

Losing Trees to Sidewalks: Why we need old growth urban trees

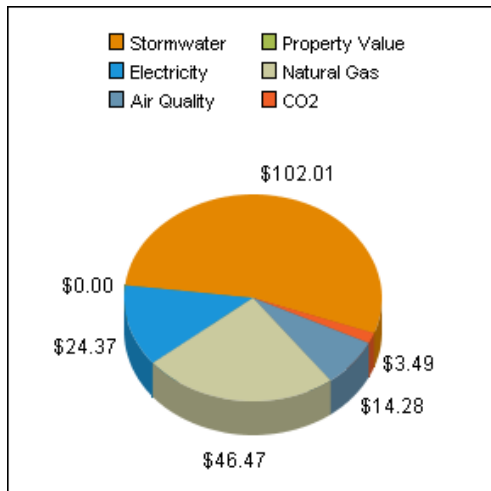
Trees provide increasing benefits as they grow, and mature trees are an asset that requires decades to replace.

1. Due to many artificial surfaces and higher levels of fossil fuel emissions, climate impacts are intensified in urban areas. We need large, old growth trees to offset these effects.
2. The World Resources Institute estimates that nearly 80 percent of the old-growth forest **on the planet** is now gone (in the contiguous United States that figure jumps to more than 90 percent). Much of the loss is due to the march of civilization; we have clear-cut ancient trees to make way for our settlements. <https://placesjournal.org/article/champion-trees-and-urban-forests/>
3. Our loss of ASH trees alone will change the look of our neighborhood. Sidewalks will further reduce the neighborhood old growth forest.

Effects of the loss of our Ash Trees: Why take more trees when we are already losing so many? Below is an explanation of what one ash tree provides.

From <http://www.treebenefits.com/calculator/ReturnValues.cfm?climatezone=Midwest>

Taking, as an example, a 35" diameter ash tree, it provides:



This 35 inch Ash provides overall benefits of: \$191 every year.

Your 35 inch Ash will intercept 3,764 gallons of storm water runoff this year.

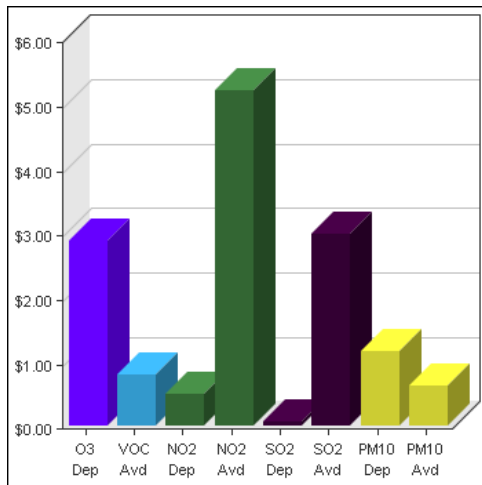
Your 35 inch Ash will conserve 321 Kilowatt hours of electricity for cooling and reduce consumption of oil or natural gas by 47 therm(s).

Trees modify climate and conserve building energy use in three principal ways (see figure at left):

- Shading reduces the amount of heat absorbed and stored by buildings.
- Evapotranspiration converts liquid water to water vapor and cools the air by using solar energy that would otherwise result in heating of the air.
- Tree canopies slow down winds thereby reducing the amount of heat lost from a home, especially where conductivity is high (e.g., glass windows).

Strategically placed trees can increase home energy efficiency. In summer, trees shading east and west walls keep buildings cooler. In winter, allowing the sun to strike the southern side of a building can

warm interior spaces. If southern walls are shaded by dense evergreen trees there may be a resultant increase in winter heating costs.



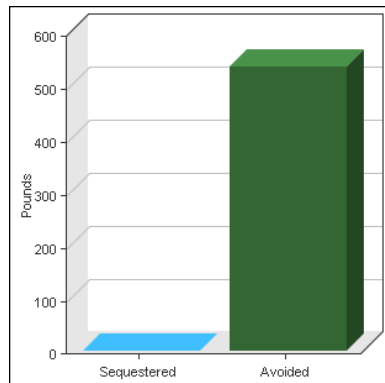
Air quality benefits of your 35 inch Ash shown in the graph at left.

Air pollution is a serious health threat that causes asthma, coughing, headaches, respiratory and heart disease, and cancer. Over 150 million people live in areas where ozone levels violate federal air quality standards; more than 100 million people are impacted when dust and other particulate levels are considered “unhealthy.” We now know that the urban forest can mitigate the health effects of pollution by:

- Absorbing pollutants like ozone, nitrogen dioxide and sulfur

dioxide through leaves

- Intercepting particulate matter like dust, ash and smoke
- Releasing oxygen through photosynthesis
- Lowering air temperatures which reduces the production of ozone
- Reducing energy use and subsequent pollutant emissions from power plants



This year your 35 inch Ash tree will reduce atmospheric carbon by 537 pounds.

How significant is this number? Most car owners of an “average” car (mid-sized sedan) drive 12,000 miles generating about 11,000 pounds of CO2 every year. A flight from New York to Los Angeles adds 1,400 pounds of CO2 per passenger. Trees can have an impact by reducing atmospheric carbon in two primary ways (see figure at left):

They sequester (“lock up”) CO2 in their roots, trunks, stems and leaves while they grow, and in wood products after they are

harvested.

Trees near buildings can reduce heating and air conditioning demands, thereby reducing emissions associated with power production.