Urban Forestry

An essential element for improving quality of life in communities
and promoting economic development

It is a proven fact that businesses, workers, and retirees want to locate in areas that have a good quality of life. Business views the community as a place where it will hire employees and will move employees to. The community quality of life is a benefit for employees of the business and may affect compensation, employee satisfaction, and retention.

What defines quality of life? Most people consider parks, trees, streams, and natural areas as a very important part of their community. Real property value has been shown to increase with trees. Many home buyers consider a property with trees to be worth several thousand dollars more than similar property without trees. Quality of life is also defined by safety and peacefulness. Studies have shown that crime rates are lower in areas with trees. Mental health of residents is improved in communities with a vital urban forest and stress levels are measurably lowered. Patients recover quicker in rooms with a view of trees.

Can communities afford urban forest management? A better question is can they afford not to have it. Nice views, lower city taxes, reduced flooding danger, clean air, clean water, lower energy bills, and climate are vital to community residents and businesses alike. In a number of studies, trees have been proven to save money on vital basic services. A managed urban forest can save money by:

Stormwater Control

When a rain event occurs, trees diffuse and absorb the initial moisture. Water is released slowly over a longer period of time than in treeless areas. This reduces erosion and slows runoff. Trees and forests decrease peak stream flows thereby reducing the possibility of flooding and increase stream base flows for more constant water for aesthetics, recreation, and wildlife habitat. With trees and forests in place, less water needs to be processed through city control structures. A study done by *American Forests* in Forest Park, Georgia, showed that between 1974 and 1996 areas with tree cover of less than 20% increased from 71% to 83%of the land area. As a direct result of tree loss there was a 28% increase in runoff which amounted to 2.2 million cubic feet of additional water to manage.

Pollution Control

Water pollution (water quality) is affected by trees as they stop or slow movement of, absorb, and store many pollutants thus protecting water quality. Currently, the Environmental Protection Agency considers nonpoint source pollution the most serious threat to water quality. Trees reduce rain impact and slow water movement that can cause erosion and carry pollutants. Shading from trees stabilizes water temperatures and greatly improves wildlife habitat. Air pollution (air quality) is also significantly affected by trees. According to *American Forests*, one tree over a 50-year period will provide $62,000 worth of air pollution control and generate $31,250 worth of oxygen. Trees have been proven to absorb airborne pollutants. According to Dr. Nowak of the USDA Forest Service, an average 12.5" diameter tree stores 897 pounds of carbon per year.

Energy Cost

A study done by the University of Florida concluded that tree canopy in Gainesville, Florida, being twice as dense as that in Ocala, saved Gainesville residents an average of $126 a year on power bills. A number of other studies support these findings. Most power companies promote tree planting around buildings to reduce energy usage during peak periods.

Cost of Community Services

The University of Georgia has shown that new development is actually a net loss for a community due to outlay for services such as sewers, drinking water, and roads costing more than the additional tax revenue collected. Forested and agricultural land netted the community two to three or more times the revenue as compared to the cost of services provided. A study done by the USDA Forest Service and other partners in Modesto, California, showed for every dollar spent on urban forestry $1.89 was realized in benefits. Tree cover extending the life of asphalt streets was a major calculated savings in this study.

Climate Moderation

Studies done in Atlanta, Georgia, have shown that during hot summer days, the average temperature difference between areas with dense tree canopy such as established suburban neighborhoods and areas with no canopy such as the airport can be 20 degrees. Areas with more trees had cooler temperatures.

Obtaining benefits from the urban forest is dependent on management. A forest in any location is a changing, natural system that cannot be preserved in the same state. We must take action to obtain what we want. Ignorance, lack of care, or misuse will not result in obtaining maximum benefits. We have a valuable resource which we can realize return from based on management. The urban forest could be compared to a new car. It can be driven without any investment in care for a short time, but maximum benefit is obtained from investing in its care for the long term.

The Mississippi Forestry Commission

The role of the Mississippi Forestry Commission in urban forestry is to assist communities through grants, technical assistance, information, and serve as a liaison to other support organizations. We provide technical advice through a statewide network of professional foresters. Information is available through our web site and in printed form at our offices throughout the state. The Forestry Commission is active in seeking new partner organizations to build program capacity. We currently work closely with the USDA Forest Service, Mississippi Department of Transportation, Mississippi Department of Environmental Quality, Mississippi Urban Forest Council (a non-profit group), National Arbor Day Foundation, National Tree Trust, and many other national, state, and local groups.