

The Heat Island Effect and Urban Forestry

Heat Island Effect

- If you've ever noticed that the city feels hotter than the suburbs or rural areas, then you have experienced the urban heat island effect.
- The urban heat island effect occurs when an urban area is noticeably warmer than the surrounding area.
- The urban heat island effect can cause a temperature increase of 1-7°F.

Causes

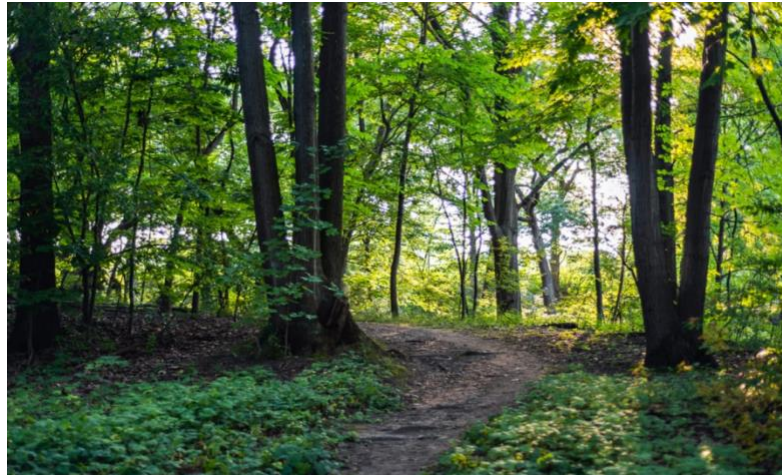
- Lack of vegetation - Trees, grasses, and other natural elements help to cool down the air by adding moisture and shade to the area.
- Dark Surfaces - Roofing, asphalt, and other manmade materials do not provide the same benefits as vegetation. They absorb sunlight and make the area warmer.
- Human Activity - People densely populate cities, especially during the workday. Their use of vehicles, air conditioning, and heat all contribute to the heat island effect.

Urban Forestry - A Solution

- When you hear the phrase urban forest, you may think it applies only to parks in city centers. Actually, urban forests are any form of nature within a city! Street trees, ponds, gardens, and rivers are all examples of urban forestry.
- Urban forests help mitigate the urban heat island effect by increasing the natural elements that cool the area.

Local Examples

- [The Emerald Necklace](#) - a variety of urban forests across Boston and Brookline, including Boston Common, the Fens, the Arnold Arboretum, and Jamaica Pond



- [The Rose Kennedy Greenway](#) - an extensive park in downtown Boston
- [Charles River Esplanade](#) - a riverside urban forest popular for walks, bike rides, and picnics



Local Efforts

- Many city planning committees see the benefits of expanding or adding green spaces and urban forests.
- Massachusetts offers a variety of grants to community groups, nonprofits, and local governments.
- The city of Boston is in the process of implementing an Urban Forest Plan to further protect from the urban heat island effect.

Sources

Heat Island Effect: <https://www.epa.gov/heatislands>

Urban Forests: <https://www.fs.usda.gov/managing-land/urban-forests>

Urban and Community Forestry: <https://www.mass.gov/service-details/urban-and-community-forestry>

City of Boston seeks partner to design first urban forest plan | City of Boston:
<https://www.boston.gov/news/city-boston-seeks-partner-design-first-urban-forest-plan>