FACTS FOR ACTION

Scenic America

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Trees in Your Community

An Important But Disappearing Resource

Open any magazine on architecture or gardening and chances are you will find dozens of pictures of "dream homes" surrounded by trees. Because most people prefer to live, work, and visit beautiful places, trees are one of a community's most vital assets. Trees contribute to the beauty and character of the local landscape. Different native species distinguish one place from another. And trees shape the perception and feelings about our neighborhoods by framing buildings and enhancing open spaces.

Trees are critical to the overall quality of our environment. Trees offset development impacts, significantly diminish noise pollution, lower air temperature, reduce smog, remove pollutants from the air, and decrease topsoil erosion. Trees are a critical component of numerous ecosystems and provide habitats for songbirds, small forest animals, wildflowers, and smaller understory trees.

Benefits of Protecting Your Community's Trees

As important as trees are, their survival is often threatened by development. For instance, developers commonly clear-cut building sites to make construction faster and easier. Millions of trees are needlessly destroyed in this way each year, because many communities do not have strong tree preservation ordinances.

Environmental Benefits

- **Air Quality--** Trees are an efficient and cost-effective way for a community to improve its air quality and reduce pollution. A mature tree absorbs between 120-240 pounds per year of small particles and gases, like carbon-dioxide, which are released into the air by automobiles and industrial facilities. In addition, a single tree produces nearly three-quarters of the oxygen required for one person; and a canopy of trees in an urban environment can slash smog levels up to six percent.[1] American Forests reports that just 25,000 acres of forest can offset the equivalent emissions of 10 billion automobile miles.[2]

- **Water Quality--** Trees help anchor soil and reduce storm water runoff, saving the high costs of drainage ditches, storm sewers, and other "engineered solutions" to storm water management. A street lined with 32-foot tall trees can reduce runoff by almost 327 gallons, allowing cities to install smaller and less expensive water management systems.[3] Reducing runoff also decreases topsoil erosion and the amount of silt and other pollutants washed into streams, rivers, and lakes.

- **Lower Heating and Cooling Costs**-- Trees have demonstrated the ability to reduce heating and cooling costs and counteract the "heat island" effect in urban environments. Urban areas with little vegetation can experience temperatures of up to seven degrees higher than those with tree cover.[4] This translates into significantly higher energy costs to cool buildings. Properly planted trees can cut heating and cooling costs by as much as 12 percent and reduce overall power demand.[5]

- **Reduced Noise Pollution**-- Noise pollution is an often overlooked problem. Excessive or unwanted sound has negative physical and psychological effects. Noise can come from many sources, especially roads and highways. Trees can play an important role in deadening unwanted noise. Sound waves are absorbed by a tree's leaves, branches, and twigs. Studies suggest that belts of trees 100 feet wide and 45 feet long can cut highway noise in half.[6]

Economic Benefits

Trees are a major economic asset to a community, building a positive community image which is a key factor in attracting residents, businesses, and visitors alike. Some of the economic benefits attributed to trees include:

- **Higher Commercial Land Values and Occupancy Rates**-- Trees have a positive impact on the value of commercial property. Recent surveys indicate that nine out of 10 commercial real estate appraisers believe that trees boost the sales appeal of commercial properties and add significantly to their value. In addition, commercial areas with trees enjoy higher occupancy and rental/lease rates than identical properties that lack landscaping. Some studies suggest attractive tree-lined commercial centers are more desirable than those areas without trees that have direct access to main roadways.[7]

- **Increased Consumer Patronage and Spending**-- The appearance of a business can attract or repel customers. Well-landscaped businesses project an image of quality and service that entices customers. Surveys show that three out of four consumers prefer to shop in places that are graced by trees and other forms of landscaping. One study showed that patrons to shops with extensive landscaping and tree cover spent 11 percent more than they would in an identical shop without attractive landscaping and trees.[8]

- **Greater Residential Property Values**-- Studies have consistently shown that trees have a major impact on the price and desirability of homes. Among identical homes, those with trees sell for an average of five percent more than homes without trees. Property values for unimproved lots can rise as

much as 30 percent based on the amount and density of tree cover.[9]

Health

There is mounting evidence that stress and noise have an impact on our physical and psychological health. Trees and vegetation can affect our mood and help relieve stress. Research is showing that trees have a restorative quality that helps people feel and function better:

- Dr. Robert Ulrich of Texas A&M University found that over a nine year period gall bladder patients who could see trees outside their windows, instead of a blank wall, needed almost a full day less recovery time and required fewer pain killers. The study also found that people who are exposed to nature after periods of heavy stress exhibit fewer signs of physiological stress.[10]

- Studies on driving and road-related stress have shown that drivers exposed to nature are less likely to have a negative response to stressful situations then those that were not exposed to nature.[11]

- A survey conducted by Dr. Rachel Kaplan found that office workers who could see trees from their desks report higher levels of satisfaction with their jobs and better overall health than those workers that could not see trees.[12]

Strategies for Protecting Your Community's Trees

The importance of trees to our quality of life requires that we protect them. Property owners have a major responsibility to care for and maintain their trees. Citizens and communities must adopt and enforce sound policies and regulations that will protect the scenic, environmental, and economic benefits of trees. Below are some strategies that your community can adopt to save its trees.

Education

- Educate property owners about how to care for and maintain their trees. Obtain good information about tree protection from professional foresters, horticulturists, landscape architects, and planners.
- Involve citizens in preserving your community's trees. Those who have lived in a community for many years have a deep understanding of the area's needs. Experts such as tree or planning commission members, municipal attorneys, and environmental and natural resource consultants can contribute to the process by analyzing the best tree policies to achieve desired community goals.

Voluntary Measures

- Invite community groups, interested citizens, local leaders and business owners to donate time and/or money to local

landscaping and tree preservation efforts.
- Encourage local landowners to donate easements on woodlands to the community.
- Establish a volunteer program to maintain trees for elderly, disabled, or financially burdened property owners.

Incentives

One of the best ways to promote tree preservation is to provide incentives. Incentives encourage landowners to protect their trees and improve the community. Some common incentives include:

- Establishing a community grant fund for replacing or planting new trees;
- Offering developers zoning incentives such as reduced setbacks or increased density in exchange for tree preservation; and
- Giving property tax breaks to landowners who agree to preserve their woodlands.

Land Acquisition

While purchasing tracts of woodland or easements is one of the most expensive options, outright purchase is sometimes the only way to permanently protect trees from development pressure.

- Identify forested areas that are particularly vulnerable to development or deforestation. Investigate donation or purchase of the area, or seek donation of easements on the land.
- Encourage local governments, nonprofit organizations, land trusts, and private citizens to purchase land and place permanent restrictions on the deed before reselling or donating the land.

Regulatory Measures

- Adopt and enforce sound regulations that will protect the scenic, environmental and economic benefits of trees. Tree conservation ordinances are an important tool that may require planting street trees, protect sensitive forested areas, limit clearing during development, or provide incentives for development that preserves trees. Austin, TX; Seattle,WA; Cincinnati, OH; and Tampa, FL are just some of the cities across the country that have adopted strict tree preservation ordinances.
- Establish distance or buffer zone requirements to protect trees. Regulations requiring a buffer zone (typically 100 feet or more) between major roadways and any buildings on private land are an effective way to preserve trees and screen development. All trees within buffers are designated for conservation and removed only under exceptional circumstances.

Resources

Where indicated, the following publications are available from Scenic America at (202) 543-6200 or through our website at *www.scenic.org*.

Aesthetics, Community Character, and the Law. (1999). $34.00. Christopher Duerksen and R. Matthew Goebel. APA and Scenic America. A comprehensive guide to legal mechanisms, including tree preservation, that communities can employ to protect their natural beauty and distinctive character.

Tree Conservation Ordinances: Land Use Regulations Go Green. (1993). $32.00. Christopher Duerksen. APA and Scenic America. A guidebook for planning and implementing a successful tree conservation ordinance.

From Sprawl to Smart Growth: How to Achieve Beautiful Results. (2000). $3.50. Scenic America. A series of nine fact sheets on how communities can stop haphazard sprawl, preserve scenic beauty, and encourage smart growth.

Trees Make Cents. (1992). $5.00. Scenic America and Elizabeth Brabec. Documents case studies demonstrating the positive economic impact of tree and landscape protection.

Trees Are Treasure: Sustaining the Community Forests. Video. $20.00. Provides interesting case studies of cities and counties that have adopted regulations for tree and forest protection.

Center for Urban Horticulture
http://depts.washington.edu/urbhort.
An excellent website for studies and information on the benefits of trees.

American Forests
www.americanforests.com.
Nonprofit action group dedicated to protecting and restoring America's forests.

Notes

1. *Urban Forest Values: Economic Benefits of Trees in Cities*. 1999. The Center for Urban Horticulture.
2. *How Forests Fight Climate Change*. 1999. American Forests.
3. *Urban Forest Values: Economic Benefits of Trees in Cities*. 1999. The Center for Urban Horticulture.
4. *Tree Conservation Ordinances: Land-Use Regulations Go Green*. 1993. Christopher Duerksen. APA and Scenic America.
5. *Tree Conservation Ordinances: Land-Use Regulations Go Green*. 1993. Christopher Duerksen. APA and Scenic America.
6. *Tree Conservation Ordinances: Land-Use Regulations Go Green*. 1993. Christopher Duerksen. APA and Scenic America.
7. *Urban Forest Values: Economic Benefits of Trees in Cities*. 1999. The Center for Urban Horticulture.
8. *Trees in Business Districts: Positive Effects on Consumer Behavior!* 1999. The Center for Urban Horticulture.
9. *Urban Forest Values: Economic Benefits of Trees in Cities*. 1999. The Center for Urban Horticulture.
10. "Human Responses to Vegetation and Landscapes." 1986. Dr. Roger Ulrich.

Landscape and Urban Planning, 13: 29-44.
11. *Urban Nature Benefits: Psycho-Social Dimensions of People and Plants*. 1999. Center for Urban Horticulture.
12. *The Experience of Nature: A Psychological Perspective*. 1989. Kaplan, R. and S. Kaplan. Cambridge University Press.