

TreeVitalize Partnership Philadelphia, Pennsylvania

"We are proud of the impact of this unique public-private partnership, which has resulted in increased economic development and property values as well as vibrant, revitalized neighborhoods and empowered community residents."

-John F. Street, Mayor, Philadelphia, Pennsylvania



Project Overview

TreeVitalize, a partnership created to restore tree cover in Philadelphia, was launched in 2004 as a response to a study by American Forests. The study estimated that almost 34,000 acres of heavy tree cover was lost in a five-county region in Pennsylvania and that the City of Philadelphia lost 15% of its heaviest tree cover. The City has embraced this program, and together, TreeVitalize partners have propelled tree planting to the highest level seen in decades. In addition, TreeVitalize has increased the awareness of community forestry among the general public through various high-profile tree planting activities. Trees are being planted in all 12 Planning Analysis Sections of the City of Philadelphia, including residential neighborhoods, commercial corridors, schools, urbanized parks, and watershed park areas. TreeVitalize aims to invest \$8 million over the 2004-2008 period in tree planting projects and education programs in a five-county region, which includes Philadelphia. It plans to plant 20,000 shade trees, restore 1,000 acres of forest buffer, provide education and training in tree planting and care to 2,000 citizens, and encourage regional collaboration to promote best practices and multi-municipal approaches. About 17,000 trees and about 212 acres of streamside buffers have been planted as of early 2007, while almost 3,370 citizens have already been educated about tree planting and care.

Project at a Glance

Project Partners: Pennsylvania Horticulture Society (PHS), Pennsylvania Department of Conservation and Natural Resources (DCNR), the City of Philadelphia, and about 60 other organizations.

Location: Philadelphia, Pennsylvania

Award Category: 2007 Large City National Winner

Timeframe: 2004 - 2008
(Ongoing program)

Size and Scope: Citywide partnership to restore tree cover in all 12 Planning Analysis Sections of Philadelphia; 20,000 shade trees to be planted by 2008.

Outstanding Accomplishments

- Planted 17,000 trees and restored about 212 acres of streamside buffers with native trees and shrubs.
- Created strong public-private partnerships and involved non-traditional partners, including the Philadelphia Eagles and Comcast Corporation.
- Implemented successful citizen education program that provided training in tree planting and care.
- Improved the livability of affordable housing and enhanced existing residential areas and green infrastructure.
- Increased the total value of residential properties in affected areas by an estimated \$10 million in Philadelphia.

TreeVitalize Partnership - Project Description

Pre-Existing Conditions

According to a 2003 study by American Forests, Southeastern Pennsylvania lost 33,995 acres (-8%) of heavy tree cover between 1985 and 2001. Philadelphia, the largest and most urban city in the region, lost 15% of its heaviest tree cover over this period. While American Forests recommends 40% tree cover for metro areas in the northeastern United States, Philadelphia only has about 16% tree cover. In fact, only 7% of the region's citizens live in a neighborhood with the recommended

40% tree cover. It was also found that 29% of the region's stream miles need forested buffers and over 70,000 park acres within the stream buffer area have no trees. In order to prevent more tree cover loss, TreeVitalize, a partnership to restore tree cover, was established by the Pennsylvania Department of Conservation and Natural Resources (DCNR), with the Pennsylvania Horticultural Society (PHS) soon joining as a leading partner.

riparian areas within the park system. Each of the City's 12 Planning Analysis Sections has been impacted by one of more TreeVitalize activities. The greatest number of landscape-size trees (1.5" to 2.5" caliper) are being planted in Sections with percent tree cover well below the City's average of 16%. Sections of the City adjacent to watershed parks tend to have higher tree cover. The extensive training and tree maintenance programs that educate citizens in tree planting and care also play a major role in the success of the TreeVitalize partnership.

Project Components

TreeVitalize's unique public-private partnership involved stakeholders from business, government and non-profit organizations to develop the approach and goals for the project. Citizen and local government engagement, capacity building, and stewardship were established as major program themes. Corporations and foundations became funders, while non-profit organizations with the appropriate skills and experience were chosen to lead the tree

Outreach: TreeVitalize employed several methods to reach the broader community beyond those who participated directly in planting projects. Some examples are media outreach, signage, links with GreenPlan Philadelphia (a process to create the City's first comprehensive open space plan), a rebate program to encourage individual planting to increase tree cover, and participating in events such as the Philadelphia Flower Show, where educational booklets, brochures and rebate cards are distributed. Rebate cards allow homeowners to receive a rebate of up to \$25 for all trees purchased and planted in Southeastern Pennsylvania. The success of TreeVitalize can be reflected in the number of volunteers. Over 2,000 residents have volunteered to plant trees in their neighborhoods, in addition to another 1,300 volunteers who have helped plant trees in the riparian buffers.



Project Goals

- Plant 20,000 shade trees.
- Restore 1,000 acres of forest in riparian and source water protection areas.
- Provide education and training in tree planting and care to 2,000 citizens.
- Encourage regional collaboration to promote best practices and multi-municipal approaches for sustaining and increasing tree cover.
- Use tree planting projects to build community stewardship.
- Motivate citizens to increase tree cover in their own backyard.



planting effort with the support from DCNR field staff. TreeVitalize is city-wide in scale and was designed to restore tree cover in Philadelphia, primarily by planting public trees along streets, in parks, on other public lands and in

Funding

About a third of the \$5.8 million committed to TreeVitalize to date has been private funds, and about 45% of the total funds raised supported planting and education activities in the City of Philadelphia. Private funders include the William Penn Foundation, Aqua Pennsylvania, Philadelphia Electric and Gas Company (PECO), The Philadelphia Eagles, Claneil Foundation, and Comcast

TreeVitalize Partnership - Benefits

Foundation. Public funds were granted by DCNR, Pennsylvania Department of Environmental Protection, Office of State Representative Dwight Evans, Mayor's Office of Neighborhood Transformation, Philadelphia Health Department, Fairmount Park Commission (FPC), US Forest Service, Pennsylvania Community Forestry Council, and NOAA Coastal Zone Management Program. Cash funds have been matched with volunteer and municipal labor.

Community and Economic Benefits

Economic Vitality: TreeVitalize has partnered with the Mayor's Neighborhood Transformation Initiative to plant 600 trees as part of ReStore Philadelphia, a commercial corridor revitalization program. Most projects are enhancing the existing green infrastructure - streets, commercial corridors, parks and trails.

Safety: Since 37% of the City's resi-



dents do not have a vehicle available and 42% of households only have one vehicle, many residents rely on walking and public transit to move around the City. Restoring the street tree population will enhance the pedestrian experience in residential areas and commercial corridors, which will increase pedestrian traffic, thereby improving public safety in the affected areas and corridors.

Affordable Housing Livability: TreeVitalize has improved the livability of affordable housing in two ways. It partners with community development corporations who preserve or develop affordable housing in their community. Secondly, it works with civic organizations in neighborhoods where new affordable and mixed income housing is being developed. Its tree planting programs enhance these projects and the existing residential areas adjacent to new developments.

Real Estate Value: A 2006 study by the Wharton Business School at the University of Pennsylvania found that new tree planting adds an average of 9% to the value of a house in Philadelphia. TreeVitalize tree plantings have added an estimated \$10 million to the

value of residential properties, which is more than \$7,000 on average to each property in the affected neighborhoods.

Community Involvement and Training: PHS's Tree Tender program serves as the main source of community involvement, especially in the ongoing management and maintenance of the projects, as well as being a public education strategy. The Tree Tender program covers long-term tree care and identifies situations when a professional arborist is needed for the care or removal of street trees. The Tree Tender program offers a 9-hour basic training course that covers tree biology, identification, planting, proper care, and working in the community. Tree Tenders also includes continuing education classes for advanced training on specific topics. Continuing education includes formal classroom training as well as field work and social events with learning opportunities. As of early 2007, over 3,370 residents have completed the basic training or continuing education classes. Since the establishment of TreeVitalize, the number of community groups taking part in the Tree Tender network has increased

Environmental Benefits

Air Quality: The trend of unhealthy and very unhealthy days has steadily declined since 1979. The air pollution (SO₂, PM₁₀, HC, O₃, NO₂, VOCs, BVOCs) avoided and net uptakes in year 5 is 0.32 lb per tree planted.

CO₂ Sequestration: Estimates show that the net carbon dioxide (CO₂) uptake in year 5 will be 121 lbs per tree, which is equivalent to 2.42 million pounds if 20,000 trees are planted according to plan.

SO₂ Uptake: The net sulfur dioxide (SO₂) uptake and avoided in year 5 is 0.1 pound per tree.

Heat Island Impact: Maximum difference between hot areas (parking lots) and cool areas (tree planted green space) are approximately 8.39°F in daytime and 7.86°F in nighttime. The cooling effect generated by one tree is 16 kWh in year 5.



2007 Awards of Excellence Community Trees Case Study



TreeVitalize Partnership - Looking Ahead

Project Evaluation

After every planting season, the tree-planting partners meet to evaluate and suggest improvements for the next season. This process led partners to establish a central holding yard to receive, hold and disperse tree shipments for the various projects. Tree species that are not typically used for street planting are tested at the same time. There are also methods in place to measure long term success. A mortality report will be prepared by the Morris Arboretum to document survival rates of trees planted in the TreeVitalize program. In addition, the FPC will monitor buffers by conducting visual assessment of riparian planting.

Project Maintenance

There is not a written maintenance plan for street trees, but ongoing maintenance is a team effort. Early care is the responsibility of property owners or the local planting partner organizations. Long-term care is provided by FPC, as they prune each street tree every 8-10 years and remove dead and dangerous street trees as required. Although FPC does not have a written maintenance plan for riparian buffers, visual assessments are made annually to identify areas for reinforcement planting or invasive species removal. Permanent plots in each watershed park for long-term monitoring will also be set up together with the US Forest Service.

Challenges Faced

The most significant challenge was procuring trees, including bare root trees, for neighborhood street plantings that met the Morris Arboretum's quality requirements and the FPC's species specifications. As a result, trees were procured not only from Pennsylvania but from nurseries in other states to meet project needs.

Innovation Applied

By creating partnerships that extend beyond traditional park and forestry organizations, TreeVitalize has actively engaged corporations, community development and economic development organizations, and has established a broader base of support for urban forestry. Other characteristics that distinguish TreeVitalize from other tree planting programs and partnerships are: the leadership role of the DCNR Secretary, the depth of collaboration and partnership among citizens and local government, the focus on the need for broader policy change, and the level of increased awareness achieved concerning the importance and value of urban forestry.

Contacts

Pennsylvania Department of Conservation and Natural Resources

Secretary Michael DiBerardinis
(717) 772-9084
ra-askdcnr@state.pa.us
www.dcnr.state.pa.us



Pennsylvania Horticultural Society

Maitreyi Roy
Senior Director
(215) 988-8800
mroy@pennhort.org
www.pennsylvaniahorticulturalsociety.org



Fairmount Park Commission

Mark Focht, ASLA
Executive Director
(215) 683-0202
mark.focht@phila.gov
www.fairmountpark.org

