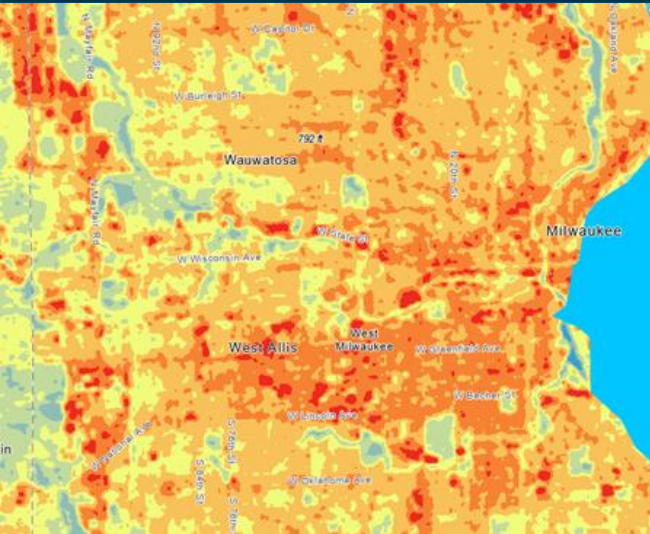




Mapping The Location And Causes Of Urban Heat Islands



Caption 2: Map of Urban Heat Islands in the Milwaukee area Photo Credit: Wisconsin DNR.

Principal Investigators & Partners

- Wisconsin DNR

Timeline

- Launch – January 2024
- Expected Completion Date – December 2026
- Status – Ongoing

Contact Information

Bob Smail

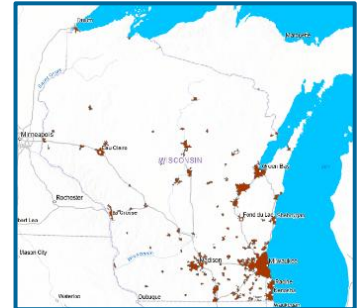
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Project Overview

Urban heat islands are typically found in areas with high densities of roads, buildings, and parking lots. Without the cooling benefits from evapotranspiration associated with green space and green infrastructure the heat islands stand out as significantly warmer than they would

be otherwise. This project is comprised of two main parts. First, high resolution maps were modeled from existing aerial imagery to detail urban landcover composition. Second, these urban landcover composition maps will be compared to evapotranspiration models to quantify correlations landcover and cooling and identify current urban heat islands. Further, these observations will be used to locate opportunities for optimizing urban canopy development and to identify communities that may be at risk from dangerous heat events.



Caption 1: Wisconsin with census urban areas shown in red. Photo Credit: Wisconsin DNR.

Key Points

- Current urban heat islands will be mapped across all urban areas in Wisconsin.
- This effort will identify the size, density, and proximity of green infrastructure needed to offset the adverse impacts of urban heat islands.

Management Implications

- High resolution maps are now available detailing urban landcover including, trees, turf/grass, water, and impervious surfaces.
- Results will assist planners and urban foresters in locating areas where green infrastructure can be added or expanded to maximize cooling effects.