

It's no small task to plant a tree. From left, volunteers Pete Kyne, Chris Wildfire and Bruce Barcic join Eisler Nursery foreman Jamie Colteryahn in what will be an all-day project of planting saplings on traffic islands in Pittsburgh's East Liberty neighborhood. About 150 volunteers participated in the work.



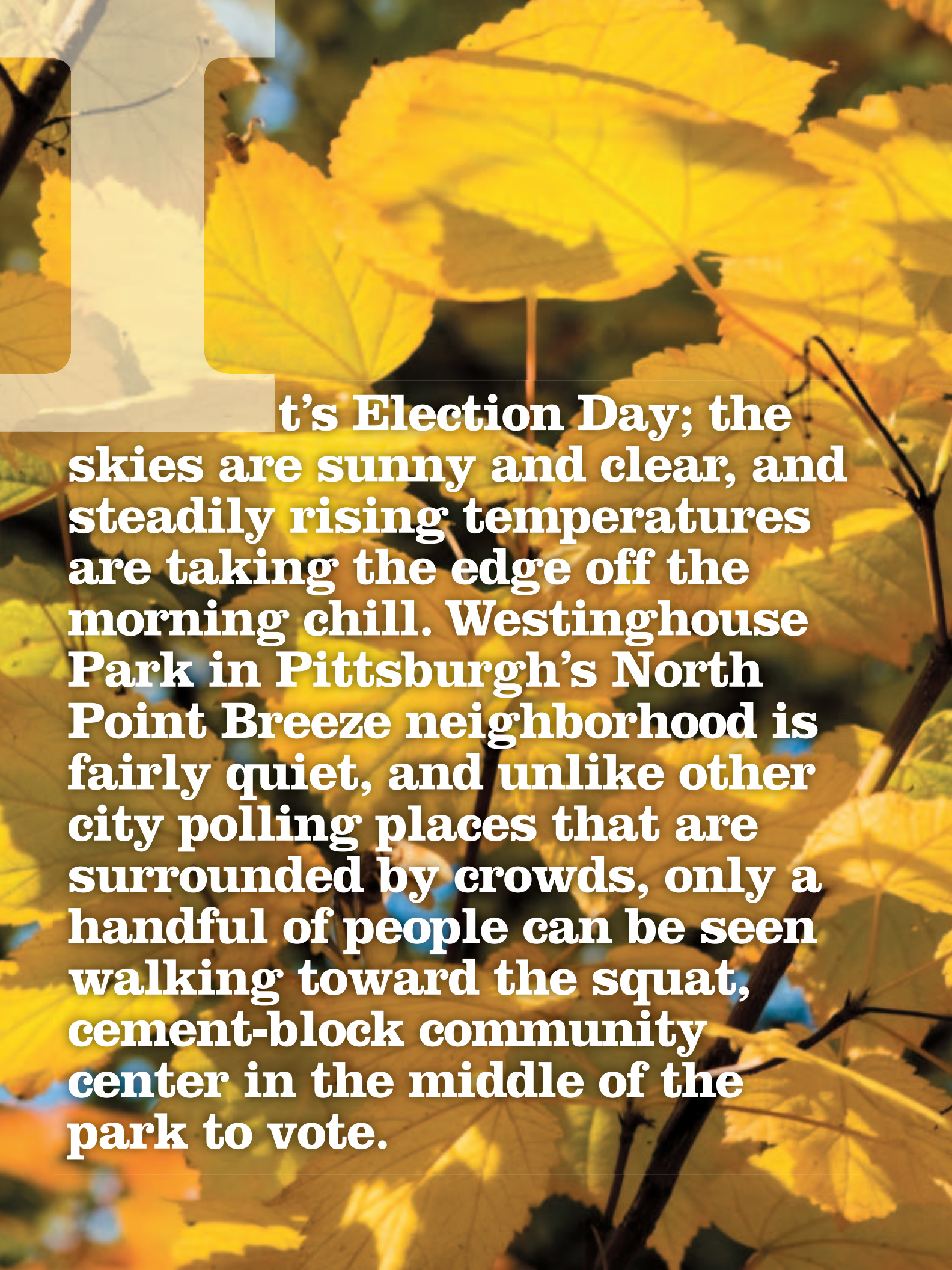




# Taking ROOT

**A tree may grow in Brooklyn all on its own, but an innovative planting program in Pittsburgh depends on foundation resources, scores of volunteers and government maintenance to bring leafy rewards to urban neighborhoods. By Carmen Lee Photography by Renee Rosensteel**





**t's Election Day; the  
skies are sunny and clear, and  
steadily rising temperatures  
are taking the edge off the  
morning chill. Westinghouse  
Park in Pittsburgh's North  
Point Breeze neighborhood is  
fairly quiet, and unlike other  
city polling places that are  
surrounded by crowds, only a  
handful of people can be seen  
walking toward the squat,  
cement-block community  
center in the middle of the  
park to vote.**

The scene's serenity makes it easy to spot two elm-like Japanese zelkova saplings that stand on one side of a pathway leading to the building. Their trunks are held straight by taut green straps that attach each young tree to pairs of wooden stakes placed securely in the ground. A cluster of three pin oak saplings that are similarly supported has been planted a few feet from a large, elaborate green-and-red jungle gym.

The young trees are dwarfed by several taller ones in the small neighborhood park, which is surrounded by large, stately homes—including those carved into apartments—and modest, neat houses. The community has a mix of working-class and professional families, and the occasional problems with violent crime seem incongruous with the attractive setting. And while the park has trees, it's apparent that shade is sparse on this square, mostly grass-covered patch. The saplings will one day help expand the tree canopy, a fact not lost on Christina Springer, 44, and Norman Nunley, 36, who have just cast their ballots and are playing with their 5-year-old son, Winston Ives Nunley, on the jungle gym.

"This play equipment gets hot. That's why we like to go to Highland Park, where it's more wooded and has more shade," says Springer, referring to a larger neighborhood park a few miles away.

Neither she nor her husband is familiar with The Heinz Endowments—supported program responsible for planting the saplings, TreeVitalize Pittsburgh, but Springer rattles off some benefits trees bring to urban communities as if she's read the brochure: increased oxygen in the air, more shade that helps cool down asphalt-laden cities in hot weather.

"I grew up in Wisconsin around a lot of trees," says Nunley. "It's nice to see that they're increasing the number of trees here. It will help people feel more positive about the neighborhood."

Restoring tree cover in the Pittsburgh region is the primary objective of the nearly one-year-old TreeVitalize program, a joint project of the City of Pittsburgh, Allegheny County, the Pennsylvania Department of Conservation and Natural Resources, and the Western Pennsylvania Conservancy. Other groups that support the project include Friends of the Pittsburgh Urban Forest, Pittsburgh Parks Conservancy and Friends of the Riverfront.

Under the initiative, 20,000 trees will be planted in the region by 2012, starting with 1,150 the first year. At the same time, the program is promoting environmental justice by trying to help modest- or low-income urban neighborhoods enjoy the same benefits of tree-lined streets and well-shaded parks as tonier sections of the region. TreeVitalize also educates public officials about the importance of maintaining urban trees, and works with other organizations to encourage local residents to participate in creating a healthier and more attractive urban landscape.

"When I say what I do, people regularly respond, 'We have so many trees and we have such green hillsides. Why do we need to plant trees?'" says Director Marijke Hecht, a petite, energetic woman with wavy, neck-length black hair and an infectious enthusiasm. "And I think that's true. We have great green hillsides, but when you drive through the city streets of Pittsburgh, you don't see green equitably distributed. There is this big disparity among neighborhoods, and, not coincidentally, it overlaps with income levels... The reason we want to plant so many trees in the next five years is to bring the benefits to all our neighborhoods around the region."

Endowments Chairman Teresa Heinz talked about the consequences of such green space disparities in a speech during the International Urban Parks Conference in September: "Too many children are being raised in isolation from nature. The only

# We have great green hillsides, but when through the city you don't see green equitably

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sense of belonging and adventure many children get is in front of a computer, wandering through malls or, worse, when they take advantage of our parks to prey on the innocent. This lack of connection, this isolation and indifference, separates them from their world... Every effort—a simple neighborhood garden, Three Rivers Park, a playground in a city—every effort strengthens our connection to this natural world.”

Author and columnist Richard Louv, who has written several books on family, nature and community, calls this lack of connection to the natural world “nature-deficit disorder.” In his 2006 book, “Last Child in the Woods,” Louv cites numerous studies showing a variety of benefits from quality time in nature such as improving children’s resistance to depression, stimulating their imagination and creativity, and calming those with attention deficit hyperactivity disorder.

“Deficit is only one side of the coin. The other is natural abundance,” he writes. “By weighing the consequences of the [nature-deficit] disorder, we also can become more aware of how blessed our children can be—biologically, cognitively and spiritually—through positive physical connection to nature.”

The Endowments supports several groups dedicated to improving southwestern Pennsylvanians’

connections to nature through a broad range of initiatives. The programs advance the foundation’s vision for the region’s ongoing environmental transformation, and tackle issues such as green building, green spaces, recreational amenities, land use and smart-growth policy, air- and water-quality improvement, environmental health, environmental enterprise and environmental education. Increasingly, these projects are being integrated, with the organizations working collaboratively toward sustainability for the region. TreeVitalize is an

example of how planting trees in neighborhoods lacking them can create a green infrastructure that enhances livability and increases property values while improving air and water quality.

Currently, the project is focused on planting trees in neighborhoods and parks within Pittsburgh, with plans to expand the program to other Allegheny County communities over the next few years. Individuals and organizations can apply to have trees planted in their communities. The city’s urban forester evaluates the sites to make sure there are no impediments to planting, such as sewer pipes or utility lines, and to determine what species of tree would thrive in those areas. City public works employees, contractors or volunteers dig the holes, plant the saplings or do both. The Endowments—supported Friends of the Pittsburgh Urban Forest provides staff to help with the site evaluations, and supplies “tree tenders,” community volunteers who assist with planting and are trained to prune, weed, mulch, water and otherwise take care of the trees.

TreeVitalize came to Pittsburgh after Caren Glotfelty, director of the Endowments’ Environment Program, learned of Philadelphia’s initiative three years ago through conversations with Michael DiBerardinis, secretary of the state Department of Conservation and Natural Resources. DiBerardinis told her the project was moving briskly toward its goal of planting 20,000 trees in the Philadelphia region in five years.

“I thought, ‘Wow, we ought to do something like that in Pittsburgh,’” Glotfelty recalls. She believed the program would complement grants that the Endowments already had awarded to improve the region’s green landscape, such as \$200,000 to support the tree preservation plan developed in response to a city Shade Tree Commission report. The 2005 inventory found that Pittsburgh had 31,524 street trees, nearly 30,000 less than anticipated, and thousands were in poor condition. The species varieties were limited, and the city had one tree for every 11 people—in some low-income neighborhoods one tree for

Below from the left, Michael DiBerardinis, secretary of the Pennsylvania Department of Conservation and Natural Resources; Michael Boyle, chairman of the Western Pennsylvania Conservancy; Allegheny County Executive Dan Onorato; and Pittsburgh Mayor Luke Ravenstahl are poised to shovel dirt for a ceremonial tree planting in the city’s Lawrenceville section as part of the formal announcement of TreeVitalize Pittsburgh.





## you drive streets of Pittsburgh, distributed.

**Marijke Hecht**, director, TreeVitalize Pittsburgh

every 22 people—while the average for more than 20 other comparable cities was one tree for every three people. The results exposed the paltry attention given to street trees in the last decade as the city grappled with financial crises.

“TreeVitalize seemed like a comprehensive approach for addressing the situation that would achieve a larger scope and scale—tens of thousands of trees rather than a few hundred,” Glotfelty says. She organized a meeting during which DiBerardinis spoke to about 30 people from 10 local organizations that were involved in tree planting as part of their revitalization or ecosystem restoration work. After confirming the group’s interest, state officials provided a \$250,000 grant to get TreeVitalize off the ground, and later awarded another \$250,000 to support the work. The Endowments gave the project \$250,000 in the spring, and, more recently, the Home Depot Foundation granted the program \$50,000, which bumped up the number of trees that could be planted the first year from 1,000 to 1,150.

Still, expanding the tree canopy in an urban environment is no simple matter. Only the hardest saplings can survive in that setting. The minimum size at planting is 250 to 350 pounds, a cost of \$150 to \$185 per tree. Site preparation usually involves removing concrete so that at least a 30-square-foot patch of dirt is available for a hole about 14 inches deep and 40 inches around. Factor in expenses such as soil, mulch, wooden stakes, tools, staff time and contractors, if they are used, and the total cost of planting a single tree can be nearly \$400 to \$600. Despite the expense, DiBerardinis announced in October plans to expand TreeVitalize statewide, with a goal of planting 1 million trees in metropolitan areas in five years.

Trees are worth the cost for a number of city dwellers, especially the enthusiastic volunteers who become tree tenders, setting aside time in their often busy schedules to learn about trees and care for them. When Molly Dimond-Stephany, an insurance broker with two young children, moved to Pittsburgh 10 years ago, she maintained her love of nature from growing up on a farm and, later, in



a suburban subdivision. She found like-minded souls among her fellow tree tenders and neighbors on Fisk Street in Pittsburgh’s Lawrenceville neighborhood. Residents there submitted so many requests for trees that Fisk, with its closely built houses that sit only a few feet from the curb, was the site of the first 18 TreeVitalize plantings when the program kicked off in the spring.

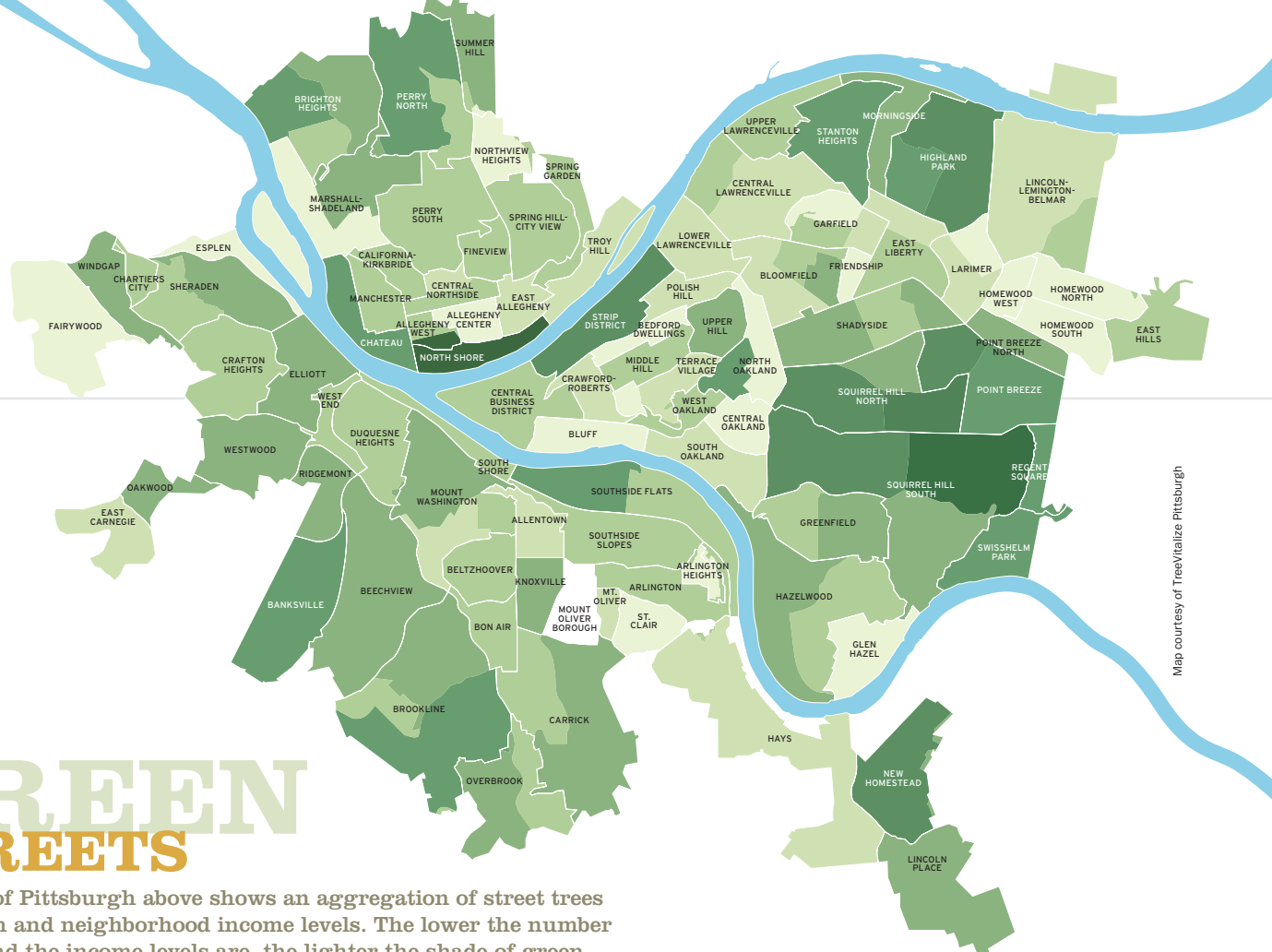
“We have so many people who want trees. It’s really an exciting time,” says Dimond-Stephany. “It makes a huge impact, even though there’s not a large canopy yet. People are noticing them. They’re so little, but they make the street look so nice... It’s great to see some nature separating the concrete.”

Real estate agent Alice Vaday, who acknowledges having 60 house plants, says she loves her Carrick neighborhood but has become concerned that it is starting to look rundown. That’s why she has walked a two-mile stretch of Brownsville Road, the main drag through the community, knocking on doors to see who would be interested in having

TreeVitalize Pittsburgh Director Marijke Hecht, left, doesn’t let her clutch on a thermos of tea stop her from aiding a volunteer in planting a tree in East Liberty.

# GREEN STREETS

The map of Pittsburgh above shows an aggregation of street trees per person and neighborhood income levels. The lower the number of trees and the income levels are, the lighter the shade of green. Though surrounded by city neighborhoods, Mount Oliver Borough is a separate government entity and not included in this evaluation.



a tree planted in front of their business or home. About 26 trees were planted on the street by the end of the year, with the possibility of more being added in the spring.

“We had two business owners sign up to become tenders. We had one business owner put a spigot on his building so he can water his tree,” notes Vaday. “We anticipate that people will want to do other things to beautify the neighborhood.”

In fact, studies indicate that the presence of trees can give people a sense of well-being, which can have a variety of positive effects. Researchers at the University of Illinois at Champagne-Urbana found that residents in a low-income Chicago housing community socialized more in areas with several trees compared to those living in sections with little or no vegetation. And buildings in the study that had more greenery had 56 percent fewer violent crimes and 48 percent fewer property crimes. A study at Texas A&M University’s Center for Healthy Systems and Design revealed that just seeing trees out hospital windows helped reduce the recovery time for a group of gallbladder surgery patients by almost one full day and lowered the amount of painkillers they consumed.

Many people remember from their school science courses that trees help improve air quality by supplying oxygen, but trees also remove pollutants; reduce stormwater runoff, flooding and erosion; cool down cities; and help to lower utility costs. A study by Columbia University found that children living in New York City neighborhoods with more street trees have a lower incidence of asthma.

On the economic front, shoppers who were surveyed by the University of Washington’s Center for Urban Horticulture reported that they were willing to pay 9 to 11 percent more for goods and services in shaded business districts because they believed the quality was better and the merchants more responsive. Researchers at the Wharton School of Business at the University of Pennsylvania found that planting a tree within 50 feet of a house increased its property values by about 9 percent.

Linda Doman, executive director of Vintage, a senior center in Pittsburgh’s East Liberty section, believes the 115 trees, including maples, oaks, horsechestnuts, cedars, red buckeyes and cypresses, that were recently planted on traffic islands in front of the center will help attract the type of economic development that occurred a few blocks away where



customers flock to a six-year-old Whole Foods Market and neighboring stores.

“Once the trees grow, they’ll look beautiful. They’ll make using the bike lanes more pleasant, and it will be good for the Peabody students to see improvements in their community,” says Doman, referring to the high school across the street that’s had problems over the years with gang violence. “I believe they will encourage people to take notice of this part of East Liberty.”

Glotfelty and TreeVitalize’s Hecht hope the initiative will convince people that having trees and

green space in all of the region’s neighborhoods is a necessity rather than a luxury.

“It may seem somewhat frivolous to be spending money on planting trees when, in this economy, people are losing their health insurance and using food banks in record numbers. But trees are an investment in health, safety and hope for the future,” says Glotfelty. “We depend on trees to make oxygen for us to breathe, clean our air and water, give us shade. They save us money on our utility bills by reducing cooling costs in the summer and breaking chilly winds in the winter. And the spiritual relief they give us from the dehumanizing effects of concrete and asphalt is priceless.” *h*

## TREE OF KNOWLEDGE

**What does it take to plant a tree? More than some people might think. Here are some of the steps that require careful consideration in the planting process.**

Trees are purchased from a local nursery and tagged with their species identifications.

Wooden stakes are used to keep the saplings straight. As part of the TreeVitalize program, the stakes are milled by Urban Tree Forge, a local company that uses salvaged materials.

Community volunteers called tree tenders help with maintenance tasks such as watering, pruning and weeding.

Before planting, care must be taken to ensure enough distance between the tree and the street or sidewalk. In some cases, this means cutting away a portion of the sidewalk. Ultimately, a proper amount of space—usually at least 30 square feet—must be provided to allow room for the tree’s roots to take hold.

The site is evaluated to determine what type of tree would thrive in that environment.

