Excerpts from

Municipal Regulation of Trees & Landscaping

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"Trees affect the environment, cool your property and the neighbors', reduce energy costs, clean the air. They take up and hold water, release it into the air and increase rainfall. They reduce stormwater runoff, hold soil and mitigate erosion, which reduces flooding. They capture carbon, combating heat-creating atmospheric CO_2. " - David Foster, Texas director of Clean Water Fund

According to a study in the journal Environmental Pollution that used hourly weather and pollution data together with tree cover data to estimate pollution removal for each county, in 2010 America's trees saved 850 lives and prevented around 670,000 cases of severe respiratory problems. The study also used census data and a model from the Environmental Protection Agency to estimate the combined health-effect value in removing four pollutants: nitrogen dioxide, ozone, sulfur dioxide, and particulate matter smaller than 2.5 microns. In 2010, trees absorbed between 9 and 23.2 million tons of pollution, with an estimated health value of between $1.5 and $13 billion. Even though the majority of pollution reduction was outside cities due to the fact that most trees can be found in rural areas, it was cities that saw the biggest benefit, with $4.7 billion in health value savings in comparison to $2.2 billion for the countryside. Encouragingly, Texas was also among the three states that saw the greatest pollution removal amounts by volume.

The preservation of trees in cities should also be valued in the face of climate change concerns. It has also been shown that the right amount of tree cover is able to lower summer daytime temperatures by as much as 10 degrees Fahrenheit and combat what is known as the "urban heat island" effect. According to the study in the Proceedings of the National Academy of Sciences, the effect of tree cover is so noticeable as to clearly impact the weather from "neighborhood to neighborhood, even down to the scale of a single city block." To get the maximum benefit of tree covers' cooling effects, the study found that the tree canopy cover of an area must exceed 40 percent. For illustrative purposes, an aerial view of a city block with that coverage would need to be "nearly half-way covered by a leafy green network of branches and leaves." The right percentage of tree cover is what allows the canopy cover to cool the air down more than the pavement is able to heat it up. In addition to keeping cities cool, studies have also shown there are several mental and emotional restorative effects for their citizens. Research shows that a person's level of stress, blood pressure, muscle tension, asthma rates, and heart rate all decrease in the presence of trees. In other words, trees do more than make an area attractive. They trap pollution, absorb auto emissions, and cool sizzling pavement. In Baltimore, Maryland for example, the city's cumulative 14,000 acres of canopy ensnares in excess of 550,000 tons of carbon per year— offsetting 54 days' worth of emissions from the city's more than 600,000 residents.

Further, using a resource like the i-Tree program (www.itreetools.org) a software service from the USDA Forest Service further enables cities to map and value trees, potentially making the case for "greening" cities with the actual dollar values for trees all the more accessible. With the emergence of these new studies and resources, it stands to be shown that protecting trees is not simply about keeping

a city pretty, and that the urge to make cities pay to keep each of their trees to stop residents from cutting healthy ones down is only a gross underestimation of their true worth. In 2014, Texas Trees Foundation computed the dollar values of Dallas trees alone, based on research from eight organization and found that the annual value for stormwater savings, energy savings, air pollution removal, and carbon removal by Dallas' almost 15 million trees totaled $36.1 billion. These savings were found in both direct costs to homeowners and tax-funded costs.

In 2016, the U.S. Forest Service and Texas A&M Forest Service researchers found that the "compensatory value" of the roughly 33.8 million trees found in just the city of Austin was around $16 billion, or $480 per tree.

Trees absorb pollution, help with temperature control and water quality, improve people's health and moods, and adds value to real property and neighborhoods. They also connect communities to sources of pride in themselves, a sense of their past, their progress, what they've fought for— figuratively and even sometimes literally. Put simply, trees have been proven to make communities better places to live. They have been proven to help make communities, communities. In the words of Eillie Anzilotti, "These leafy streets cannot afford to be seen as a luxury."24 The present and future sense of community and well-being trees provide are reason enough to fight to conserve them.