

Tree Preservation and Management

FACT SHEET

FACT SHEET

FACT SHEET

FACT SHEET

It's not an exaggeration to say that trees define the character of our region. Thirty-five percent of the region's land area, or 1,095,243 acres, are covered by forests.¹ This amounts to around 500 million individual trees.² Many thousands of additional trees grace our cities, suburbs, and villages.

Benefits

Trees provide enormous aesthetic, economic, and environmental benefits to our region.³ Consider:

- An acre of trees can produce enough oxygen each year to keep 300 people alive.
- Trees directly remove air pollutants—including ozone, sulfur dioxide, and carbon monoxide—and help ameliorate respiratory problems, such as asthma, the leading serious chronic illness among children.
- Trees provide shelter and food for birds and wildlife.
- Tree roots reduce soil erosion, preserving farmlands, steep slopes, and water bodies from degradation.
- Trees help conserve energy by shading buildings, providing evaporative cooling, and blocking winter winds. Shade from well-positioned trees can reduce air temperature 5-10 degrees, resulting in savings of up to 50 percent on air conditioning. Windbreaks can reduce winter heating costs by as much as 30 percent.
- A typical tree (25 to 30 feet tall) intercepts 70 percent of the water that falls on it during a half-inch rainfall, dramatically reducing the volume of storm water that must be processed, and helping communities avoid significant storm water management costs.
- Trees also naturally filter suspended solids from runoff (mostly particulates from gas and diesel fuel), reducing the amount that reaches and pollutes streams.
- Trees in our region store 173 million metric tons of carbon, a major contributor to atmospheric warming.⁵ Assuming an average tree lifespan of 50 years, our region's trees *each year* remove from the air the equivalent of the greenhouse gas emissions produced by...
 - ... 729,167 passenger vehicles, or
 - ... 8,139,535 barrels of oil, or
 - ... electricity use of 523,952 homes, or
 - ... burning 15,038 railcars' worth of coal, or
 - ... 1 coal-fired power plant.⁶
- Trees increase property values and thus the tax base of our communities. Each large front yard tree typically adds one percent to the home sales price, and large specimen trees can add ten percent to property values.



Wayne County is the leading county in New York State and third leading county in the nation in acres of apple trees.⁴ (photo courtesy of the New York Apple Association © New York Apple Association)

Tree Preservation and Management

FACT SHEET
FACT SHEET
FACT SHEET
FACT SHEET
FACT SHEET

- In tree-lined commercial streets and shopping plazas, shoppers are more likely to shop longer, return more often, pay more for parking, and spend 11 percent more for goods.
- Trees in urban areas are directly correlated with lower levels of fear, fewer incivilities, and less violent and aggressive behavior.
- Trees help reduce stress and increase feelings of well being with their myriad forms and patterns, pleasing colors, and fragrant blossoms.
- School children with ADHD show fewer symptoms if they have access to natural settings.
- Trees relieve the monotony of asphalt roads, concrete sidewalks, and masonry buildings.
- Trees provide fruit, lumber, maple syrup, mulch, and jobs.

Managing and Preserving Our Trees

To ensure their health, trees must be managed according to their locations. Forest trees, crop trees, residential street trees, commercial street trees, and parkland trees all have particular considerations for preservation.

Non-Regulatory Mechanisms

Non-regulatory mechanisms to manage and preserve trees include:

- Promoting low impact development and green infrastructure.
- Integrating a commitment to preservation and a preservation ethic into comprehensive plans, transportation plans, utility



Trees can increase property values, lower environmental costs, improve human health, and add to the attractiveness of communities.

plans, watershed plans, park and recreation plans, and energy plans.

Conceptual plans and advocacy can become the stimulus or basis for detailed management plans. Management plans for trees, regardless of their location, may include:

- An inventory of existing trees.
- Identification of planting sites.
- A prioritized planting plan.
- Standards for tree selection.
- Scheduled maintenance.
- An inspection program.
- Tree-friendly construction guidelines.
- Integrated disease and pest management.
- Reforestation plans.
- Plans for utilizing waste wood.

Regulatory Mechanisms

Local authorities have specific legal powers at their disposal to protect trees, including:

- Tree preservation ordinances.
- Natural resource overlay zoning.

Tree Preservation and Management

- Stream buffer regulation.
- Floodplain protection.
- Land disturbance/sediment controls.
- Wetland mitigation.

During a 50-year lifespan, the average tree will generate \$30,000 in oxygen, recycle \$35,000 worth of water, and clean up \$60,000 worth of air pollution.

Resources

Forest Connect, Cornell University: knowledge and resources to ensure sustainable production and ecological function on private forest lands <http://www2.dnr.cornell.edu/ext/forestconnect>.

Urban Forestry Best Management Practices for Public Works Managers, American Public Works Association Press, <http://www2.apwa.net/documents/About/CoopAgreements/UrbanForestry/UrbanForestry-4.pdf>.

Guidelines for Developing and Evaluating Tree Ordinances, International Society of Arboriculture, http://www.isa-arbor.com/education/resources/educ_TreeOrdinance-Guidelines.pdf.

New York State Department of Environmental Conservation Urban and Community Forestry Resources, <http://www.dec.ny.gov/lands/4957.html>

Tree City USA Program, National Arbor Day Foundation, <http://www.arborday.org/programs/treeCityUSA>.

Endnotes

1. *Finger Lakes Regional Sustainability Plan, Baseline Assessment Document*, <http://sustainable-fingerlakes.org>.
2. Average of 450 trees/acre, from American Forest <http://www.americanforests.org/assumptions-and-sources>.
3. Unless otherwise noted, the benefits are adapted from: *Trees Pay Us Back*, USDA Forest Service, 2006 (http://www.dec.ny.gov/docs/lands_forests_pdf/treespayusback.pdf); *Benefits of Trees*, Upstate Forever, 2005 (http://www.upstateforever.org/newsviews_other/Trees08_26_05/benefitsoftrees.pdf); *Why Trees*, Keep Indianapolis Beautiful (http://www.kibi.org/neighborwoods_why_trees).
4. *US Census of Agriculture*, 2007.
5. *Finger Lakes Regional Sustainability Plan*, op. cit.
6. *Greenhouse Gas Equivalencies Calculator*, US EPA, <http://www.epa.gov/cleanenergy/energy-resources/calculator.html>.

More Ways to Save Trees

Stop receiving junk mail • Buy recycled paper products • Drink shade-grown coffee • Use paperless billing • Support local land trusts and parks • Borrow books and opt for e-subscriptions • Look for FSC and SFI labels • Use reuseable shopping bags • Avoid unsustainable palm oil • Eat a more vegetarian diet • Print on both sides of copy paper • Reuse wrapping paper • Use a travel mug for your take-out coffee and ceramic cup for dining-in • Use cloth napkins, handkerchiefs, and diapers • Plant a tree.

from The Daily Green at GoodHousekeeping.com

- Genesee Transportation Council, April 2013