

Understanding Urban Heat Islands: A Community Guide to Resilient Environments

Introduction:

This document aims to inform residents about Urban Heat Islands (UHI) and their impact on our community. By understanding UHIs and engaging in proactive measures, we can collectively build a more resilient and comfortable town.

What are Urban Heat Islands (UHIs):

Urban Heat Islands are areas within developed environments where temperatures are significantly higher than their surrounding rural areas. The heat accumulation is often a result of human activities that absorb and re-radiate solar heat, prevalence of impervious surfaces (area that are covered by water-resistant materials like pavement or rooftops), and reduced green spaces.

The Importance of UHIs:

Urban Heat Islands can lead to various environmental challenges, including increased energy demands, reduced air quality, and heightened heat-related health risks. By understanding and addressing UHIs, we contribute to creating cooler, healthier, and more sustainable urban environments.

UHI Assessment Basics:

To understand how and where UHI is impacting Ludlow and create an effective mitigation plan, the Town has recently:



Review and Model Data: Developed a UHI model that follows a comprehensive methodology, focusing on ambient air temperature and heat index.



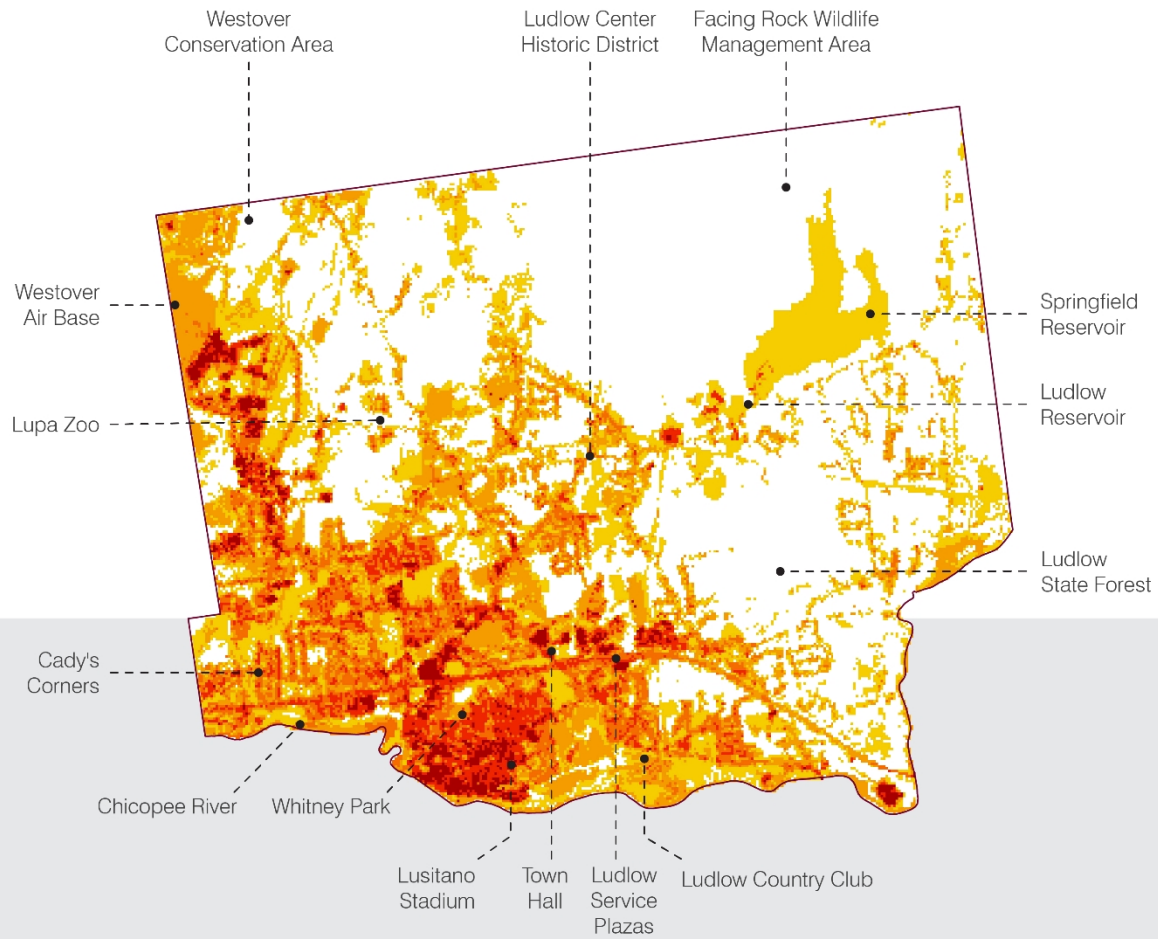
Identify Hotspot Areas: Pinpoint locations in Ludlow with elevated temperatures based on the UHI Model.



Vulnerability Analysis: Assess the vulnerability of the populations living in these hotspot areas by overlaying UHI maps with environmental justice neighborhoods, community facilities, and vulnerable population groups. The results of this overlay will be used to prioritize the hotspots for implementing mitigation techniques.



Recommendations: This work will result in a shortlist of UHI mitigation solutions for each of the priority hotspot areas. The Town of Ludlow will use these recommendations to guide future initiatives and inform capital improvement planning decisions.



Town of Ludlow Resilient Stormwater & Urban Heat Island Assessment

Urban Heat Island

Ambient Air Temperature on a 95°F Day Value



□ Ludlow Boundary

• -- Key Locations



Weston & SampsonSM