

PROJECT AT A GLANCE

Location

Atlanta, Georgia

Lead Partners

Trees Atlanta
City of Atlanta

Award Category

Large City (population >100,000)

Timeframe

2004-2008 (ongoing)

Total Cost

The Trees Atlanta budget for 2007-2008 was about \$2.3 million.

Size and Scope

Trees Atlanta has planted over 7,500 new trees and maintained 8,500 existing trees since 2004.

Outstanding Accomplishments

- Planted 7,500 trees, including 6,150 shade trees in neighborhoods and 1,500 urban street trees
- Increased "green" coverage by 20-30% in project areas, lowering summer temperatures by several degrees
- Planted 70-75% indigenous tree species
- Ensured a 90% survival rate of maintained trees
- Maintained trees in 24 city parks
- Removed invasive species such as kudzu and privet to facilitate forest restoration
- Helped five neighborhoods establish urban arboreta
- Held 2-3 planting or maintenance events every weekend year-round
- Educated more than 2,000 children and adults about the importance of urban trees
- Forged partnership with the Atlanta Watershed Department to use water from scheduled flushing of City's fire hydrants to irrigate trees
- Developed a base of 1,600 repeat volunteers
- Used GIS-based software to track every tree planted by Trees Atlanta

Re-Green Atlanta Trees Atlanta



Over the last 30 years, Atlanta has lost 65% of its tree canopy to sprawling development. This tree loss has caused drastic environmental effects in the City, including urban "heat islands" with temperatures 3-10 degrees above surrounding countryside and a 33% increase in stormwater runoff, both of which cost the City millions of dollars to address. In 2004, Trees Atlanta, a two-decade-old nonprofit, joined forces with the City of Atlanta to reverse this destruction and restore the urban forest by planting thousands of trees. Since the program's inception, Trees Atlanta has planted over 7,500 new trees and actively maintained 8,500 existing ones. They also maintain trees in 24 city parks, helped to establish five neighborhood arboreta, and developed a base of 1,600 repeat volunteers.

The Trees Atlanta initiative is truly a community effort. The organization holds two to three planting or maintenance sessions every weekend of the year, each of which begins with a training session for new volunteers. Although Trees Atlanta staff monitors and cares for new trees during their first three years, it is the ongoing commitment of neighborhood residents that ensures the long-term survival of the trees. As neighborhoods become greener, their residents become more civic-minded. Since the start of the program in 2004, Trees Atlanta's donor records indicate a 35% increase in funding from groups and individuals living in neighborhoods where trees have been planted. And for good reason: maps of project areas show a 20-30% increase in greenspace, which helps reduce peak summer temperatures. Expanding Atlanta's urban forest also helps reduce air pollution, mitigate flooding, and decrease stormwater runoff while making Atlanta's neighborhoods healthier, more pleasant places to live.

Over the next couple of decades, a new 22-mile BeltLine transit loop will connect 45 Atlanta neighborhoods around the city and along this corridor Trees Atlanta will create the world's longest linear arboretum. The arboretum will serve as a pedestrian thoroughway and will showcase the aesthetic and educational benefits of urban trees.

Project Description

Pre-Existing Conditions

The City of Atlanta has a population of almost 425,000, a number that is expected to double from 2000 to 2030. The "State of Our Urban Forests" report by American Forests recommends 40% tree cover for a healthy city, but Atlanta has a tree canopy of only 27%. According to NASA, the City has lost 65% of its tree cover over the last 30 years, replacing green areas with residential and commercial development dominated by concrete and asphalt. On average, metro Atlanta loses 54 acres of trees to development every day. Unfortunately, the large canopy species being lost, such as oaks and poplars, are most often replaced with under-story, ornamental species such as dogwoods and red maples.

Tree loss in the City has created urban heat islands with temperatures 3-10 degrees higher than surrounding rural areas. This temperature increase has altered local weather patterns. Moreover, a study by American Forests found that tree loss between 1974 and 1996 caused a 33% increase in stormwater runoff. The City is now spending \$240 million to counter effects of tree loss in order to meet stormwater discharge standards.

Along with these significant environmental and economic impacts of tree loss, residents of Atlanta, like those in other sprawling cities, are becoming separated from open space and losing their connection with trees.

Project Components

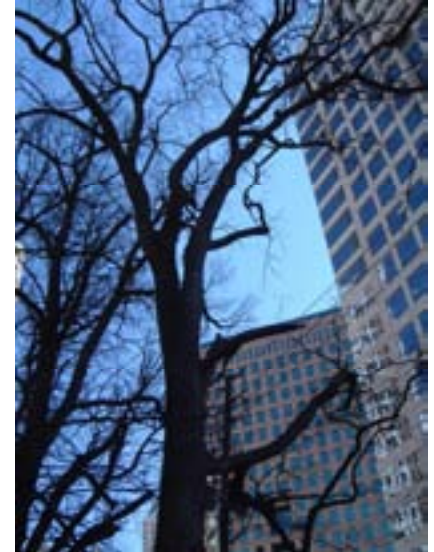
Purpose: Trees Atlanta seeks to restore Atlanta's urban forest by planting and maintaining thousands of trees. The organization hopes to help the City cope with environmental issues such as urban heat islands, air pollution, and flooding while educating and mobilizing the City's citizens around the importance of trees.

Process: Trees Atlanta's partnership with the City of Atlanta was forged in 2003, and since 2004, 7,500 new trees have been planted. In 2005, Mayor Shirley Franklin signed the U.S. Mayors Climate Change Agreement and has implemented several new programs under the title "Green City Initiatives." Trees Atlanta serves as a catalyst and teacher for the various city departments.

The planting process for Trees Atlanta involves using GIS mapping to identify areas in need of trees, securing the appropriate permissions for planting, acquiring additional soil and/or arranging for concrete removal if necessary, and training volunteers in proper planting techniques. Once new trees are in the ground, Trees Atlanta maintenance staff is responsible for caring for the trees during their first three years of life and replacing them if they die during this period.

Outreach: Trees Atlanta participates in festivals all around the City to distribute information about the benefits of its efforts to restore the urban forest, and to solicit volunteers and monetary support. Their quarterly newsletter, "The Atlanta Treebune," is mailed to 10,000 residents. A weekly electronic newsletter is e-mailed to a database of 3,500 potential volunteers, providing information on tree planting and maintenance projects. Two to three projects occur every weekend year-round.

Through partnerships with City agencies, local conservation groups, small business owners, neighborhood organizations, large corporations, and utilities, Trees Atlanta's outreach efforts reach a large segment of the community.



PROJECT GOALS

- Involve neighborhood residents in planting projects and implement a tree care plan within each neighborhood
- Educate students and residents about the benefits of trees and proper tree planting and care
- Plant trees in low-income neighborhoods and areas in greatest need of tree canopy
- Provide 3 years of maintenance to all planted trees to ensure survival
- Plant native Piedmont trees that provide shade and aesthetic benefits to surrounding communities
- Create the world's longest arboretum along the proposed 22-mile Atlanta BeltLine transit loop, connecting 45 neighborhoods

(2007-2008 Goals)

- Plant 1,400 shade trees in residential neighborhoods
- Plant 350 urban street trees
- Replace 50 damaged urban street trees
- Provide 18 months of tree maintenance for 3,000 – 3,500 existing trees

Benefits

Community and Economic Benefits

It is estimated that 4 million people per year receive health, social and economic benefits from trees planted by Trees Atlanta. They enjoy more aesthetically pleasing neighborhoods, cleaner air and water, UV skin protection, lower crime rates, reduced utility bills, and sound buffering. Tree leaves remove tiny particles of dust and soot from the atmosphere, increasing air quality. Tree root systems filter contaminants in soils, improving water quality. Trees prevent erosion and hold stream banks in place, protecting against the flooding that periodically plagues Atlanta. Due to Trees Atlanta's efforts, green areas in target project zones have increased by 20-30%, which measurably reduces peak summer temperatures in those areas. Trees have also strengthened Atlanta's neighborhood communities by providing more outdoor greenspace for children to play and families to exercise and socialize.

Economic Vitality: Increasing Atlanta's tree canopy saves the City millions of dollars in energy and water management expenses. For instance, the City is currently spending \$240 million to counter the effects of canopy loss in order to meet stormwater discharge standards. Planting trees also has a positive impact on property values. Research has shown that homes in neighborhoods with trees are 5-20% higher than equivalent properties without trees.

Citizen Engagement: Trees Atlanta has a base of 1,600 returning volunteers, with 3,500 people total in their volunteer database. The organization relies on these residents to participate in two to three weekly tree plantings. Three of Trees Atlanta's current board members and six of its staff members began their connection with the organization as volunteers. Citizen-based NeighborWoods projects often organize plantings and tree care in residential neighborhoods, and city council members frequently participate in planting projects in their own districts. After the three years of initial care by Trees Atlanta ends, ongoing relationships with committed neighborhood organizations ensure that trees will continue to be maintained long-term.

Education: Every Trees Atlanta tree-planting or maintenance project starts with a training session for new volunteers. Long-term volunteers may participate in a series of Tree Keeper Certification trainings which qualify them to lead weekend projects. The organization also offers workshops on the removal of invasive species and proper pruning techniques to City Park staff, landscape company employees, neighborhood associations, and community residents. Trees Atlanta staff and volunteers go into schools to initiate on-site plantings and teach students about the importance of trees. Staff and board members make more than 100 presentations to civic, cultural, educational, and social organizations each year. The City has initiated a "Developer Day" which educates Atlanta's development community on environmentally sustainable business processes and policies, including tree stewardship.

Upcoming educational initiatives include signage along the BeltLine arboretum about the various tree species and the multiple benefits of urban trees. The "TreeSource" Center, Trees Atlanta's new headquarters, hosts school field trips, speakers, conferences, and special trainings for volunteers. A "living urban laboratory" provides on-site demonstration of healthy tree growing practices, including use of structured soils, pervious pavement, and innovative water conservation methods.

Funding

Trees Atlanta's budget for 2007-8 was approximately \$2.3 million. The organization received about \$1.6 million from the City; the rest of the funding was in the form of grants from businesses, foundations, and civic groups, plus individual gifts.

Since the partnership with the City of Atlanta was established in 2004, Trees Atlanta's donor records indicate a 35% increase in funding support from local groups and individuals in neighborhoods where planting projects have taken place.

In late 2006, Trees Atlanta received a \$100,000 grant from the Humana Atlanta Benefits award program. The organization also received a \$350,000 gift from the Arthur M. Blank Family Foundation as well as funding from the Georgia Urban Forestry Commission to help build the 22-mile arboretum loop tracing the BeltLine transit corridor around the City.

Maintenance of 24 city parks as well as removal of invasive species is funded by the Parks and Recreation Department of the City.

More than 1,600 volunteers provide additional in-kind support to Trees Atlanta.

MEASURABLE BENEFITS

Based on the U.S. Forest Service i-Tree software, Trees Atlanta estimates the following benefits accrue from 1,500 large urban trees (3" caliper) and 6,160 residential trees (2" caliper):

- Stormwater runoff eliminated:**
740,000 gallons/year
- Electricity conserved:**
47,300kh hours/year
- CO2 reduced:**
227,340 pounds/year

“We know that community building involves more than the creation of housing. Trees are essential to the nurturing process of human interaction. A tree can add another dimension to a home.”

- Reynoldstown Revitalization
CEO

“Trees Atlanta brings the community and neighborhood residents together to work towards common goals while educating the community about how to plant and care for trees as well as the many benefits of trees. The shade trees planted in our neighborhood and others improve the business districts as well as the residential streets and create a healthier urban environment.

- Resident, Collier Heights Park

Contacts

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City of Atlanta

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Looking Ahead

Project Monitoring and Evaluation

Trees Atlanta uses a GIS-based software program to track all trees planted as a part of the program. Tree maps include data on size and species of trees and are updated weekly to ensure accuracy. This tracking method allows Trees Atlanta to identify new areas of need, monitor maintenance of planted trees, and effectively communicate these findings with the City.

Project Maintenance

A monthly review of all components of the project evaluates the success of tree planting and maintenance methods. Trees Atlanta maintenance staff are responsible for mulching, pruning, watering, and evaluating trees during their first three years. After three years, neighborhood associations take charge of tree care, contacting Trees Atlanta if there are problems. So far, trees planted by Trees Atlanta staff and volunteers enjoy a near-90% survival rate, and those that die within their first three years are replaced by the organization.

Challenges Faced

Due to successful collaboration with the City and the ongoing support of the Mayor, Trees Atlanta faced relatively few roadblocks in implementing their tree planting initiatives. There have been challenges with projects that involved concrete removal, such as conflicts with utilities and auto/pedestrian conflicts during the work phase. Also, awaiting permission from business owners has delayed some project start dates. The pending doubling of Atlanta’s population will likely create new challenges as there will be increasing pressure on trees as competition for space intensifies in the urban landscape.

Innovation Applied

Trees Atlanta is advanced in its use of reporting methods and tracking templates to monitor every tree planted. Tree maps created using GIS-based software allow for easy evaluation of tree planting and maintenance methods and inform planning for new tree planting. The three-year tree care contract ensures that every tree planted will either survive or be replaced over this period. Three quarters of the trees planted each year are indigenous, illustrating a commitment to restoring native tree species.

In terms of outreach, Trees Atlanta’s visibility at city festivals has allowed them to establish a database of 3,500 volunteers. Opportunities to plant trees are impressively frequent, with two to three sessions planned and advertised each weekend. For the general public, the neighborhood arboretum projects provide a unique space for tree appreciation and education and, when completed, the BeltLine arboretum will be the longest in the world.

