



Neighborhood Trees Project Portland, OR

"Friends of Trees, in partnership with the City of Portland, is the reason our canopy cover is alive and vibrant!"
-Tom Potter, Mayor, Portland, Oregon



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Project Overview

Neighborhood Trees (NT) is a key program of Friends of Trees (FOT) in Portland, Oregon. NT plants trees in over 60 underserved communities, increasing canopy cover on streets and in schools and yards. FOT has worked for sixteen years, leveraging public-private partnerships in order to bring together diverse neighborhood residents—businesses, local organizations, and individuals—with local government to increase the tree canopy and improve environmental and social conditions within the community. NT plants trees from November through April, organizing neighborhood tree-planting events nearly every weekend, particularly in low-income areas of the city with little tree canopy. During the late spring and summer, NT works with volunteers to inventory and monitor trees, plans the next tree-planting season, recruits volunteers, works with the city to select tree species and site locations, and performs neighborhood assessments in order to equitably increase tree canopy throughout the city.

Project at a Glance

Project Partners: Friends of Trees (lead), City of Portland Bureau of Environmental Services, Portland Parks and Recreation, Portland General Electric, and Collier Arbor Care

Location: Portland, Oregon

Award Category: Large-city runner-up

Timeframe: Jan. 1, 2003 - Dec. 31, 2005

Size and Scope: 5,671 trees in 62 neighborhoods; 30-40 tree species

Total cost of project: \$900,000

Outstanding Accomplishments

- 5,671 trees planted.
- Reduction of 56,710 lbs of air pollutants per year.
- Sequestration of approximately 1.8 million lbs of carbon dioxide each year.
- Reduction of 4.3 million gallons of stormwater run-off per year.
- Extensive tree inventory (including species) to inform future research and projects.
- Involvement of approximately 1,800 volunteers per year.
- Outreach and educational efforts reaching 25,000 people every year.

Neighborhood Trees - Project Description

Pre-existing Conditions

Mean canopy cover in Portland, not including the 5,000 acre Forest Park, is 23.6% (with Forest Park it is 26.3%). This signifies a 1.2% increase over thirty years, an improvement that a local study has attributed primarily to the work of Friends of Trees. It also makes Portland one of the few cities in the country to show an increase in canopy. However, these percentages are well below the levels recommended in a 2004 report from Portland State University of 47% for residential areas within Portland (one-quarter of residential areas already achieve this) and 12% for commercial/industrial zones. There are many areas in the city with less than 10% tree cover. The Eastside of Portland in particular, has diminished tree cover. Much of the area is industrial, and, in several places, train tracks and shipyards intersect the green space.

Impervious Surfaces: Portland has 45 square miles of pavement and 25 square miles of rooftops. Combined, this represents 54% of the total area.

Stormwater: Paved streets constitute 19% of the total paved area and produce 66% of the stormwater run-off. Portland's Combined Sewer Overflows (CSOs) into the Willamette River and Columbia Slough are a major source of pollution and affect the five species of endangered salmon in the watershed.

Safety: Many neighborhoods not only lack trees, but have high levels of vandalism, homelessness, drug and gang activity and abandoned buildings.



Project Components

Purpose: The purpose of the Neighborhood Trees (NT) project is to curb environmental problems by reducing stormwater runoff, combined sewer overflows (and resulting discharge into the Willamette River), energy use in households, and air pollution. The project also strives to improve the quality of life in low-income neighborhoods by enhancing the aesthetic and environmental appeal of public spaces and involving community members in planting projects.

Project Goals

- Increase canopy cover in all residential neighborhoods to 47%.
- Achieve 12% canopy cover in commercial and industrial areas.
- Continue to improve the tree inventory and database of trees planted by FOT over the past 16 years to help plan future urban forestry events in the neediest neighborhoods.
- Ensure the survivability of trees by increasing citizen involvement in and awareness of urban forestry.
- Improve on the overall objective of building healthy communities through fun, safe and educational volunteer tree planting events.

Process: Between 2003 and 2005, FOT planted 5,671 trees in 62 neighborhoods, spanning multiple planting events in most neighborhoods. In one season, FOT plants approximately 30-40 tree species, 7-10% of which are native. Site preparation is done before planting events and includes siting and digging holes and cleaning around the planting area. When choosing the species of tree to plant, FOT follows the philosophy adopted by Portland's Urban Forestry Division and the Oregon Dept. of Forestry: "right tree right place." Each planting event attracts 70-120 volunteers, and in season, FOT holds planting events in about four neighborhoods per week.



Outreach: FOT engages numerous long-standing partners—government agencies, non-profits, individuals and local groups among others—in its work, and its partnerships continue to grow and strengthen over time. Volunteers number from approximately 1,500 to 2,100 per year, donating between 16,000 and 20,000 hours of time. These volunteers take part in a wide range of activities including tree-planting weekend events, educational events at schools, businesses, community group meetings and Urban Forest Commission meetings. FOT trains volunteers to be either neighborhood coordinators, crew leaders, or summer tree care volunteers.

Funding

FOT receives cash and in-kind annual funding from: The City's Bureau of Environmental Services, Parks and Recreation Bureau, and Urban Forestry Division, as well as the Metro Regional Government, the Oregon Department of Forestry, Clean Water Services, Water Environment Services, more than 40 neighborhood associations, the Oregon Community Foundation, the Hoover Family Foundation, the J. Frank Schmidt

Neighborhood Trees - Benefits

Family Foundation, the Templeton Foundation, the Alice Tyler Perpetual Trust, the Collins Foundation, the Meyer Memorial Trust, Earth Share Oregon, the Maybelle Clark MacDonald Trust and the Oregon Parks Foundation.

Environmental Benefits

Air Quality: Absorption of 56,710 lbs of pollutants per year from the air.

CO₂ Sequestration: Trees in the NT project sequester about 1,871,430 pounds of CO₂ each year.

Canopy Restoration: Friends of Trees works to both prevent tree canopy loss and create new canopy. All but three of the neighborhoods in which Friends of Trees plants do not show an increase in canopy cover.

Greenway Connectivity: Friends of Trees works with the City on the Urban Forestry Management Plan (UFMP) to promote connected green areas, parks, trails and public spaces.

Energy Conservation: Shade from FOT planted trees has shown to lower the temperature inside buildings up to twenty degrees in the summer.

Stormwater: Friends of Trees works directly with the Bureau of Environmental Services (BES) to plant trees to create buffers and restore vegetation along streams. The trees in the NT project, when mature, are estimated to reduce runoff by more than 4.3 million gallons each year.

Community Benefits

Resident Involvement and Satisfaction: Through FOT's training on proper tree stewardship practices, volunteers learn about the types of trees, their benefits and maintenance, thereby gaining confidence and pride in doing something positive for the community as stewards of the urban landscape. In addition, many citizens get to know one another through volunteer tree-planting events, which strengthens the social ties within the community.

Education: FOT planting events hold a strong significance for volunteers, residents and businesses. Each tree planted comes with a tag listing its species, maintenance requirements and the business that sponsored it.

Safety: Trees serve as "traffic-calming" devices, thereby discouraging speeding and increasing neighborhood safety. In addition, several neighborhoods where FOT plants have enjoyed community and economic prosperity, and a reduction in crime.



Economic Benefits

The City of Portland estimates that each urban tree with a 50-year lifespan saves \$273 a year in reduced costs for air conditioning, erosion and stormwater control, decreased air pollution, increased wildlife shelter and other infrastructure costs.

Stormwater: Each tree planted by FOT saves approximately \$10 per year in reduced water flow treatment and control over its lifespan.

Energy: One large deciduous tree planted in the Portland area can lower home cooling costs by \$11 per year (assuming average cost of \$0.941 per kwh).

Air quality: Each tree planted by FOT will, on average, save \$1.89 per year, or \$75.60 over its lifespan in costs related to air pollutants.

Economic Vitality: FOT targets neighborhoods with difficult economic and social conditions. FOT notes that two of its targeted communities had previously "struggled to attract new businesses, reduce crime rates, increase poverty and increase new business developments. Today, both areas are considered attractive to new homeowners and businesses and are busy with increased pedestrian use including the introduction of monthly street fairs."





CASE STUDY:
Award of Excellence for Community Trees



Neighborhood Trees - Looking Ahead

Project Monitoring and Evaluation

The Urban Forestry Division's Tree Liaison program and FOT's Tree Teams work together to perform follow-up maintenance and tree health monitoring, and to complete species and canopy cover inventories. The results are stored in a database that is shared by many research and academic institutions for urban forestry studies.

Project Maintenance

Of its numerous partners, FOT maintains a particularly close relationship with the City of Portland, which helps to secure solid long-term management plans and funding for urban forestry initiatives. Many government officials have participated in plantings and recognize the array of benefits from trees. In addition, FOT played a major role in developing the Portland Urban Forestry Management Plan 2004 and was the only non-governmental party on the Advisory Committee. The Plan lays out guidelines for meeting future urban forestry needs and maintaining funding to complete the critical work.

Challenges Faced

Funding has often been and continues to be a challenge; nevertheless, it has not prevented FOT from achieving its objectives. The organization continues to fundraise to secure adequate funds for future projects.

Innovation Applied

FOT has developed unique and robust public-private partnerships. Its relationship with The City of Portland and its several agencies and bureaus is longstanding, accomplished, and effective at meeting objectives to better the Portland region. FOT also has numerous highly engaged partners besides the City, including many community groups, businesses, and regional and state agencies.

"...Friends of Trees efforts over the years, in partnership with the City of Portland and other partners have helped...neighborhoods and homeowners be environmental stewards by the simple act of planting a tree."

-Portland Urban Forestry Commission Chair

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