

STREET SMART™ TREES



PART 1

THE PERSONAL BENEFITS— HOW TREES AFFECT OUR HEALTH THE HEALTHY HOME - FROM THE CRIB TO THE CURB

TREES IMPROVE OUR HEALTH AND WELL-BEING

We know that trees provide beauty and add a softness and color to our surroundings. They can screen or re-direct attention from unpleasant sights. Trees can also reduce noise pollution by creating background noise, and they muffle noise almost as well as a stone wall. (see [July 2004 R&D: The Art Of Screening With Plants](#) at www.beesongrows.com/ArchivePage.html)



Natural areas provide for recreational activities including physical fitness and community events. Trees can improve physical and mental health by reducing stress levels, increasing enjoyment, and providing clean air and water.

Trees bring urban residents back in touch with the natural world. Studies show that people with access to plants and nature are more productive. Nature is also used in therapy of all kinds. Recuperation is enhanced with views of wooded areas- faster recovery, and less pain and medications.

TREES IMPACT CHILDREN AND THEIR FUTURE

A study of parent-child pairs in urban housing showed that the more natural and green a view from a girl's home, the better her test scores were, and the greater self discipline she showed. Girls were then more likely to do well in school, and avoid unhealthy or risky behavior.

Boys in this study showed no similar links, but boys and girls, and children as well as adults can become fatigued from concentration and structured activities, and need to refresh their ability to focus. Green outdoor spaces foster creative play, which is valuable in child development, and improve access to interaction with adults. With ADD children this is especially important.

Over 2 million kids in the US are diagnosed with ADD. Medications to treat symptoms have side effects and costs, but outdoor play in natural green setting would have no side effects or costs, and helps ADD kids function better. A study showed that ADD symptoms were relieved after contact with nature. Kids displayed an increased ability to concentrate, complete tasks, and follow directions after play in green and natural settings. Sites with trees and grass were the most beneficial.



Landscaping can have a recovery value of 100-200%

INCREASE PROPERTY VALUES

Trees may be an average 20% of property value, but this value is determined by the buyer and seller. Trees and landscaping have higher impact on property value in higher-end housing because buyers are willing to pay more for extras.

Most people think neighborhoods with trees are attractive places to live, and properties near green spaces or greenways have increased value.

Mature trees are valuable in areas where old buildings have decreased in value. Preserving existing trees can also have less immediate and long-term costs than clearing the land.



GREEN IS MONEY	VALUE OF TREES	STUDIES SHOW
<i>Trees and Landscape for an average \$200,000 home</i>	\$7,000 to \$12,000	<i>Trees can increase value by 3.5-6% between comparable homes</i>
<i>A well-planned landscape for a single family home</i>	\$100 to \$200 per year	<i>A typical 25ft tree reduces the annual heating & cooling costs to a typical residence by 8-12%</i>

DECREASE ENERGY COSTS

By shading your home in warm months, trees can reduce temperatures by 20-40°F. Increased shade can also protect you from skin cancer by reducing your exposure to UV radiation. Trees also battle heat by reflecting and absorbing solar radiation. One large tree absorbs as much heat as several window air conditioners, which can decrease the temperature by 10°F in summer. Trees are also natural air conditioners, from evaporation through transpiration. A mature tree evaporates hundreds of gallons per day, and mature canopy can reduce air temps through evaporation by 5-10°F.

Trees can reduce heating costs in winter by acting as a windbreak. Conifers and other dense trees, and planting on the west and north side of building is most effective for blocking wind. (see July 2004 R&D: *The Art Of Screening With Plants* at www.beesongrows.com/ArchivePage.html)



Reducing energy use also conserves fossil fuels and reduces carbon emissions.

To take advantage of the natural heating and cooling of trees, carefully consider the species, location, type of building, and climate. Planting the wrong tree in the wrong place can increase energy costs. (see May 2004 R&D: *Extreme Landscaping* www.beesongrows.com/ArchivePage.html)

In high end real estate, small and medium sized trees enhanced the perception of real estate value

GREEN IS CLEAN - TREES IMPROVE AIR QUALITY

Air pollution harms living things and also breaks down man-made materials. Human health effects of air pollution depend on many factors, but include biochemical and physiological changes, difficulty breathing, wheezing, coughing, and aggravation of existing respiratory and cardiac conditions. Any of these problems can result in costs from use of medication, doctor visits, or hospital visits. Other costs are loss of productivity, lost wages from sick time, other out of pocket expenses, and loss of quality of life.

People greatest at risk from health effects of air pollution are the elderly, people with asthma. Children and newborns are also extra sensitive to air pollution because they take in more air for their body weight. Also with greater exposure to pollutants are people who exercise on hot smoggy days.

Trees have the ability to absorb and reduce airborne pollutants. Leafy trees absorb or trap dust, ash, pollen, smoke, nitrogen oxide, sulfur dioxide, carbon monoxide, and ozone. A mature tree absorbs 120-240lbs of small particles, which would cost an average of \$2.40 per pound if removed by other methods. Trees as windbreaks also reduce wind speeds so heavy particles settle. Improve the air quality and reduce costs of air purification by planting plenty of trees and other plants around your home.

The major air pollutants

- Carbon dioxide- from burning fossil fuels, burning of tropical forests
- Sulfur dioxide- from burning coal to generate electricity
- Hydrogen fluoride and silicon tetrafluoride- from aluminum and phosphate fertilizer production, oil refineries, and steel manufacturing
- Ozone- from chemical reactions of sunlight on auto exhaust gases, (ozone is a major factor in smog)
- Methane- from burning fossil fuels, livestock waste, landfills, rice production
- Nitrous oxides- from burning fossil fuels, auto exhaust
- Chlorofluorocarbons- from air conditioners, refrigerators, industrial foam

One average 18in caliper tree provides enough oxygen for a family of four humans or animals

