



Could Treeless Cities Be in Our Future?

Just think what it would be like to live among unrelenting aspects of concrete, brick, and asphalt without the visual relief of trees. Hard to imagine, isn't it? Not only do we depend on our "urban forests" to improve the esthetic value of our surroundings; we also rely on them to provide wildlife habitat, economic stimuli, outdoor recreation, and for cleaner, healthier living spaces.

While trees play a vital role in our health, we humans make life difficult for trees. Land clearing for both residential and commercial development continues at a rapid pace throughout the country. Acres and acres of forests are being stripped away in order to make room for new homes, shopping centers, and industrial parks.

When we do allow trees to share our space, man-made stresses significantly shorten their lifespans. Our urban trees age prematurely due to a number of factors including improper pruning and planting, poor species selection, wounds from machines and people, water availability, heat and wind exposure, and compacted and contaminated soils.

According to American Forests, a non-profit conservation organization, there are over 600 million planting spaces along U.S. city streets. At full capacity, a well-maintained urban forest will save a community millions of dollars in stormwater runoff expenses, remove millions of pounds of air pollutants, and reduce energy costs by millions of dollars. These are no small numbers!

In addition to saving money on energy, treed landscaping can also save your city on maintenance expenses. For example, just 20 acres of trees planted along Interstate 71 outside Cincinnati is projected to save about \$6,000 a year in mowing costs.

The upshot is that we need trees for a variety of reasons. Here are some ways you can help protect your neighborhood trees:

1. Promote long-term tree care programs. While we can't do much about the harshness of the urban environment, we can develop proactive tree care programs that enhance tree longevity.
2. Make sure that the tree is right for the site. For example, avoid planting tree species with mature heights of over 25 feet under electric lines.

3. Implement policies to protect existing, mature treescapes from damage by construction activity. Encourage your community to implement a construction policy or Tree Preservation Ordinance for municipal trees.
4. Keep a street tree inventory so you can easily track trees that need to be replaced. This inventory can also be used to schedule tree pruning, removal, and other maintenance needs. An inventory is most helpful in letting you and community officials see the overall condition and composition of your urban forest so that you can design effective management strategies.
5. Turn the unpopular task of tree removal into a positive by harvesting "waste" urban trees. Find sawyers in your area who can convert your waste trees into lumber that can be used to build park benches, playground equipment, and landscape timbers. This way, your parks and recreation department can use funds once designated for building materials to buy replacement trees instead.

Part of our legacy for future generations entails convincing our appointed officials that trees are more than a glamorous add-on to our municipal budget. Trees are a critical component of our urban infrastructure on par with transportation, water and drainage, utilities, and safety systems. Help to ensure that our children and their children will be rewarded with the benefits and beauty of our "urban forests" for years to come.

For additional information about what you can do to improve your community tree care program, visit www.treelink.org.



Tired of High Power Bills? Try Tree Power Instead

Just when you think you've got credit card bills from the holidays under control, winter rears its ugly head, and high heating bills rise up to take their place. If you're like most people, every year you trudge to the hardware store for weather-stripping and caulk in an effort to seal out winter winds and forestall those expensive power bills.

There is a way to save money on your utility bills that comes more naturally—plant trees! According to the U.S. Department of Energy, the strategic placement of just three trees can save an average household between \$100 and \$250 annually in energy costs.

The key is to position your trees so they can act as a windbreak. Properly planted, windbreaks channel winds away from or over a house. Even the downward fall of rain, sleet, and hail can be absorbed or deflected by trees. What kind of tree should the average homeowner consider for windbreaks? Evergreens, which keep their leaves/needles all year, are a good choice. Plant them to screen the southwest and northwest areas of your property, as snow and wind generally come from these directions. Trees intended as windbreaks should be positioned two to five times the mature height of the tree away from your home. If you are uncertain, get professional assistance to assure correct placement and selection of species.

You can rely on your local urban forester, professional landscapers, nurseries, or county extension offices to help you plan for mature growth and suggest trees that will thrive in your area.

If you're still skeptical that a few trees can save you money on energy usage, consider the fact that dew and frost are less likely to occur under trees. This is because less radiant energy is released from the soil in treed areas at night. Bottom line—trees help keep the air near your home warmer.

And if too much warmth around your home is a problem in the summer—again, a minimum of three large trees can dramatically reduce air conditioning costs. The net cooling effect of a young, healthy tree is equivalent to 10 room-size air conditioners operating 20 hours a day, says the U.S. Department of Agriculture. Many local urban foresters work to plant trees in order to moderate the heat island effect caused by pavement and buildings in our cities.

As for shading your home, what kind of trees yield the best results? Deciduous trees with high, spreading leaves and branches are great. They provide shade and block the sun's heat during hotter months. By dropping their leaves in the fall, they allow sunlight to filter through in colder months. To maximize summertime roof shading, place trees on the south side of your home. To minimize lower afternoon sun angles, plant trees with lower branches positioned to the west. Shading all hard surfaces such as driveways, patios, and sidewalks is also a good idea, as this decreases heat radiation and helps cool air before it reaches your home's walls and windows.

Trees can save you money on utility bills all year long. When embarking on a tree-planting project to improve your house's energy-efficiency, be sure to consider the following points:

- Your house's orientation to the sun.
- The amount of shade you'll need.
- The intensity and direction of wind around your home.

Next time you're enjoying the beauty and color of your neighborhood trees, remember they can also help you stay warmer in winter and cooler in summer, while you reap the benefits of lowered energy costs.



How Smart Tree Planning and Planting Help New Developments and Established Neighborhoods

“The best friend on earth of man is the tree. When we use the tree respectfully and economically, we have one of the greatest resources of the earth.”

Frank Lloyd Wright

One of the world’s best known architects and visionaries recognized long ago what modern studies now prove: trees greatly increase the appeal of any property—from new subdivisions to commercial centers, from offices to your own backyard.

Research shows that trees stimulate economic development. They help attract new business—even tourism. Retail areas with trees are more attractive to shoppers, apartments rent more quickly, tenants stay longer, and land that is wooded is more valuable. Real estate appraisals of comparable houses with and without trees place a markedly higher value on those with yards sheltered by trees.

There’s little doubt that trees add beauty and visual excitement to urban and suburban settings. These areas would be harsh with square-edged structures and hard, paved surfaces without the softening presence of trees. Trees also enhance architectural designs, provide privacy and frame views. Varying textures and colors of foliage, flowers, bark and fruit create multiple seasons of interest.

Yet smart tree planning and planting does much more than beautify an area. It also serves many practical purposes.

For example, many people love the airy, open feeling lots of natural lighting gives interior spaces. But, if you’re designing/building homes and offices, glare on TV or computer screens is a worry. Go ahead and put in plenty of skylights and windows! Planting trees of correct mature size, shape and density in the proper places can help make unwanted reflections a nonissue.

A good part of smart planning also means being knowledgeable about tree growth rates, strength, hardiness, and root systems so when foundations, sidewalks, driveways, sewers, gas, water and power lines are installed there won’t be problems later on. It’s important to realize that roots usually lie less than 12 inches below the surface and that roots often grow outward to a diameter one to two times the width of the tree. Luckily, most modern sewers are made of cemented pipe that greatly reduce the potential for tree roots to get into and clog sewers.

Utility lines should also be placed so they can be dug up and serviced without destroying nearby trees. If trees must be planted beneath power lines or within 15 feet of overhead power lines, choose trees with mature heights less than 25 feet. Utilities are generally buried at a depth between 2 and 4 feet, but this can vary greatly.

While it’s true that trees offer many benefits, if not chosen wisely, they can litter outdoor living areas or clog gutters with twigs, fruits, and other debris. Planted too close to buildings, trees can damage gutters, paint, or roofing. Plan to have trees that overhang buildings inspected for structural stability every 3-5 years by a certified arborist. Planting large trees too close to structures can overwhelm homes and is dangerous in fire prone communities.

Security lighting, a necessity in some urban areas, can be rendered ineffective by improper placement of trees with dense foliage, or by low spreading branches that can interfere with illumination.

Another consideration is the need to prune trees to make room for foot and car traffic. They can grow over traffic lights and cause dangerous sight conditions. Urban foresters generally recommend that new trees be planted at least 50 feet from intersections to prevent this. Branches of existing trees should be limbed up at six and a half to seven feet above the ground.

Among the most valuable natural assets in the modern city, trees bring nature into the urban or suburban site, enhance the environment, and raise property values.

Whether you live in a new development or existing neighborhood, you can experience the many benefits trees offer...all it takes is smart planning and planting.



An Easy Way to Increase Your Property Value: Plant Trees!

The average family is always looking for a solid investment. Stocks? Bonds? Gold? Don't overlook an easy way to get more from your money—trees.

Think about it. Cars, TVs, and computers all depreciate the minute you buy them. Trees increase in value the minute they are planted and continue to increase as they mature. They also add to your property's resale or rental value by improving curb appeal.

Looking for hard numbers? The U.S. tax court awarded a value of 9% (\$15,000) for the loss of a large black oak tree on a property valued at \$164,500. More and

more people are recognizing that trees serve many practical and esthetic purposes. As the emphasis on urban plantings increases, so does the need for better understanding tree stress. All tree species, whether native or exotic, are constantly being evaluated for their ability to thrive in urban and suburban environments.

After all, just buying a tree and planting it is not enough. You must also care for it and ensure that it fits into your total landscape to have it fully appreciate. To help you care for your trees, here's a list of Do's and Don'ts.

Tree Do's

Do consider types of trees that are strong and resistant to problems. Many urban locations expose trees to water, light, and wind extremes. Soil and air temperatures are higher in urban areas. Deicing salts and pollutants also cause lots of damage. An example of a less desirable species is Bradford pear, which has a tendency to split and has high maintenance needs.

Do plant trees in a pit at least twice the diameter of the root ball. Preparing a wide hole for planting is more important than a deep hole. Most feeder roots—which are critical for absorbing nutrients and water—exist in the upper 12 inches of soil. Till the soil in a wide ring around the hole to promote root development.

Do plant the tree with the root flare at the soil line. (The root flare is where the roots begin to grow away from the trunk.)

Do handle trees by the root ball, not the trunk, and don't let roots dry out. Give the tree plenty of water via a deep soaking once a week.

Do mulch around your trees. Just a 2- to 3-inch layer helps to hold in moisture, adds organic matter to the soil, and protects the trunk from lawn equipment.

Do look at your property from several different angles to see how to best frame your home and highlight its best features with trees. Place the center of the trees beyond the corners. Then fill in with other plants for foundation landscaping of varying heights that will draw your eye to the architectural element you want to show off.

Tree Don'ts

Don't backfill tree planting holes with poor quality soil. Backfill the pit with the hole's original soil or mix it with loose topsoil and discard any rocks or debris. Make sure to take away the displaced soil instead of piling it around the tree.

Don't leave packing material attached to roots. Remove the tree from its container and remove wire baskets, burlap (at least on the sides), and twine from the root ball.

Don't plant too deep!

Don't injure the bark. This is often caused by using lawn mowers and weed trimmers too close to tree trunks.

Don't crowd your landscaping. Give it room to grow. Plant in areas at least 5- to 8-feet wide and place everything with centers 3 or more feet from the walls of the house.

The intangible benefits of trees are great. Their tangible benefits can mean extra cash in your pocket when you sell your home or apply for a home equity loan.

BRING LIFE TO YOUR COMMUNITY



PLANT TREES

The Mightiest Pollution Fighters of All

Let's face it. Most human activities—from breathing to burning fossil fuels—cause air pollution. And, while we may not want Big Brother watching over us, it's a good thing Mother Nature is. It's as if she knew we'd need saving from ourselves and created trees to reduce the atmospheric levels of carbon dioxide created by everyday living.

The USDA Forest Service says a single acre of trees absorbs the same amount of carbon dioxide produced by driving a car 26,000 miles. This intake of carbon dioxide happens during photosynthesis, which is fortunate for us.

Not only do trees clean the air we need to breathe, they also fight air pollution by directly reducing nitrogen oxide and sulfur dioxide, major components of photochemical smog, ozone pollution, and acid rain. On a more tangible front, trees act as a giant filter on the world. Their leaves, stems, and twigs trap and filter out particulate matter, such as dust, ash, pollen, and smoke, from the air.

Trees also help keep water clean. As paving increases in neighborhoods and business districts, rain from storms flows more quickly across paved areas than it does across treed areas. The faster this storm runoff moves, the more it erodes and washes sediment and chemicals into drainage channels. The runoff carries with it oil and grime from parking lots, soil from construction sites, fertilizers from lawns, and chemicals from industrial discharges.

This storm runoff—with its soil sediment and pollutants—flows into drainage pipes and ditches and then into creeks, rivers, and lakes. Increased sediment clouds streams and destroys fish habitat. Chemicals make water undrinkable. So how can we promote clean water?

Trees. Tree leaves help interrupt and slow rainfall, allowing the water to soak into the soil. This reduces runoff and decreases the need for additional erosion control. Tree roots also hold soil in place, further slowing erosion.

In fact, trees are a great low-cost way for municipalities to save money on materials, installation and maintenance of sewer and drainage infrastructure. Trees in our backyards, along the streets, and in city parks help prevent erosion and filter pollutants from stormwater runoff, making smaller drainage pipes sufficient—another economical boost. A city's urban forest can reduce storm runoff by 7% according to the Maryland Department of Natural Resources Forest Service. Bottom line—trees clean the water that eventually flows into our rivers.

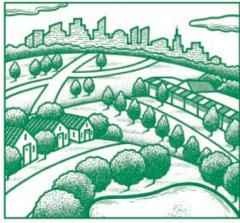
Picture your town or city without trees. Now picture it with more trees. There are between 60 to 200 million spaces along our town and city streets where new trees could be planted. These new trees could absorb more pollutants from our air and help prevent soil erosion and flooding. Public trees are a good municipal investment, right up there with bridges, roads, and storm drains. And trees are naturally green and beautiful.

Trees leaf out and green up the world. They calm the wind and reduce noise in our neighborhoods. They shade us. They moderate our climate, improve the look of our communities, conserve water, prevent erosion, and reduce flooding. And they take on specific problems—air and water pollution.

Many cities and villages have effectively increased the livability of their communities by actively managing their community trees—a relatively low-cost investment that provides high returns. Although often taken for granted, street and park trees provide economic, environmental, and social worth that all communities can enjoy. To ensure the efficient continuation of these benefits, this natural resource needs to be properly managed on par with other city services.

Help your community enjoy all the benefits Mother Nature offers through trees. Contact your state to find out how to start an urban forestry program in your area, or visit www.treelink.org.

BRING LIFE TO YOUR COMMUNITY



PLANT TREES

How to Establish an Urban Forestry Program in Your Neighborhood

As urban areas continue to expand—they now cover 69 million acres nationwide and are increasing at a rate of 1.3 million acres per year—it becomes increasingly important that we strive to maintain and manage existing trees, as well as initiate programs to plant and care for new trees. Why?

Public trees are a relatively low-cost investment with high returns that have allowed many cities and towns to effectively improve their livability. Trees increase in value the minute they are planted and continue to become more valuable as they mature. They add to property resale and rental values by improving curb appeal, not to mention the numerous other economic, environmental, and health benefits they provide. Well-maintained trees also supply year-round esthetic interest that adds to the quality of life for all citizens.

There is no doubt we must ensure that future generations continue to receive the beauty and benefits offered by trees—even during tough economic times.

That's why regional urban foresters are available to help you maximize the efficiency and effectiveness of your community's tree care programs.

These foresters are more than happy to meet with elected officials, city staff, volunteers, and citizens to enlist their support and begin organizing a comprehensive tree care program if one doesn't already exist.

They're also experts on trees—the different varieties—and how to best plant and maintain them. They can help you assess the health and condition of public trees and develop recommendations for their care.

Another way they can help is to share what other communities are doing to care for their urban forests. Instead of constantly reinventing the wheel, they are able to pool ideas from towns across the United States. In the past few years, they've been distributing information about the Asian longhorned beetle (which has resulted in the removal of thousands of trees in Jersey City, New York and Chicago) and shared how these exotic pests have been handled.

Ways an Urban Forestry Program Can Help Your Community

1. Organizational Assistance

- Meet with elected officials, city staff, volunteers, and citizens to educate them and enlist their support for the creation or expansion of local tree care programs.

- Assist with Tree City USA designation (helps with public image and community pride). Call the National Arbor Day Foundation at (402) 474-5655 or visit www.arborday.org for more information.
- Offer sample street tree and landscape legislation for local approval or modification.
- Outline what's needed to start your program (someone has to be in charge).
- Develop an Action Plan (lays out clear objectives for tree management, with timelines, jobs, and activities to ensure you accomplish goals).
- Document results and accomplishments.
- Foster ideas for citizen involvement (tree maintenance is a popular environmental program).

2. Technical Assistance

- Assist with tree selection, planting, and maintenance.
- Inventory health and condition of public trees and assess needs.
- Help identify trees needing removal due to structure, disease, pest damage, or old age.

3. Share Best Information

- Keep communities updated about breaking news through regional seminars, newsletters, and workshops.

If you already have an urban forestry program in place, what else can you do to help? Be part of an advisory committee that recommends policies and projects. Be the eyes and ears of your neighborhood and bring community feedback about insect problems and trees that pose a safety risk to the attention of your local tree commission or urban forester. Support and volunteer for projects like tree planting, watering, and pruning.

Urban and community forestry is a cost-effective way to improve the social, economic, and environmental health of your community. If you're interested in starting or improving a local urban forestry program, contact your local urban forester or go online to: www.treelink.org