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Title: Benefits of Urban and Community Forests

Authors: Yadong Qi*

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Description: We all are familiar with trees, because they are an important part of our lives, providing us with wood for housing and furniture, shelter for animals and wildlife, absorption of most of the harmful ultraviolet-B radiation, taking up carbon dioxide to do photosynthesis and produce biomass, giving off oxygen for us to breathe, and reducing air pollution and soil erosion. Trees are a vital part of our community infrastructure. About 80% of the US population lives in urban and suburban areas. Urban and community forests play significant roles in our economy, environment, social well-being, and in our everyday life. The paper gives a summary of ecological, environmental, and social-economic benefits of urban and community forests.

Full paper: Attached next

***Corresponding author:** Dr. Yadong Qi
Professor of urban forestry
Urban Forestry Program
Southern University
Baton Rouge, LA 70813
Phone: 225-771-4408
E-mail: yadong_qi@suagcenter.com



CIRCULAR – Urban Forestry Natural Resources and Environment No. 602

Benefits of Urban and Community Forests

We all are familiar with trees, because they are an important part of our lives, providing us with wood for housing and furniture, shelter for animals and wildlife, absorption of most of the harmful ultraviolet-B radiation, taking up carbon dioxide to do photosynthesis and produce biomass, giving off oxygen for us to breathe, and reducing air pollution and soil erosion.

Trees are a vital part of our community infrastructure. About 80% of the US population lives in urban and suburban areas. Urban and community forests play significant roles in our economy, environment, social well-being, and in our every day life.

Economic Benefits

Trees increase property values:

- Each large front yard tree adds 1% to the sales price.
- A large specimen tree can add 10% or more to the property value.
- When large trees are cut down for development, the environmental, social, and economic benefits are reduced because trees less than 15-20 years old provide fewer benefits than existing, older trees.

Trees increase retail returns: Well landscaped shopping areas attract customers for more frequent and longer shopping and shoppers spend 12% more for goods.

Trees increase value and occupancy of apartment rentals: Well landscaped apartment grounds make it easier to attract and retain tenants.

Large, well-placed trees around your home help lower cooling costs by as much as 30% and heating costs by 10-25%.

Trees help lower costs of health care and other social programs. Patients have shorter hospital stays and recover more quickly when placed in a room with an outside view of well-landscaped tree settings.

Tree leaves absorb at least 90% of UV-B



A Concert under the Trees

radiation, which is very harmful to human beings and causes skin cancers. Each year one million people in the US are diagnosed with skin cancer caused by over-exposure to UV-B radiation. Tree canopies block most of the UV-B load on the ground and can significantly reduce solar UV-B radiation. Our communities should take action by planting more trees for the future and preserving large, healthy trees for the present. UV light should not be taken lightly.

Trees and green space absorb runoff from rain, thus reducing the need for additional sewers and drainage infrastructure.

Environmental Benefits

Trees reduce the heat island effect in the city/downtown area. Cities are 5^o to 9^o F warmer than surrounding rural areas.

Trees aid greatly in absorbing ozone pollution that gathers close to the concrete in hot temperatures.

Trees transpire water vapor to the air and cool the surrounding environment.

The cooler air temperatures reduce ozone formation by lowering the hydrocarbon emissions.

Trees absorb gas pollutants and help combat the greenhouse effects. One hundred large trees remove 5 tons of CO₂ and about 1000 lbs of pollutants each year.

Trees help reduce storm-water runoff. One hundred mature trees catch about 250,000 gallons of rainwater/year, decreasing polluted runoff and soil erosion.

Trees create canopies and habitats for animals.

Sociological Benefits

Residential buildings with high levels of well managed landscape have over 50% fewer total crimes.

The act of planting trees gives people stronger community ties and greater satisfaction with positive effects on their neighborhoods.

Trees help improve human health. Green vistas speed recovery times and decrease need for medication, thus reducing stress and increasing coping abilities.

Aesthetics Benefits

Well-managed urban and community forests are more attractive and soften the landscape.

People are drawn to shade for UV-protection, for cooler air, and for screening out high frequency noise. Leaves absorb noise and serve as visual screens. Trees reduce glare and surface reflection.

We should consider our trees as heroes in our community.

Benefits of Southern Live Oak (*Quercus virginiana*)



The live oak tree in this picture, having 45 inches of trunk diameter, 46ft of height, and 96ft of canopy diameter, can take up 1331 lb of CO₂ per month and release 1096 gallon of water per day during the summer.



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Yadong Qi, Ph.D., Professor, Urban Forest Ecology and Tree Physiology

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