



***Green Communities are \$mart Communities
That's Why ... Trees!
Why Trees?***

Traffic Calming and Public Safety

- [I.S.A. Journal of Arboriculture](#)
This study analyzed national traffic collision data to address concerns about urban trees and traffic safety, including crash incidence and severity. Distinctions of urban and rural conditions were explored using descriptive, comparative, and predictive analysis methods. The findings acknowledge the serious consequences of tree crashes but distinguish urban/rural situations
- [Seattle Right-of-Way Improvements Manual](#)
Street Trees as a traffic calming tool
- [University of Washington - College of Environment](#)
Center for Urban Horticulture - Human Dimensions of Urban Forestry and Urban Greening: Trees and Transportation – includes studies and a wide variety of resources from various professions, etc on the value of having quality landscapes in urban roadsides
- [Walkable Communities](#)
This article describes the empirical findings on street trees and their effect on driving behavior, safety perception and speed. The experiment investigated the effect of trees on perception of safety and driving speeds in urban or suburban settings. Tree-lined streets were perceived to be safer in both urban and suburban conditions. Individual driving speeds were significantly reduced in the suburban settings with trees

Property Values, Tax Bases

- [Arbor Day Foundation – Tree Benefits](#)
Site provide statistics on just how important trees are in a community setting
- [Arboriculture & Urban Forestry](#)
A bimonthly refereed journal devoted to the dissemination of knowledge in the science and art of planting and caring for trees in the urban environment. The journal is published by the International Society of Arboriculture, whose mission is to foster a greater appreciation for trees and to promote the research, technology, and practice of professional arboriculture. Back issues from 1975 through current are available through the [Browse Articles](#) link. Example: [“Influence of Trees and Landscaping on Rental Rates at Office Buildings”](#)

- [Urban Forestry Network](#)
This site was funded with grants from the Dalrymple Family Foundation and the Mississippi Forestry Commission and used to provide technical assistance, vital public education and outreach are needed as communities and cities begin to restore their urban forests after Hurricane Katrina
- [Urban Forestry & Urban Greening Article](#)
This article describes the effect of urban trees on the rental price of single-family homes in Portland, Oregon. An additional tree on a house's lot increased monthly rent by \$5.62, and a tree in the public right of way increased rent by \$21.00. These results are consistent with a previous hedonic analysis of the effects of trees on the sales price of homes in Portland, which suggests that homeowners and renters place similar values on urban trees
- [University of Washington - College of Environment – Center for Urban Horticulture - Human Dimensions of Urban Forestry and Urban Greening: Nature and Consumer Environments](#)
Shoppers are increasingly interested in the experience of shopping, as well as the goods and services they expect to purchase. A series of studies has investigated associations between the urban forest and people's response to shopping settings. These studies show that providing for trees in the streetscape is an important investment for a business community. The presence of a quality urban forest positively influences shoppers' perceptions, and probably, their behavior. The information includes research studies, and a guidelines booklet to help create and sustain beautiful streetscapes

Drainage & Flooding

- [Concerned Citizens of Johnson County](#)
Benefits of Trees/ Effect on Flooding; has several other links cited
- [I.C.L.E.I – Local Governments for Sustainability](#)
Talking Trees – An Urban Forestry toolkit for local governments
See Fact Sheet #4
- [i-Tree Hydro beta](#) is a new application now available in i-Tree v4.0. Hydro is designed for users interested in watershed scale analyses of vegetation and impervious cover effects on hydrology
- [Stormwater Management with trees and structural soils project site](#)
A collaborative effort between the Urban Forestry and Urban Horticulture programs at Virginia Tech, the Urban Horticulture Institute at Cornell University, and the Department of Land and Water Resources at the University of California at Davis. The vision was a full-canopy parking lot that allowed trees to serve their natural role as mediators of the hydrologic cycle. This new technology puts another tool in the kit of municipal public works—especially those dealing with increased infill development. It can be put to use in streetscapes and plazas, as well as parking lots. This website provides many resources such as a BMP design manual based on our research, a presentation for explaining how this system works to your municipality or business, and many other resource links

- [The National Tree Benefit Calculator- Trees are Good Website](#)
The Tree Benefit Calculator allows anyone to make a simple estimation of the benefits individual street-side trees provide. Overall benefit value, stormwater, property value, energy, air quality, and how much a tree reduces atmospheric carbon
- [The Stroud Water Research Center](#)
Funded by the William Penn Foundation; Support for establishing and maintaining streamside buffers. Excellent downloadable handouts on streamside forests
- [Tree City USA Bulletin: How Trees Can Retain Stormwater Runoff](#)
Trees in our communities provide many services beyond the inherent beauty they lend to streets and properties. One of the most overlooked and under-appreciated is their ability to reduce the volume of water rushing through gutters and pipes following a storm. This means less investment in expensive infrastructure and – importantly – cleaner water when the runoff reaches rivers and lakes. Read more about it in this Tree City USA Bulletin produced by the Arbor Day Foundation
- [University of Florida – IFAS Extension](#)
Urban Forests in Florida: Trees Control Stormwater Runoff and Improve Water Quality. This fact sheet shows how individual trees and urban forest cover assist in maintaining watershed health, improve water and soil quality
- [Upper Des Plaines River Ecosystem Partnership](#)
Bioswale and rain garden design and installation
- [Urban Watershed Forestry Manual](#)
This three-part manual series is designed to protect and restore urban watersheds, and is particularly focused on using trees for stormwater treatment and planting trees in the urban landscape. The three parts of the manual series are:
Part 1: Methods for Increasing Forest Cover in a Watershed
Part 2: Conserving and Planting Trees at Development Sites
Part 3: Urban Tree Planting Guide

The manual introduces the emerging topic of urban watershed forestry and presents new methods for systematically measuring watershed forest cover and techniques for maintaining or increasing this cover. It presents specific ways to enable developers, engineers or landscape architects to incorporate more trees into a development site. The manual also introduces conceptual designs for stormwater treatment practices that utilize trees as part of the design, and it provides detailed guidance on urban tree planting that is applicable at both the development site and the watershed scale.
- [USDA Natural Resources Conservation Service - Montana](#)
Describes bioswales; their design, uses and installation

- [U.S. Forest Service Ecosystem Services - Watershed Services](#)
Healthy trees are valuable assets for communities. Urban and community forests contribute to energy savings, better air and water quality, reduced storm water runoff, carbon storage, and increased property values

Air Quality

- [I.C.L.E.I – Local Governments for Sustainability](#)
Talking Trees – An Urban Forestry toolkit for local governments
See Fact Sheet #3
- [Institute of Environmental Management and Assessment- iema](#)
Urban Trees Improve Air Quality - Planting trees in urban areas could cut particulate pollution in cities by as much as a quarter, according to a new study. UK study
- [The Effects of Urban Trees on Air Quality 2002](#)
Urban vegetation can directly and indirectly affect local and regional air quality by altering the urban atmospheric environment. The four main ways that urban trees affect air quality area: Temperature reduction and other microclimatic effects, Removal of air pollutants, Emission of volatile organic compounds and tree maintenance emissions, and Energy effects on buildings.
Author David Nowak
- [The National Recreation and Parks Association 2010](#)
Executive Summary of Air Quality Effects of Urban Trees and Parks
Authors: David Nowak and Gordon Heisler
- [Urban Forestry Network](#)
Tree benefits and air quality

Health & Quality of Life

- [Alaska Department of Natural Resources – Division of Forestry](#)
Trees improve communities
- [Chicago Trees Initiative](#)
“The mission of the Chicago Trees Initiative is to improve quality of life in Chicago by increasing public awareness about the value and importance of trees. Together, we can inspire a civic and social movement that will involve all of us in improving Chicago’s urban forest
- [Ohio Department of Natural Resources Division of Forestry](#)
The Benefits of Planting and Growing Trees - Trees Improve our Quality of Life
- [Trees Are Good Website – Benefits of Trees](#)
Describes the social benefits of trees; Developed by the International Society of Arboriculture (ISA), a non-profit organization supporting tree care research around the world and is dedicated to the care and preservation of shade and ornamental trees

- [University of Illinois at Urbana – Landscape and Human Health Laboratory](#)
The Landscape and Human Health Laboratory (LHHL) is a multidisciplinary research laboratory dedicated to studying the connection between greenery and human health; Fact sheets, flyers, PowerPoint presentations for download.
- [University of Washington- College of Environment](#)
Center for Urban Horticulture - Human Dimensions of Urban Forestry and Urban Greening: Fact sheets and studies from urban forestry and human benefits to human health and well being research (Green Cities: Green Health)

Energy Savings

- [Georgia Forestry Commission](#)
Handout: “Making Your Home More Energy Efficient – By Planting Trees” Helps the homeowner determine best site location for tree planting for energy savings
- [Georgia Forestry Commission](#)
“Plant Trees – Save Energy!” Handout describing energy savings benefits by strategically planting trees
- [I.C.L.E.I – Local Governments for Sustainability](#)
Talking Trees – An Urban Forestry toolkit for local governments
See Fact Sheet #2
- [i-Tree Design \(beta\)](#)
Allows anyone to make a simple estimation of the benefits individual trees provide. With inputs of location, species, tree size and condition, users will get an understanding of the benefits that trees provide related to greenhouse gas mitigation, air quality improvements and storm water interception. With the added step of drawing a house or building footprint— and virtually "planting" a tree—trees' effects on building energy use can be evaluated.
- [Maryland Department of Natural Resources](#)
Various brochures: This one if from the series, The Benefits of Urban Trees – “Trees Save Energy”
- [Sacramento Municipal Utility District \(SMUD\)](#)
Calculators for tree benefit estimation for energy savings for all regions of U.S.
- [The U.S. Department of Energy – Energy Efficiency & Renewable Energy](#)
Energy Savers – Your Home - Landscaping
A well-designed landscape not only can add beauty to your home but it also can reduce your heating and cooling costs. On average, landscaping for energy efficiency provides enough energy savings to return an initial investment in less than 8 years. Here you can learn more about the following elements of an energy-efficient landscape design

- [The U.S. Department of Energy – Energy Efficiency & Renewable Energy – Clearing House](#)
“Landscaping for Energy Efficiency” - DOE/GO-10095-046, FS 220, April 1995.
A useful handout for interested stakeholders
- [The Yuma Sun Newspaper – January 18, 2010](#)
Article: Made in the shade: Trees save energy costs
- [Urban Forestry Network – Tree Benefits](#)
“Trees Reduce Energy Costs”