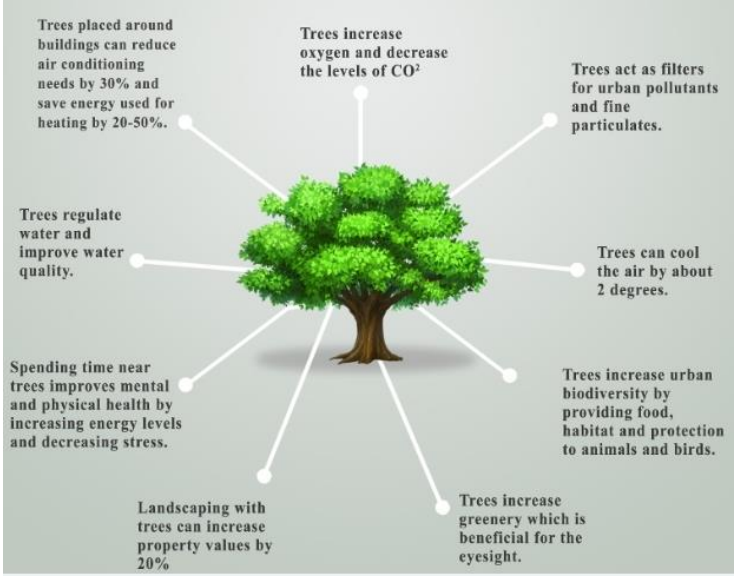
MOUNT HOLLY URBAN FOREST TREE BENIFITS

Urban forests are an integral part of community ecosystems, whose numerous elements (such as people, animals, buildings, infrastructure, water, and air) interact to significantly affect the quality of urban life. For the planting cost of $250 – $600 a single street tree returns over $90,000 of direct benefits in the lifetime of the tree.



Understanding an urban forest's structure, function and value can promote management decisions that will improve human health and environmental quality. An assessment of the vegetation structure, function, and value of the 2017 Mt Holly street tree inventory urban forest was conducted during 2017. Collected data was analyzed using the i-Tree Eco model developed by the U.S. Forest Service, Northern Research Station.

The Results Show:

- Number of Street trees: 1,100
- Street Tree Cover: 37.7 % - planting strip along curb
- Most common species of trees: Pin oak, London plane, Red maple
- Percentage of trees less than 6" (15.2 cm) diameter: 6.5%
- Pollution Removal: 1223 pounds/year ($4.44 thousand/year)
- Carbon Storage: 1.315 thousand tons ($171 thousand)
- Carbon Sequestration: 16.35 tons ($2.12 thousand/year)
- Oxygen Production: 43.6 tons/year
- Avoided Runoff: 65.97 thousand cubic feet/year ($4.41 thousand/year)
- Structural values: $5.11 million

See: http://www.twp.mountholly.nj.us/content/386/426/428/2289.aspx to download full report using link on right side of page

GENERAL BENEFITS OF STREET TREES

• **Reduction of traffic speeds.** Urban trees create vertical walls by framing streets thus helping motorist guide their movement and judge speed.

• **Increased security and reduced crime.** Tree lined streets create a more pleasant walking environment. An increase in pedestrian traffic brings an increase in surveillance of homes and businesses.

• **Improved business.** Prices for goods tend to be higher in landscaped areas compared to areas with no trees.

• **Less drainage infrastructure.** Trees absorb the first 30% of most precipitation through their leaf system, allowing evaporation back into the atmosphere. Up to another 30% is absorbed back into the ground and taken in and held onto by the root structure. Storm water runoff and flooding are greatly reduced thus lessoning the cost of a towns infrastructure.

• **Lower air temperatures.** A properly shaded neighborhood can reduce energy bills for a household by 15 – 35%. The net cooling effect of a young, healthy tree is equivalent to ten room-size air conditioners operating 20 hours a day.

• **Windbreaks.** Trees properly placed around houses and buildings as windbreaks can save up to 25% on winter heating costs.

• **Added value to adjacent homes, businesses and tax base.** Realtor based estimates of street tree versus non-street tree comparable streets relate a $15 – $25,000 increase in home or business value.

• **Longer pavement life.** Studies show that the shade from street trees can add 40-60% more life to paved roads. This factor is based on the cooling and heating (expansion/contraction) of asphalt.

• **Individual well-being and public health**. The presence of urban trees and forests can make the urban environment a more aesthetic, pleasant and emotionally satisfying place in which to live, work and spend leisure time Urban trees also provide numerous health benefits; such as reducing stress and lower exposure to UV radiation.

• **Noise abatement**—Properly designed planting of trees and shrubs can significantly reduce noise.

• **Air quality**—Trees improve air quality by lowering air temperatures, altering emissions from building energy use and other sources along with removing air pollutants through their leaves. Urban trees in the contiguous United States remove some 784,000 tons of air pollution annually, with a value of $3.8 billion.

• **Social Contributions.** Symptoms of Attention Deficit Hyperactivity Disorder (ADHD) in children are relieved after contact with nature. Specifically, ADHD kids are better able to concentrate, complete
tasks, and follow directions after playing in natural settings. The greener the setting, the more relief.