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NEWS RELEASE

USDA Forest Service

FOR IMMEDIATE RELEASE
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Trees in Charlotte are Paying Huge Dividends

Charlotte, NC December 30, 2005 – A 10% return on your investment in today's market would be considered fairly good. But, where could you possibly triple your money, given the current economic climate?

It turns out that Charlotte city trees are returning those kinds of dividends. According to a new study by the USDA Forest Service, Center for Urban Forest Research, Charlotte residents are receiving $3.25 in environmental benefits for every dollar the city invests in the care and maintenance of its municipal trees. Charlotte is home to over 85,146 street trees. As Dr. Greg McPherson, Center Director, points out, "Our research in Charlotte has shown that the municipal trees provide $5.9 million in annual benefits and only cost the city $1.8 million per year to maintain. That is a huge return on your investment."

The Center's research clearly shows that healthy city trees improve air quality, lower summer temperatures, decrease the need for air conditioning, and reduce stormwater runoff. "These environmental benefits are critical to the human health and well-being of Charlotte residents, says Dr. McPherson. We also know that healthy street

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trees increase real estate values, provide neighborhoods with a unique identity, and increase business income. These benefits are critical to Charlotte's economic health and well-being."

Charlotte trees are also associated with some intangibles such as increased community attractiveness, stress reduction, reduced crime, and recreational opportunities that make Charlotte a more enjoyable place to live, play, work, shop, and do business. "If we could put a dollar value on these kinds of tree benefits, Charlotte's return on investment would be a lot higher. Right now we can't, but we are working on it," says Dr. McPherson.

The details of the study clearly show how municipal trees benefit residents. Like many cities, Charlotte is faced with improving the management of its stormwater. The federal Clean Water Act requires municipalities to obtain a permit for managing their stormwater discharges into water bodies and identify the Best Management Practices (BMPs) it will implement to reduce its pollutant discharge. According to Dr. McPherson, "The good news for Charlotte is that its street trees intercept 28 million cubic ft of stormwater annually, or 2,464 gal per tree on average. The total value of this benefit to the city is $2,077,393, or $24.40 per tree. We like to think of trees as mini-reservoirs, controlling runoff at the source. And Charlotte's trees do that very well." Dr. McPherson also points out that certain species are much better at reducing stormwater runoff than others. "The best trees in Charlotte for reducing storwater runoff are the willow oak, water oak, and silver maple. Interception by willow oak alone accounts for 51% of the total dollar benefit for street trees. Poor performers are species with relatively little leaf and stem surface areas, such as privet and crapemyrtle."

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Willow oak, water oak and silver maple are also responsible for the majority of electricity and natural gas savings in Charlotte, “simply because of the extensive shade they provide” says Dr. McPherson. Together, all of the street trees in Charlotte annually save a total of 7,658 MWh ($581,212) and 31,815 Mbtu ($332,789) of electricity and natural gas respectively, for a total retail savings of $914,000 or $10.73 per tree.

The study also found that trees dramatically benefit human health. Charlotte’s street trees clean the air of over 14.8 tons of ozone, particulates and other gaseous pollution per year, and sequester another 10,860 tons of the greenhouse gas carbon dioxide, while also offsetting an additional 3,235 tons of CO_2 through reductions in energy plant emissions. “But the largest benefit to the residents of Charlotte is the property value increase”, according to Dr. McPherson. “The value is just over $2.76 million per year to the community, but each homeowner can expect the resale value of their home to increase by 1% for each large front yard tree.”

“Like all cities, Charlotte has room for improvement.” Dr. McPherson points out. The report suggests that because of the large number of willow oak compared to other tree species there is the possibility of a catastrophic loss to future storms, pests and diseases. Other recommendations include:

- planting large-stature trees where the site allows to maximize benefits
- develop a strong young-tree-care program that is on a four year cycle
- invest in intensive maintenance of mature trees to prolong their useful lifespan

“The city’s continued investment in the care and management of its trees is critical to ensuring that the community maintains or increases its return on investment into the future, says Dr. McPherson. “Cut back on the planting, watering and pruning of City trees

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and residents will ultimately experience a pinch in their wallets. The citizens of Charlotte can rest assured that their trees are vastly improving their quality of life and that the money they are spending annually is a wise investment of municipal dollars. Continued management is critical to ensuring that the community increases its return into the future."

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Note: The full report can be downloaded at:

http://www.fs.fed.us/psw/programs/cufr/research/studies_detail.php?ProjID=151