

Urban Heat Island and Urban Form in Durham, NC and Levers for Change

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In urban areas, the local climate tends to be warmer than adjoining rural lands, a phenomenon called urban heat island. As the global climate experiences rapid change, the local climate as experienced by humans follows this same trend but is further influenced by the locally heterogeneous conditions. The difference in temperature can be significant and has been shown to result in serious impacts to human health, energy consumption, air quality, and neighboring ecosystems to name just a few. While most often addressed in large municipalities, evidence will be shared that indicates small and medium sized cities can also experience UHI effect of similar magnitude to large cities placing them at equal risk. Using a baseline analysis of the urban heat island in the Raleigh-Durham region of North Carolina, at multiple spatial scales including regional and local, several levers for action will be outlined to demonstrate the potential for mitigation and adaptation.