

Heat Islands

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While many factors contribute to heat island formation, several characteristics typical of urban areas significantly influence the existence of a heat island. Urban areas commonly have few trees and green spaces and are predominantly made up of surfaces that are impervious or covered with buildings, thus leading to extreme temperatures. Roads, parking lots, and buildings are often constructed of materials that reflect less and absorb more of the sun's energy. In addition, cities are typically designed to be dense and compact, which prevents adequate release of heat. Therefore, because urban design plays a large role in the creation of heat islands, smart growth development strategies provide an opportunity to reduce the heat island effect. When communities also incorporate cooling strategies into smart growth initiatives, they can realize multiple benefits more efficiently than pursuing these issues separately.

Smart growth practices cover a range of development and conservation strategies that help protect our natural environment and make our communities more attractive, livable, and economically vibrant.

Based on the experience of communities around the nation that have used smart growth approaches to create and maintain great neighborhoods, the **Smart Growth Network** developed a set of ten basic Smart Growth principles, as follows:

- Mix land uses, such as residential, commercial, and recreational uses
- Take advantage of compact building design
- Create a range of housing opportunities and choices
- Create walkable neighborhoods
- Foster distinctive, attractive communities with a strong sense of place

Related Links

- [EPA Smart Growth Programs](#)
- [Local Government Smart Growth Strategies Guide](#)
- [Adaptation to Heat](#)



Smart Growth Network

USA

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