

**Trees Reduce Crime** - Urban areas with lots of greenery have less crime than those without trees.<sup>3</sup>

**Trees Improve Health** - They capture air pollution and reduce the incidence of asthma and respiratory disease. Patients with views of greenery heal faster and have better outcomes than those without.<sup>4</sup> Trees reduce stress in all settings.

Shade helps reduce incidents of skin cancer.

The cooling effects of tree-lined streets and shaded walkways allows residents to get outside and exercise more, leading to a higher level of community health overall.

**Trees Improve Learning and Behavior** - They improve self-discipline, especially in girls,<sup>5</sup> and relieve symptoms of ADHD.<sup>6</sup>

**Trees Foster Community Ties** - Neighborhoods with abundant trees feel safer and residents interact more than those without trees.

**Trees Provide Habitat** - Trees provide nesting sites for native birds and resting spots for migratory birds, which allows us to experience nature first hand.

Trees are good for people and communities. Have you ever heard anyone say “I’m going outside to read a book in the blazing sun?” As summers get hotter, people are more likely to stay inside with air conditioning unless the outside environment offers cooling shade. This contributes to isolation and keeps people from connecting with each other.

Energy costs continue to rise, meaning that people reduce their air conditioning usage to save money. At the same time, heat waves become threats to our health, especially to the oldest and youngest of our residents. Trees are nature’s air conditioners, providing shade and moisture to cool our cities.

Considering all the benefits we receive from our forest canopy, it makes sense to keep the protection, improvement and maintenance of these assets high on our list of priorities.

<sup>1</sup> Center for Urban Horticulture, University of Washington

<sup>4</sup> Ulrich, Science, 1984, 1985

<sup>2</sup> i-tree streets

<sup>5&6</sup> Taylor, Kuo & Sullivan, Journal of Environmental Psychology; Environment & Behavior.

<sup>3</sup> Kuo & Sullivan, Univ. of Illinois

## TOOLS & RESOURCES

[www.cuyahogareleaf.org](http://www.cuyahogareleaf.org)  
[www.ACTrees.org](http://www.ACTrees.org)  
[www.americanforests.org](http://www.americanforests.org)

[www.naturewithin.info](http://www.naturewithin.info)  
[www.treesaregood.com](http://www.treesaregood.com)  
[www.arborday.org](http://www.arborday.org)

[www.itreetools.org](http://www.itreetools.org)  
[www.treebenefits.com](http://www.treebenefits.com)

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### In this guide:

- The economic, environmental, physical and psychological benefits of your community forest
- The community forest as part of your stormwater and water quality management infrastructure
- Practices for planting, preserving, protecting and maintaining community trees
- Using building and zoning codes to support community forestry efforts
- Tips, tools and resources

## Yes, money *does* grow on trees: the economic benefits of a healthy forest

Your trees are the only parts of your community’s infrastructure that grow in value from year to year. And, unlike most parts of your built infrastructure, they don’t just perform one function.

**Boosting your Bottom Line** - Trees raise revenue for your community. Street trees increase property values, which means improved property tax revenue.

**Trees are Business Builders** - Research shows that shoppers will spend more time, and more money, at retail areas with trees and shaded parking than they will at areas without trees.<sup>1</sup>

**A Dollar Saved is a Dollar Earned** - Trees reduce operating expenses through cost avoidance:

- Shade from trees extends the life of paved surfaces, reducing the need to repave as frequently.
- Trees interrupt runoff and absorb stormwater, reducing the need for costly “grey” stormwater infrastructure, and they reduce stress on existing infrastructure, extending its useful life. One 18-inch-diameter maple can absorb 2,000 gallons of stormwater each year.<sup>2</sup>
- Trees reduce energy costs when they are placed so as to shade buildings in summer and block winds in winter.
- Trees reduce fuel costs. Fleet vehicles parked in shade or sheltered locations use less fuel to cool down in summer and warm up in winter.
- Trees reduce watering expenses. Established trees need less water than lawns, and their shade can reduce the water needs of other landscape plants.
- Trees can reduce personnel costs and employee absences, and increase productivity, as they improve employee health, reduce stress and contribute to a general sense of well-being.



## TIP

### SHOW AND TELL

Show your residents the value of their trees by hanging price tags on them.

You can find good tree benefit calculators at [treebenefits.com](http://treebenefits.com) and [itreetools.org](http://itreetools.org).

## That's not a tree. It's a huge vertical water tower and erosion-prevention structure: Forest management *is* stormwater management.

Your urban forest is part of your city's infrastructure, just like sewers, utilities and roads.

They deserve the same respect, maintenance and investment as built structures.

**Preserve and Protect First, Plant Later** - If you maintain the trees you've got, especially the big ones that provide a lot of water absorption and shade, you'll be ahead of the game. Find and remove Stem Girdling Roots before they kill your trees.

Trees are stormwater infrastructure and need to be treated as such. Just as you have to maintain the sewer system, the top priority should be to keep what you have, and keep it working. That means checking for problems, training young trees, pruning as needed and repairing the results of poor mulching practices.

### The Complete Canopy - Plant with a purpose

Trees planted anywhere will reduce stormwater runoff, flooding and water pollution. But the right trees in the right places can maximize your management potential. Invest in the largest trees for the site, and choose the ones that will grow best on the spot, not necessarily the prettiest (flowers fade - go for shade.)

**Overall Forest Health: What's your Urban Tree Canopy goal?** Most communities strive to have at least 40% of their land area under canopy. If you don't know where you stand, do an assessment, or get the numbers from a countywide assessment, or use a tool like i-trees to see how you measure up.

**The Big Bang: Parks, Schools, City Properties and Parking Lots** - Since you can't control how much of that coverage comes on private land, communities must maximize the amount that's on public land. If you've got big areas with nothing but lawn, start planting trees and understory vegetation. Today.

**The Big Bucks: Street Trees and Commercial Areas** - These are the trees that increase property values, retail income and tax revenues. Give them room to grow and you'll be rewarded.

**The Big Benefits: Plant Where the Water Is** - If you want the benefits of trees for stormwater management, then put them where they'll block runoff, or absorb standing water, or where erosion happens.

### Managing riparian (streamside) buffers for water quality

#### TIP

##### DON'T MOW, LET IT GROW!

Save a stream, reduce air pollution, cut the time your service workers spend mowing, and save a bunch of money on gas.



The healthiest streams are those surrounded by forest. The happiest landowners with streams that tend to flood are those with trees and vegetation in the floodplain. The biggest problem for our streams and lakes right now is runoff of nutrients (fertilizer.) It feeds algae and removes oxygen. That's bad. What's good? Stop using fertilizer, or plant a deep buffer area between the lawn and the stream to absorb the nutrients before they kill the stream.

**A Setback Is Not a Necessarily a Buffer** - If your city has riparian setbacks, that's great. But it's just a distance measuring an area in which property owners can't build. Unless it's also an area where property owners can't *mow*, it's not improving things all that much. If your city has riparian areas, stop mowing them. Plant trees there, or let nature take its course, and put up signs saying "This is a demonstration of stream restoration through natural succession." Then help backyard stream owners do the same thing. Everyone will save money on mower fuel and time.

## Crack the Code. Use ordinances and policies to support your urban forests

**Include Trees in Building and Housing Inspections** - Your *housing* inspectors are your city's eyes on properties, but most are trained, and expected, only to evaluate built structures. Train them to see and evaluate trees on private properties in the course of inspections. Even if they are only trained to recognize at-risk trees, that's something.

Your *building* inspectors, or *city arborist*, should inspect any planting, anywhere. Inspectors should be trained to recognize poor planting procedures and require remediation as they would with any structural work.

**Require Canopy Cover** - Require a minimum amount of canopy cover in all site plans for new construction

**Help the Homeowner** - Support planting on front lawns and vegetation of riparian buffers with financial incentives for homeowners.

**Protect Your Assets** - Keep earth disturbing activities and construction vehicles far away from trees. No, heavy equipment may *not* park on soil or grass near a tree. Soil compaction is a tree-killer.

**Enforce Tree-Damage Codes** - Expand "damage to trees" codes to include damage to private-property trees by utility companies and contractors.

**Tall Grass is Good** - If your ordinances mandate that grass not be allowed to exceed 6 inches in height, remove that restriction for riparian setbacks to turn them into vegetated buffers.

### Funding your forest - Trees grow on money

**Create a Tree Fund** - Set up a special dedicated fund where monies from tree-related fines and fees, donations, fundraising and other sources can be deposited and used specifically to support urban forest restoration and maintenance.

**Allow Payment in Lieu of Mitigation** - Keep your overall canopy coverage level by allowing builders or property owners who remove trees to contribute replacement costs to the Tree Fund to plant mitigation trees elsewhere. It allows you to plant where you need more canopy, not just where the developer chooses.

**Respect Your Tree Budget** - Make your forestry operations budget a line item within, or separate from, your general service department budget. Nobody respects something they can't see.

### Be specific - Setting specifications for planting and maintaining trees

**Treat Landscapers Like Contractors** - They are, after all, installing and maintaining essential pieces of your city's infrastructure. Require landscapers to register with your city, read your specs and follow them. Knowing how to mow a lawn doesn't mean a person knows how to plant a tree.

**Set Standards and Enforce Them** - Distribute and enforce tree planting and mulching specs. Root flares must be visible above the surface. Wire baskets and burlap must be removed (no, they *don't* biodegrade) and staking must be removed when no longer needed.

**Prohibit Volcano Mulching...By Law.** - **Poor mulching practices are killing our urban trees and creating hazardous conditions. Educate landscapers and homeowners on proper procedures, and enforce standards.**



#### TIP

##### IT'S GOOD TO BE SQUARE!

It seems natural to create a round mulch bed on a tree lawn. But a **square** mulch bed is a lot easier to make and maintain. And it discourages the dastardly practice of volcano mulching, so your trees have a fighting chance to grow and thrive.