

Trees: Pittsburgh's Tallest Natural Resource

by Charlotte Kidd, M. ED.

Pittsburgh is greening up in more ways than one. The city is feeling flush in a progressive business climate, and its street and park trees are attracting much needed attention.

"Pittsburgh went from Steel Town USA to no steel mills," said Dale Vezzetti, the City Forester. "The whole region has taken a different direction over the last decade as the current administration tries to bring in new technology and opportunities." Today health care, biomedical research, and financial services are the city's major employers. High-tech opportunities beckon from electronic business, software development, manufacturing, and environmental companies.

And city leaders are looking with new eyes at some long-standing assets. Healthy trees, they realize, are good for business. Lush green canopies shading city parks and streets benefit the local economy — from bottom-line energy savings to offering an inviting spot for family outings and TV backdrops.

Last spring Pittsburgh recognized the potential of its tallest natural resource by officially reviving the Shade Tree Commission, a 15-member, quasi-governmental advisory group. The volunteer members, chosen by the mayor and city council, reflect a combination of hard-earned expertise and enthusiastic vision. Although the commission is in the early stages of defining goals, its mission is clear to Peggy Smyrnes Williams, Shade Tree Commission president. "It's incumbent on us, the Shade Tree Commission, to not only reforest but maintain the forest we have."

Late in September, Mayor Tom Murphy "set aside \$70,000 for the trees," said

Williams. "I think he's looking to the Shade Tree Commission to develop a program to reforest and develop a tree maintenance system in four neighborhoods."

The Shade Tree Commission (forester, landscape architect, landscape contractor, botanist, lawyers, councilman, mayor's representative, community leaders from different neighborhoods, and banker) is "a real nice cross-section of people with a common thread: that is, interest in the quality of life, environmental and ecological issues here," Williams said. "The framework of that quality is trees. Trees purify the air, give off oxygen, keep things cooler in summer, and provide shelter for a vast variety of wildlife in our urban setting."

The Shade Tree Commission intends to plant and cultivate while the political and economic fields are fertile. "Our initial projects are going to be governed by requests of the mayor and city council," Williams said. The commission plans its first tree planting for one neighborhood this fall. In the spring, it will identify three other areas for additional plantings. "We will be looking at neighborhoods to reforest that were devastated as tornadoes and down-drafts swept through last year, destroying historical trees as well as causing millions of dollars of damage," she added. "Apart from that, we want to educate. We want to develop better public relations for our green spaces, and to collaborate with other environmental groups and build partnerships with groups like the Pittsburgh Parks Conservancy. We want to reestablish within the public the importance of our green spaces and our trees."

The new Shade Tree Commission emerged through a proposal from Council-

man Jim Ferlo with strong support from Mayor Tom Murphy. Both are interested in the environment and "in quality-of-life issues in terms of making Pittsburgh a more livable city, attracting business, and keeping residents," Williams said. They and the city council "realize the trees are an asset," Williams added. "We are a very green city. Historically, with the steel industry and manufacturing, the people who were in a position to donate spaces and maintain plant life did so. It was always important to people who lived here."

Reauthorizing and funding the Shade Tree Commission is a good start but Pittsburgh has some catching up to do. The city's original Shade Tree Commission was a street tree advisory group authorized in 1910; five years later, the commission was all but mute. Although the city created a Street Tree Division in the Bureau of Parks in 1914, attention to and funding for street trees declined steadily into the 1990s, according to the Carnegie Mellon study, "Pittsburgh's Urban Forest: Planting For the Future."

Maintaining Pittsburgh's Urban Forest

With 10 years as city forester, Dale Vezzetti has both broad and close views of Pittsburgh's several thousand acres of city parks and nearly 1000 miles of street right-of-way. "We see a fairly diverse urban forest," Vezzetti said. "Trees in all age ranges,

Trees enhance Pittsburgh's Golden Triangle.



SEITZ/HYLTON

Trees: Pittsburgh's Tallest Natural Resource

from mature trees in decline to newly planted trees, including majestic oaks, elms, London planes, and smaller ornamentals like flowering cherries."

Keeping that urban forest healthy and safe with dwindling city funding hasn't been easy. "For the last 25 to 30 years, the city's Forestry Division seemed to operate on a crisis management, or as-needed basis," Vezzetti said. Pruning is limited to hazardous dead limbs on dying trees. Dead trees are removed. Tree planting is done by property owner request. There's no formal street tree inventory.

"As the city's urban forester, I certainly hope that the Shade Tree Commission would make an impact on budget and resources that would enhance our tree maintenance program," said Vezzetti, who is also a Shade Tree Commission member. In his opinion, the commission would serve well as a serious lobbying group that draws attention to tree-related issues and gets supplemental funds for an effective community tree program. "With a comprehensive maintenance program, we could prune trees on a cyclical basis: for example, mature trees on a six- or seven-year cycle. Also, I believe tree planting should be done on a geographical basis, by blocks and streets, for both immediate and long-range impact."

Vezzetti continued, "We are in hopes of securing private funding to help with tree planting in the city of Pittsburgh, but one of the larger issues is tree maintenance. In reality, continuing to plant trees without the necessary resources for the maintenance of these trees is actually counterproductive."

For seven years, the city received much needed help with maintenance thanks to public utility Duquesne Light's Vegetation Manager Jennifer Arkett. "Since Jenny came on board, there've been so many improvements in the working relationship with the city and the utility company," Vezzetti explained. "In prior years, there was very little communication between the city's forestry division and the utility company. Now we work very well with our local utility provider. We have made some major changes agreeable to both of us with regard to pruning. Duquesne Light has upgraded standards to cuts that promote healing, like the v-trim, and they no longer

allow the old roundover, pollarding."

That cooperation has long- and short-term gains. "The long-range impact is that we will have a healthier urban forest because of the improved pruning practices," Vezzetti said. "We are also incorporating a lot of utility-compatible trees, trees that at maturity would have very little, if any, impact on utility lines."

Residents benefit immediately because their trees and streets are safer. Take the typical scenario of a dead and dying tree along a street in Duquesne Light's jurisdiction. Rather than just cut the tree back enough to clear their lines, which is their only responsibility, Duquesne Light often offers to go the extra step of taking that dying tree down. "They're just a big help," Vezzetti said. "It does affect their utility and it works out in everybody's best interest. When you have an overburdened maintenance program, any extra help is certainly appreciated."

Pittsburgh spends about \$800,000 annually for tree care; Duquesne Light outlays roughly \$1.5 million a year for pruning and removing dead trees in the city, according to the 1995 Carnegie Mellon Study.

"As a utility company, we are one of the key impactors on the urban forest in any given day," Jenny Arkett said. "It really has been a challenge to work throughout the city, a densely populated area where the trees are near and dear to people. We've worked with Dale and extended his budget a bit. We complement each other. We may call him and ask if we can take that dead elm down. He calls us. It makes for a good working relationship."

"Utility companies across Pennsylvania have been very active in municipal tree restoration programs — everything from planting the right tree in the right place to proper pruning and promoting correct arboricultural practices," she added.

"Duquesne Light is working hard to revamp our utility line clearance program and is promoting the best of arboricultural practices to address the issues of reliability and safety on a day-to-day basis," she continued. "We've brought professionalism to our program, for example, the ANSI standard pruning techniques, and we're actively involved with professional organizations such as the International Society of Arbori-

culture. With that approach, Pittsburgh has a heightened awareness of the value trees add to a community."

Arkett is one of four certified arborists on the Shade Tree Commission. Utility pruning, she said, takes a lot of punches. A citizen's awareness of the urban forest

PITTSBURGH PARTICULARS AND TREE FACTS

Pittsburgh population:

350,363 based on 1997 census

Average Per Capita Personal Income:

\$25,359

Pittsburgh size:

55.5 square miles

Street miles:

935

Estimated number of trees:

50,000

Tree-related costs:

Pittsburgh spends \$800,000 annually for city trees, mostly removing dead trees and pruning dead limbs deemed potentially dangerous to property and life; roughly \$2 per resident.

Utility provider Duquesne Light spends roughly \$1.5 million annually pruning and removing dead trees in Pittsburgh.

Tree-related benefits:

Value of \$6.5 million for Pittsburgh's public and private forest assets

Value added in property taxes:

\$1.5 million

Intangible value of parks:

more than \$3 million

Environmentally derived savings

such as energy savings:

\$2 million

Per tree:

\$56 estimated energy conservation benefits

\$2 for hydrological benefits

\$1 for improved air pollution

The urban forest's unmeasured yet discernible benefits:

Psychological benefits: increased sense of community pride and ownership in neighborhood

Trees: Pittsburgh's Tallest Natural Resource

often starts and ends with a single tree in the front yard. "People don't understand what goes into maintaining an entire city of trees for safety and preserving the health of the urban forest," Arkett said. "The key is education. It's important to get people to understand why we prune trees. Most people prune for aesthetics. They want the tree to look nice. Very few prune for function, unless they're knowledgeable about it. With electric lines, the professional prunes for clearance around a dangerous obstruction going through the crown of the tree. All the cuts are made properly according to industry standards and current best practices."

Like Vezzetti, Arkett emphasized the need to address maintenance before planting new trees. "Everybody loves to plant trees, but nobody likes to take care of them," she observed. "Pittsburgh has a large enough population of trees to take care of before people just jump in and plant. Until we get by the ceremonial planting with the gold shovel and put a gold saw in their hands, we won't have attention where it's needed. Residents need to recognize what they have and how to take care of it. We have to refocus to get everybody to understand that if you don't maintain what you already have, you're only adding to the problem."

To that end, Duquesne Light has hosted several Pittsburgh tree education workshops including one at the Pittsburgh Zoo. The utility invited local tree people to a two-day program featuring renowned arborist Alex Shigo to get word out about proper pruning. Duquesne Light has also made the video "Managing the Urban Forest" about practices such as proper pruning and tree removal as well as denouncing topping of trees. Last year, the National Arbor Day Foundation awarded Duquesne Light the Tree Line USA Award, which recognizes electric utilities that meet certain criteria for line clearance activity.

Volunteers: Tree Stewards and Tree Tenders

In the nonprofit sector, the Western Pennsylvania Conservancy has been training volunteers to plant and tend Pittsburgh's trees through its Green Neighborhood Initiative program. "Trees and tree stewardship are one portion of the Greening Initiative's

holistic approach to energy conservation," explained Josie Gaskey, Director, Community Conservation. "Other components are indoor energy conservation, historic preservation, and urban beautification." A striking example of their work is a brick town plaza on the South Side, she added. "We put in gardens and planted 16 trees and will put in benches. From the standpoint of energy conservation, this area will be a cooler spot in a historic district. We tried to choose historic trees and flowers while keeping the urban environment in mind."

Tree Stewards and Tree Tenders have been busy with several projects. Their training has included pruning instruction by Mark Remcheck, Urban Forester for Pennsylvania State University Cooperative Extension, as well as information about proper planting techniques, tree biology, and grassroots organizing. "I think that education is such a major part of this," Gaskey said, who is also a member of the Shade Tree Commission. "If somebody wants to learn, the better off we all are."

While helping to improve the current condition of Pittsburgh, trees act as a symbol of faith and continuity to future generations.

Tree Stewards put theory into practice in a project on Pittsburgh's South Side. Thanks to funding from the Vera I. Heinz Endowments and the Birmingham Foundation, they planted and tended about 70 three-inch caliper balled-and-burlap street trees, in about a 20-block square area including Brownfield Road in the Carrick neighborhood and Butler Street in Lawrenceville. Although more expensive and harder to plant than whips, larger trees are more likely to survive, Gaskey explained. "In a city like Pittsburgh, you really need to put in a substantial tree to keep from tempting people to dig them out or kids to break off the trunk." They used 'Skyline' honeylocust 'Chanticleer' pear, and 'Harvest Gold' crabapple because of their tolerance to urban pollution. "Honeylocust holds up so well," she added. "The canopy is airy and few leaves fall on the ground. We used the pear for color and areas with power lines, and the

crabapple for side streets and near peoples' homes."

Every tree lived although two, subjected to vandalism, were replaced the next day. "All the people were excellent at watering and taking care of them," Gaskey added. Despite the unusual drought, "they supplied water from their homes, watering once a week by slowly dripping five-gallons. They've taken ownership in the trees; that really is key."

The Shade Tree Commission's collective expertise will come into play in fall 1999 for their first major tree planting in a selected neighborhood. Gaskey filled in the details. "The commission divided the city into four regions, picked four potential neighborhoods for the planting, and sent them questionnaires to evaluate their readiness," she said. "Based on their applications, the Shade Tree Commission will pick one neighborhood. We plan to plant about 50 trees, two to three-inch caliper, depending on the streets and the neighborhood," Gaskey said. The city forester will select the varieties. Neighborhood volunteers will be required to take the four-hour Tree Tenders' training and sign a maintenance agreement to care for the new trees.

If best intentions and plans take root, Pittsburgh's tree trend could be a win-win for its community forest, citizens, and economy. "The Shade Tree Commission has immense talent and potential," noted Williams, its president. "We're all on the same page, quite harmonious," she observed. "It's amazing to me how well everyone works with one another." Among their many challenges will be finding a workable balance between the hard realities of maintenance demands and more emotionally engaging, and more easily funded, tree planting. In the meantime, their neighborhood tree plantings with follow-up volunteer maintenance is one significant way to engage strong advocates, voters who value trees.

Thanks to "Pittsburgh's Urban Forest: Planting for the Future," Carnegie Mellon University, Department of Engineering & Public Policy, Department of Social and Decision Sciences, and H.J. Heinz School of Public Policy and Management, January 18, 1995 and Pittsburgh Regional Alliance, Economic Development Council for some of the above information.