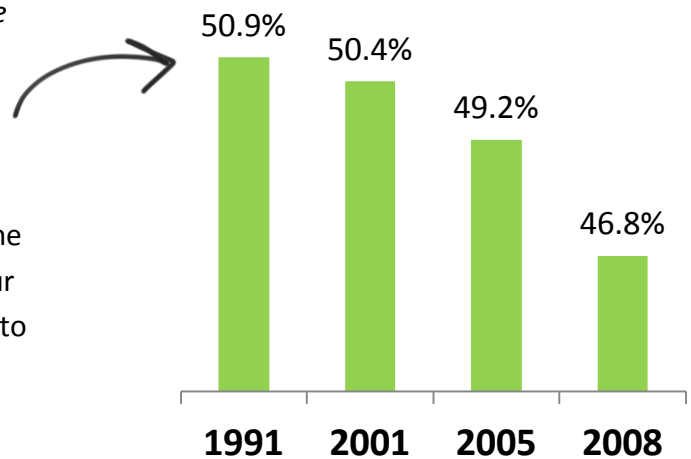


## A Is Decatur Losing Trees?

Data from multiple sources indicates that the City of Decatur's tree canopy cover is decreasing.

- The University of Georgia's *Natural Resource Spatial Analysis Laboratory* (NARSAL) shows that Decatur's tree canopy cover has decreased since 1991. According to the NARSAL data, there has been a decrease in tree canopy cover in Decatur of 4.1% over the last 27 years. If this trend continues, Decatur will lose 1% of its tree canopy cover every 6 to 7 years.



- In 2010, a study commissioned by the City of Decatur analyzed tree canopy using aerial photographs. The study showed a tree canopy cover of 45.7% in 2005, and 45.1% in 2010. This study used images with a greater level of detail than the NARSAL study.

## B

### What is causing the tree loss?

The loss of tree canopy in Decatur is primarily being caused by;

1. Aging tree population.
2. Construction impacts to soil and trees.
3. Developments with increased lot coverage resulting in less growing space for tree roots and crowns.

## C What is a tree worth?

A water oak tree with a trunk diameter of 30 inches growing on a single family residential lot provides environmental and economic services worth **\$258** annually. This tree also provides an annual increase in the property value of **\$113**.

The benefits to the owner include:

- Interception of 11,935 gallons of stormwater.
- Conservation of 270 Kilowatt/hours of electricity for cooling.
- A decrease in consumption of 8 therms of oil and natural gas.
- Increased air quality including the production of oxygen, reduction in and avoidance of deposition of volatile organic compounds, nitrous oxides and sulfur dioxides.
- A reduction of 904 (917) pounds of atmospheric carbon.

# Tree Canopy Facts



## D What would it take to increase the tree canopy?

Current tree canopy covers approximately 45% of the city’s geographical area. Maintaining or increasing the current canopy cover requires an active program of tree planting and a policy of no net tree loss – which means every tree lost must be replaced. Additional trees above no net loss must be planted to increase tree canopy, as illustrated below. Three canopy goals are illustrated below assuming the goal is reached by the year 2039.

### HOW WE CALCULATED:

Decatur has a geographical area of 4.2 square miles, or 2,688 acres. 1% of this entire area is 26.88 acres, or 1,170,893 square feet. If a single large tree at maturity has a crown that covers an estimated 1,600 square feet, then 732 trees are needed to cover 1% of the total land area.

### INCREASE TO 50%

*(1991 Coverage)*

One-for-one replacement required for no net loss.



Plant **3,660** large canopy trees throughout community.

### INCREASE TO 55%

One-for-one replacement required for no net loss.



Plant **7,320** large canopy trees throughout community.

### INCREASE TO 60%

One-for-one replacement required for no net loss.



Plant **10,980** large canopy trees throughout community.

## E

### What do these canopy goals look like on a typical residential lot?

On most residential lots, it only takes only a few large canopy trees to create substantial canopy cover across the site. For illustration purposes, it is assumed that each large canopy tree will grow to have a minimum tree canopy cover of 1,600 square feet at maturity (if given proper space and care they can grow to have a larger canopy). A medium tree is estimated at 900 square feet.

	1/4 Acre Lot	1/3 Acre Lot
Lot coverage from 1 large canopy tree	15%	11%
Trees needed to have 45% coverage	3 large	4 large
Trees needed to have 60% coverage	4 large	4 large + 1 medium