

# THE PURDUE LANDSCAPE REPORT

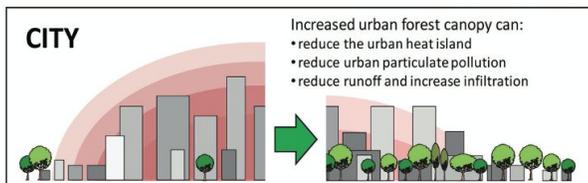
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## We need trees and here's why...

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Yes, we need trees and here's why...

Trees have presented as more than just a pretty face as research has indicated that trees are even more valuable for their function as much as their form. Currently, more than 50 percent of the world's population now lives in towns and cities. In the Hoosier state, the last census indicated that 72% of our population lives in an urban area and this statistic is increasing annually.



Properly planted trees improve living conditions in downtown and suburban areas.

For the most part, the rapid expansion of cities takes place with little consideration to land use planning strategy. The resulting human pressure has highly damaging effects on our urban trees and green spaces. The environmental impacts of climate change are intensified by urbanization such as increased pollution, increased temperatures, and larger demands on infrastructure such as stormwater systems.

Urban trees can help to mitigate some of the negative impacts and social consequences of urban sprawl and make cities more resilient to these changes. These important functions are called ecosystem services. This is the way urban foresters measure the benefits that trees provide other than just their beauty. Ecosystems services are the many benefits that trees and plants provide to the community. They improve our quality of life by providing food, cleaner air and water, regulating temperatures, supporting pollination and providing recreational, health and spiritual benefits.



People will stay longer and enjoy urban economy more with tree-lined streets.



Trees are proven to reduce length of hospital stays and improve birth outcomes.



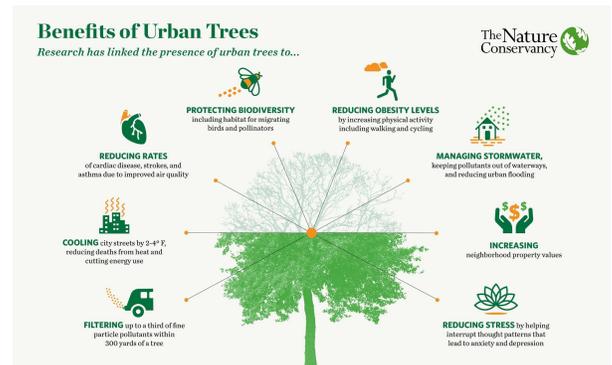
Recreational areas are critical to community well-being.

Here are some easy ways in which urban trees and woodlots contribute to making cities more environmentally sustainable and livable:

- Trees can contribute to the increase of local **food and nutrition security**, providing food such as fruits and nuts for wildlife and human consumption.
- Trees play an important role in **increasing urban biodiversity**, providing plants and animals with a proper habitat, food and protection.
- A mature tree can absorb up to 350 lbs. of CO<sub>2</sub> per year. As a result, trees play an important role in **climate change mitigation**. In cities with high levels of pollution, trees can improve air quality making cities healthier places to live in.
- Strategic placement of trees in cities can help to **cool the air** between 30-40° F, thus reducing the urban “heat island” effect, helping reduce extreme heat conditions in summer weather.
- Large trees are great biological **filters for urban pollutants** and particulate pollution. They absorb pollutant gases (such as carbon monoxide, nitrogen oxides, ozone and Sulphur oxides) and filter fine particulates such as dust, dirt, or smoke out of the air by trapping them on leaves and bark.
- Research shows that living in close proximity of urban green spaces and having access to them, can **improve physical and mental health**, for example by decreasing high blood pressure and stress. Also, research indicates

greatly improved neo-natal health as well. This, in turn, contributes to the well-being of urban communities.

- Mature trees **regulate water flow** and play a key role in preventing floods and reducing the risk of sewer overflow. Stormwater management is a crucial city infrastructure issue and trees help. A mature tree, for instance, can intercept more than 5,000 gallons of water per year and without trees, every rain would contribute floods.
- Trees also help to **reduce carbon emissions** by helping to conserve energy. For example, the correct placement of trees around buildings can reduce the need for air conditioning by 30 percent and reduce winter heating bills by 20-50 percent.
- Planning urban landscapes with trees can **increase property value**, by up to 15 percent, and attract tourism and business.



Trees make life better.

These are just a few examples of the functional benefits that trees provide to our everyday life. A community or neighborhood with well-planned and well-managed green infrastructure becomes more resilient, sustainable and equitable in terms of livelihood improvement, climate change mitigation and adaptation, disaster risk reduction and ecosystems conservation. Throughout their lifetime, trees can thus provide a benefit package worth two to three times more than the investment made in planting and caring for them. Trees aren't the answer, but they are part of the equation. Planting trees is important, but their maintenance is as equally important.

For more information on urban tree care, visit the [Purdue Education Store](#) for tree care tips and suggestions.

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