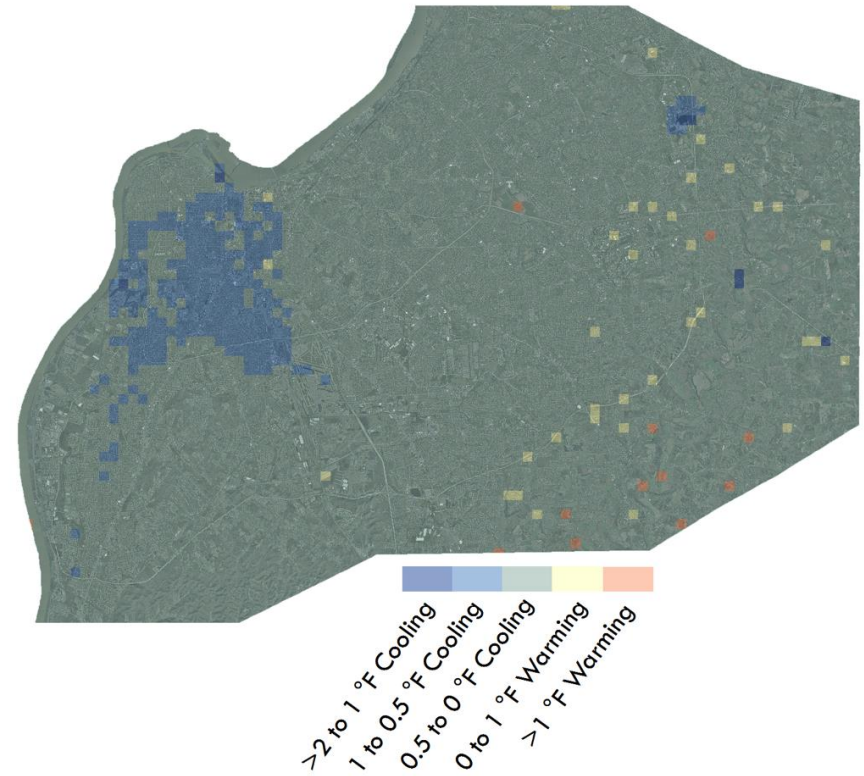
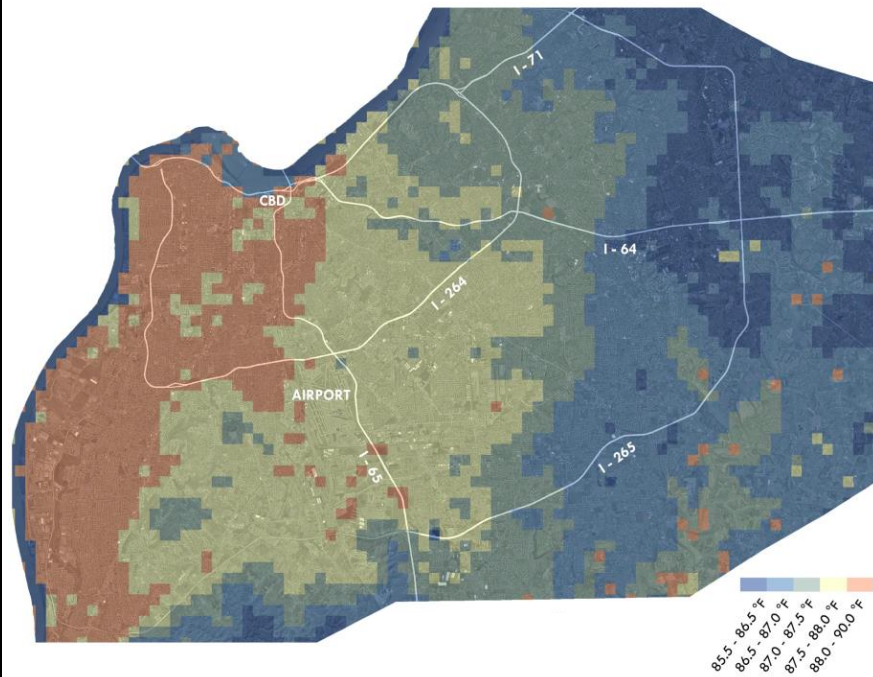


Land surface temperature (left), near surface air temperature (right). Arrows mark CBD.
Source: Landsat ETM+, July 2010. Air temperature (2m) Weather Research and Forecasting model, July 2012.

Results - Average Daily High Temperature (May-September 2012)

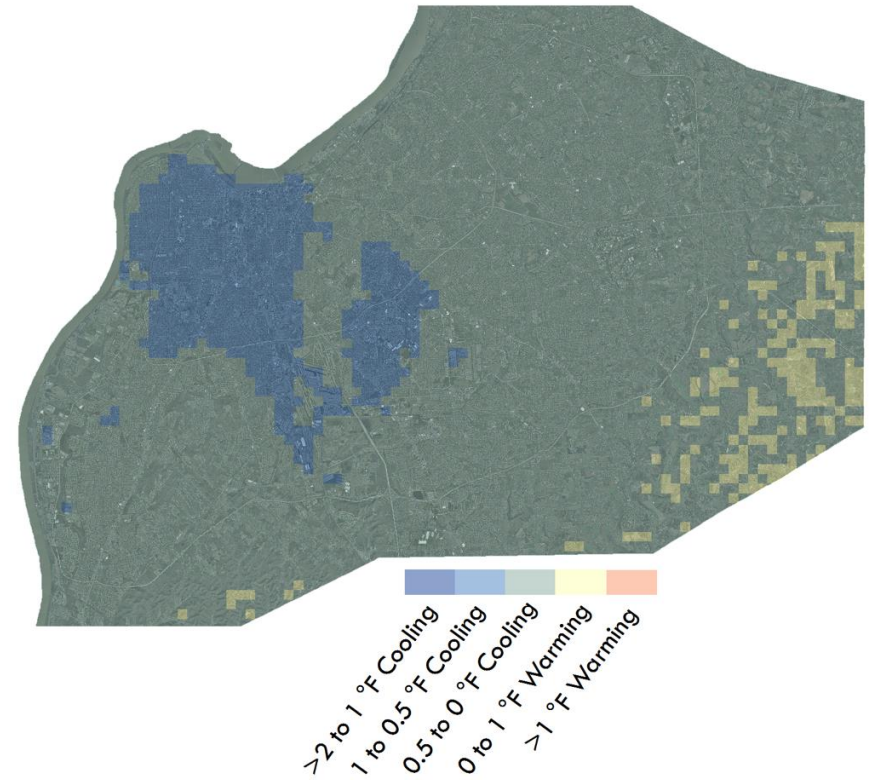
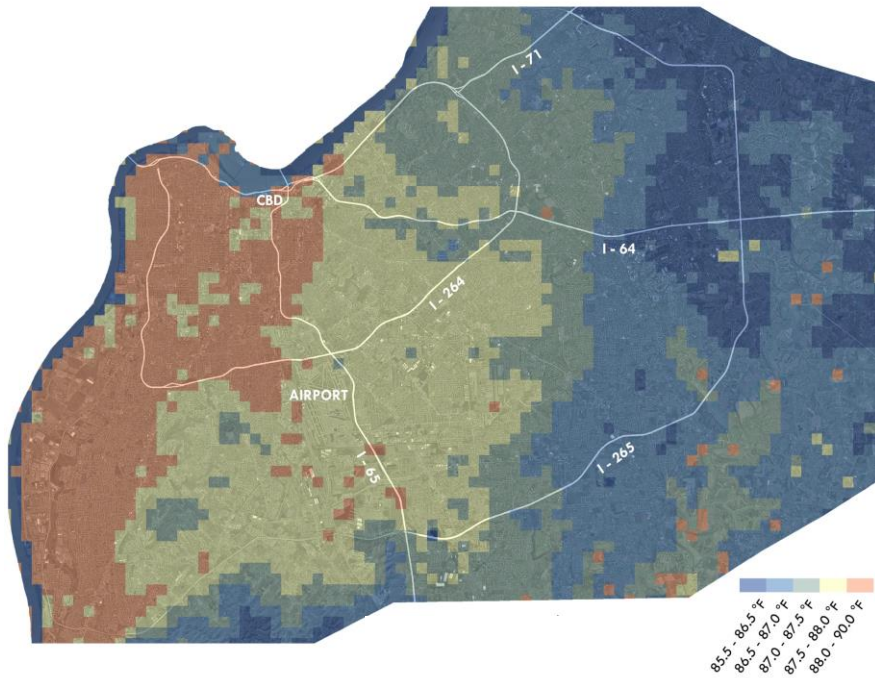


Scenario Modeling Results - Greening



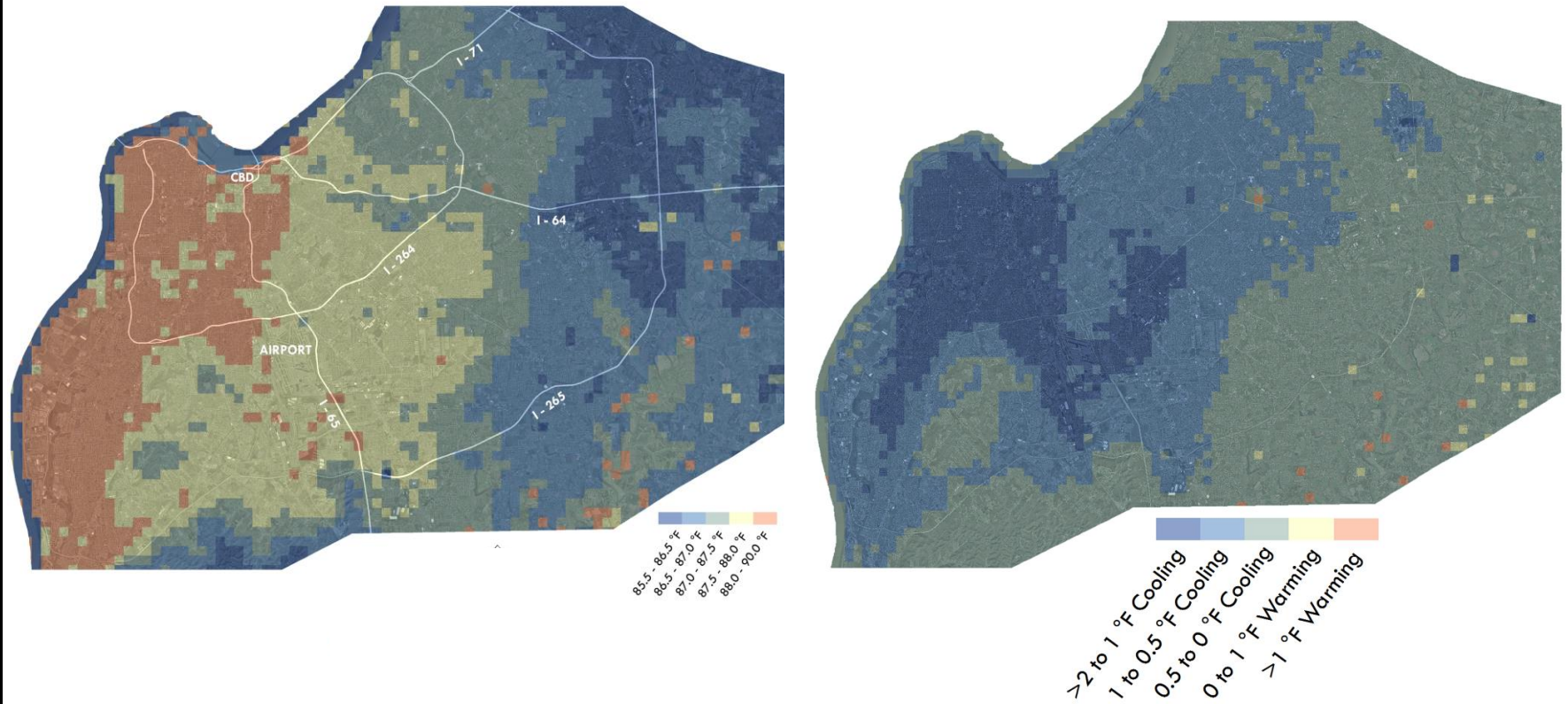
Plant 450,000 trees

Scenario Modeling Results - Cool



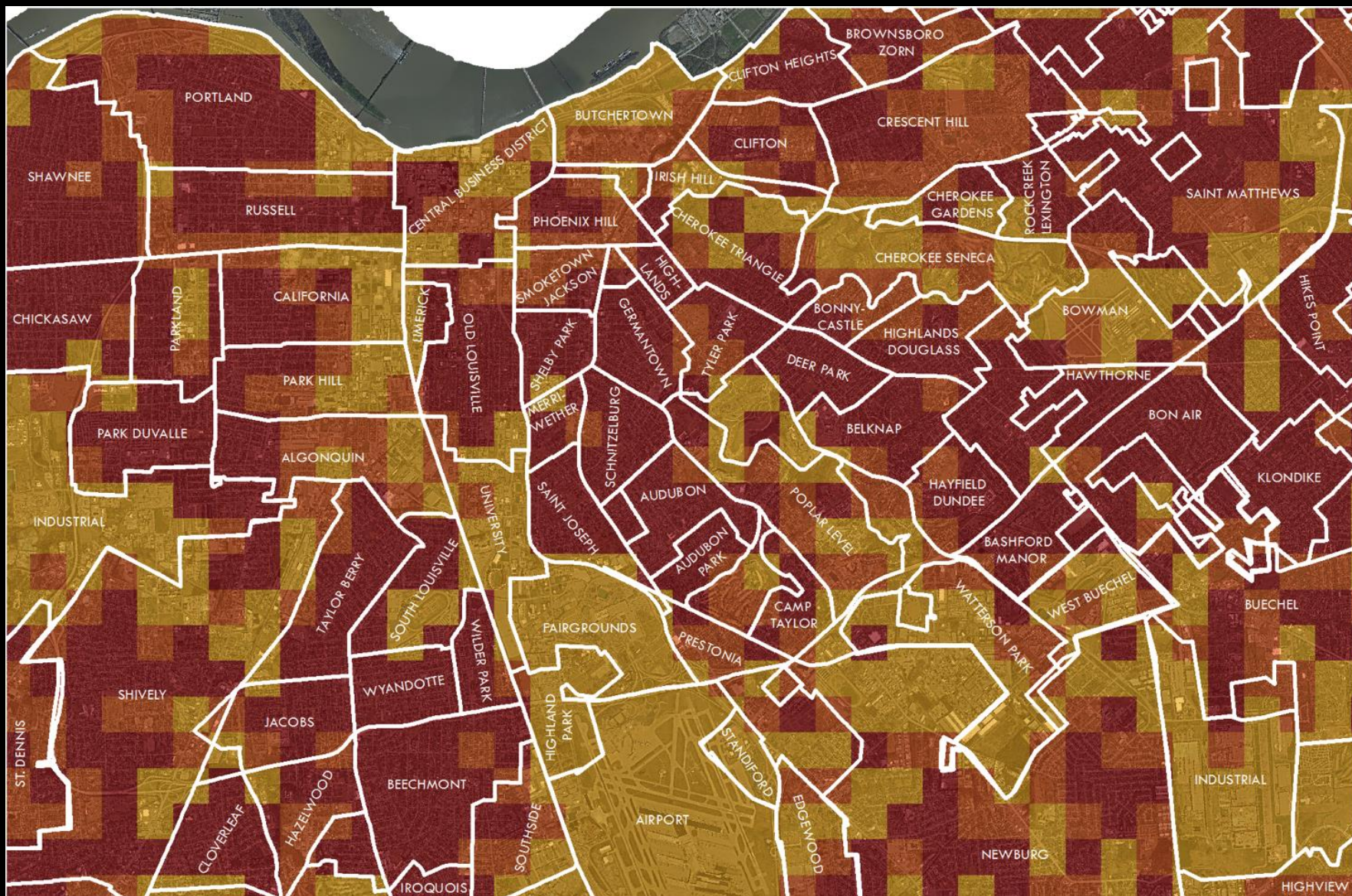
Add 23,000 cool roofs and 54 square miles of cool pavement

Scenario Modeling Results - All Combined

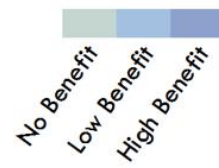
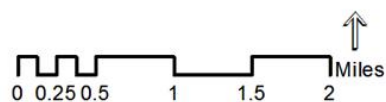
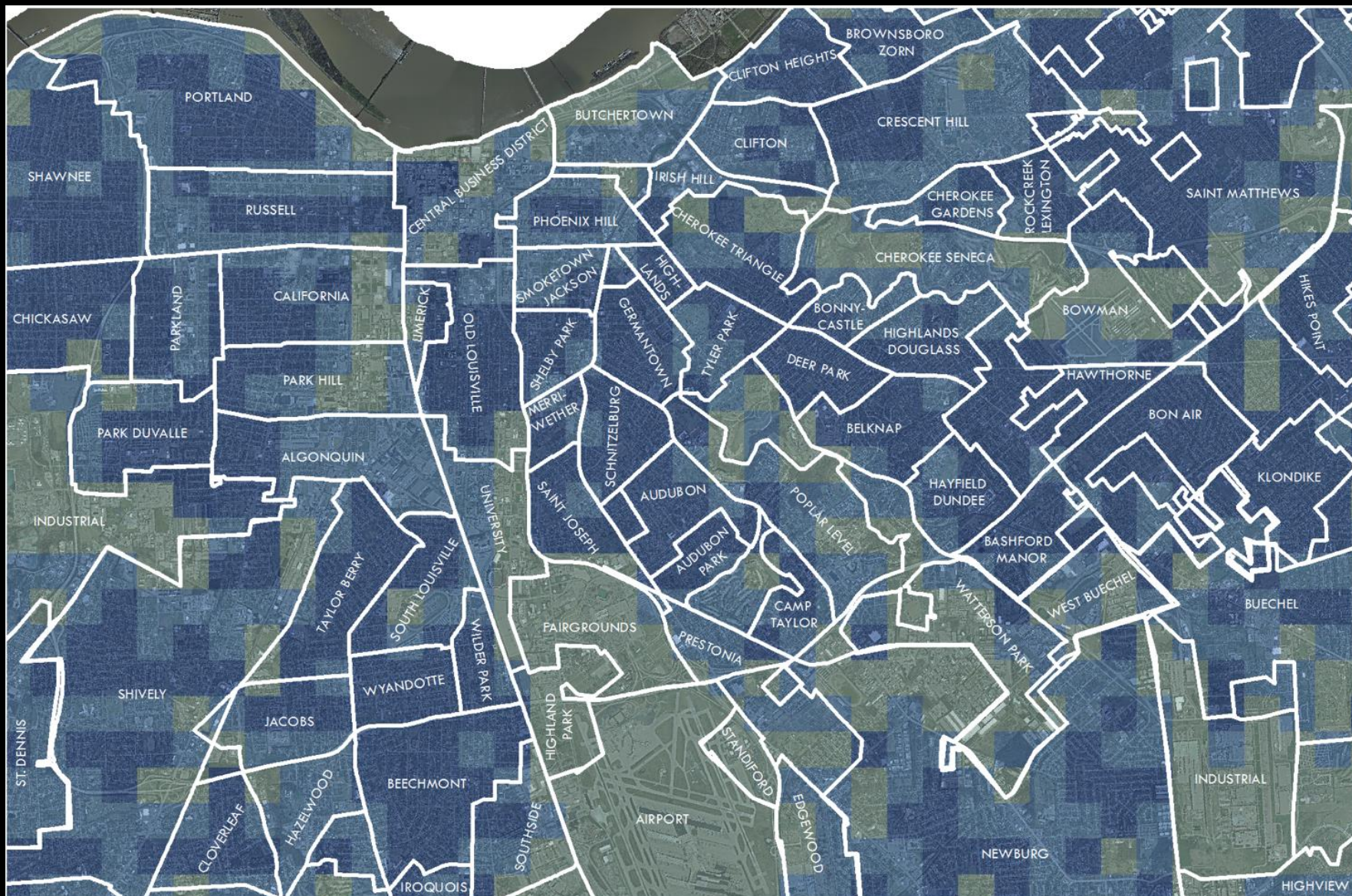


Increase greenness and implement cool strategies

Summer heat mortality under current conditions



Reduction in summer heat mortality with combined scenario strategies



UHI Mitigation Implementation

Greening

- Downtown greening
- Cool award
- Trees in residential areas

Cool materials

- Commercial zones
- Cool Roof Rebate
- Cool in Lieu



UHI Mitigation Implementation

Health

- Neighborhoods focus
- Indoor temperature risks
- Fan giveaways
- Cooling center blitz

Education and outreach

- PR, media, public forums
- Community tree efforts



Questions?

Thank you!

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