# Info

Working Trees

## How can agroforestry practices and approaches support green infrastructure?

The Beacon Hill Food Forest is one element of the city of Seattle's green infrastructure. Photo by Catherine Bukowski.

Green infrastructure is an approach to conservation intended to create a network of "green" areas to benefit people and wildlife. Such networks can include protected lands such as national parks, working lands such as farms, forests, ranchlands, and parklands or other spaces with trees and grass found in urban areas and communities. Even small patches of land, such as a rain garden in someone's front yard, can contribute to the effectiveness of green infrastructure.

Green infrastructure networks can include lands with agroforestry - the intentional integration of trees and/or shrubs with agriculture (e.g. crops and livestock). Whether designed for agricultural lands or forest lands, agroforestry practices can provide environmental and community benefits while producing food and enhancing landowner incomes.

The designs and methods used to plan and manage agroforestry systems can be adapted and applied to a community's green infrastructure effort. For example, agroforestry practices can add additional benefits to other tree planting efforts, including food production, climate change adaptation and mitigation, water quality improvements, and sound, odor, and dust control. This integrated approach to land management can enhance the benefits of green infrastructure. The increasing popularity of urban agriculture and food forests provides new opportunities to incorporate trees and perennial plants into our communities and landscapes. This can happen at a variety of scales, ranging from the design of green infrastructure on a street to larger landscapes, such as a park or greenway. Agroforestry practices have particular relevance to the "rural-urban interface", where they can provide significant environmental benefits while allowing the land to remain economically and socially productive.

A woman picks strawberries at a food forest in Kansas City. Photo by Catherine Bukowski.

# Examples of how green infrastructure can be implemented

### Food forests:
Food forests can enhance education efforts, local food production, pollinators and recreation. They can borrow methods from forest farming and other agroforestry practices to reduce wind speed and increase humidity to benefit annual and perennial crops.

### Floodplain and river corridors:
Limiting development adjacent to streams and rivers reduces risks and maintains the floodplain's ability to absorb flood waters, reducing floods downstream. Instead, this land can be used for agriculture, incorporating perennials that can withstand flooding.

### Year round plant cover:
In rural areas, year round plant cover like riparian buffers, windbreaks, and alley cropping slows runoff. This reduces erosion, improves water quality, protects drinking water, provides wildlife habitat and maintains the productivity of the land. Profitable land is less likely to be developed.

### Wildlife corridors:
Riparian forest buffers and other agroforestry systems can act as corridors for wildlife to move between patches of habitat. These systems can also provide income for landowners and habitat for pollinators.

### Greening new development:
Incorporating green infrastructure and agroforestry elements in the planning of new developments is less costly and more effective than retrofitting developed areas.

### Tree planting in rural communities:
In addition to increasing shade, reducing temperature, or retaining storm water, trees can perform other functions in communities. For example, windbreaks can reduce wind speeds near buildings and recreational fields, keep snow drifts off roadways, or act as visual screens.

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USDA National Agroforestry Center

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