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# Trees, Jobs, Health and Equity in the Urban Forest

*By Kathleen L. Wolf, Ph.D.*

Materials from America's vast forests have fueled our nation's growth and economic development. Today, trees are still important sources of wood products, but city trees provide additional, often intangible benefits and services. As the importance of trees is better understood by the public, we need to ask – is everyone sharing in the benefits? Green-industry jobs are place-based; they can't be easily outsourced. Are residents able to access the green jobs within their communities? A more general concern is whether all communities have equitable quantities of trees, parks and gardens.

This article highlights recent research about city trees and the green-jobs workforce, as well as why all city residents should have access to nearby nature. It offers practical reasons for why environmental justice (EJ) is important.

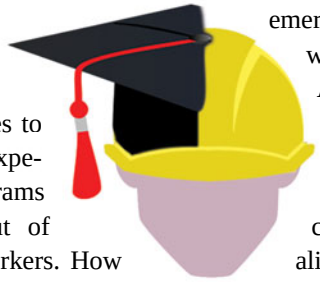
***Local governments are increasing their investments in green infrastructure to meet policy goals such as urban-canopy targets and storm-water management. The demand for a well-trained green-collar labor force will increase as cities implement their sustainability plans. Photo by Guy Kramer.***

## Businesses and jobs

Local governments are increasing their investments in green infrastructure to meet policy goals such as urban-canopy targets and storm-water management. The demand for a well-trained green-collar labor force will increase as cities implement their sustainability plans.

Green-industry wages have a multiplier effect in the community economy. Ecotrust, based in Portland, Oregon, found that, for every full-time job created for local green-infrastructure work, nearly two are created throughout the economy. Yet hiring practices can limit access by some workers. A report by Ecotrust and PolicyLink points out both needs and solutions concerning jobs and equity in green industries.

Green businesses are often entrepreneurial start-ups in underserved communities. A review of cities turned up specific obstacles to such firms. For instance, cities may not publically advertise small contracts, possibly resulting in new or smaller firms not being considered. Some public prequalification processes limit opportunities for minority and women-owned businesses. Subcontracting decisions also may not address business diversity. Many local governments are making efforts to be more inclusive and transparent in outreach for public projects.



Community-based green jobs can help people in underserved communities to gain career training and experience. Local training programs can provide pathways out of poverty for low-skilled workers. How can entry-level workers become successful contributors to a firm? The Ecotrust identified barriers that need to be addressed.

For example, youth-oriented training programs often have to turn away applicants, reducing the number of people able to develop skills and knowledge for employment. There are often language and financial barriers in more formal educational and training programs, such as community colleges. Internships for new workers may be limited as the hiring organizations are less welcoming to people of different cultural backgrounds.

Why should a firm make the effort to diversify its employees? Research on businesses suggests that greater creativity emerges when a variety of people work on plans and strategies. Also, communities are becoming more culturally mixed, and workers can help connect to a broader set of potential customers and develop ways to align management practices with different cultural preferences.

## Urban forests and equality

In just the last decade, the expanded availability of data combined with more affordable computing power has ushered in the era of big-data analysis. Urban-tree canopy analysis has become an invaluable way to envision the urban forest across an entire city, informing policy and program goals. But an unsettling discovery, made clear by maps and statistics, is that the urban forest is not equitably distributed. For a variety of historic reasons, underserved communities often have fewer parks, trees

and other nearby nature assets.

Every person, regardless of race, ethnicity, income or age, is entitled to live in a community that supports wellness and good health. In the 1980s, the Environmental Protection Agency observed disproportionate exposures to environmental harms and hazardous land uses, as well as a lack of access to clean-up programs. A 1994 U.S. presidential executive order required environmental-justice initiatives to be included in every federal agency's mission. A 2012 update requires agencies to not only abate or remove harm, but to promote efforts to increase quality of life and opportunity.

**Health outcomes**

Even the smallest bits of nature in the city can make a positive difference in people's daily lives. Such messages about nature and wellness can be used to help landowners and clients understand why trees and landscapes are important for quality of life. In addition, as the urban forest is more widely understood to be a health-promoting asset, there will likely be greater financial support for urban-forest planting and management.

There are literally thousands of studies about the relationship of nearby nature in cities and human health. A summary is provided at the Green Cities: Good Health website (depts.washington.edu/hhwb/). Some of the findings include:

*Active living:* The U.S. Centers for Disease Control promotes moderate physical activity, such as brisk walking, several times a week to reduce health risks from obesity and chronic disease. Trees and green streets improve the walkability of neighborhoods and promote recreation, offering better health for people of all ages.

*Stress reduction:* Our bodies respond to stressors with a higher heart rate and blood pressure, and increased levels of adrenaline and cortisol. The experience of nearby nature is one antidote to stress, and the body's positive response is remarkably fast, occurring within minutes.[1]

*Mental health and function:* Time spent within nature contributes to better mental health and improves one's capacity to be productive. Natural settings provide respite and reduce fatigue. Mental restoration is gained from brief experiences with nearby nature, and longer visits improve the effect.[2] Interacting with urban green space is also associated with reduced depression.[3]

***As the urban forest is more widely understood to be a health-promoting asset, there will likely be greater financial support for urban-forest planting and management. Photo courtesy of the author.***

*Social cohesion:* Having parks, landscapes and trees sets up environments where people can interact and engage. Views of nature and green space are linked to greater perceptions of well-being and neighborhood satisfaction and a greater sense of safety. Active participation in community greening programs, such as street tree plantings, provides opportunities to develop social connections.[4]

**Overcoming challenges**

Some studies have focused specifically on underserved communities. Research suggests that the positive effects of exposure to urban nature may be amplified in lower-income urban communities. For instance:

• In a study of public-housing residents living in architecturally identical buildings, those with nearby vegetation were more effective in managing serious personal life challenges than their counterparts living in barren environments.[5]

• Living in the greenest environments can reduce health inequality of those with lower income.[6] A study found that mortality rates of communities having low income and high levels of residential greenery were similar to those of higher socio-economic status. However, with lower income and little surrounding greening, mortality rates were higher.

• Studies of public-housing settings found fewer reports of personal and property crimes for buildings having greener surroundings.

• Vacant-lot cleanup provides benefits.[7] One study found that walking near "greened" vacant lots significantly decreased heart rates, indicating reduced stress. Others find reduced crime and increased resident perceptions of safety following vacant-lot improvements, in addition to increases in market value for adjacent properties.

• Community gardens and tree plantings can be important to minority and ethnic groups by creating culturally significant places – strengthening a sense of community and tradition.[8]

**Importance of nature and equity**

This review of environmental justice spanned two scales, from efforts to encourage more diversity in hiring tree care employees to the need for equitable access to nature by all residents of cities. Hiring people who live in the communities where a firm or agency is based provides benefit to the local economy and perhaps gives a business access to a new customer base. Meanwhile, given the high costs of health services, providing nearby nature, including trees, can promote health and improve quality of life.

Including people in the design and stewardship of nearby nature offers other benefits. Service days on greening projects can contribute to community goals and be a direct-marketing approach. Connecting to new ideas and welcoming diverse cultures often leads to vibrant, desirable places to live.

**Learn more from these publications:**

Enelow, N., C. Schildt, et al. 2017. Jobs & Equity in the Urban Forest. Portland, Ore.: Ecotrust & PolicyLink, 110 pp. (3.3 M download)

Wolf, K.L., & E. Housley. 2014. Environmental Equality: Providing Nearby Nature for Everyone. Annapolis Md.: TKF Foundation, 16 pp. (1 M download)

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*Kathleen Wolf, Ph.D., is a research social scientist with the College of the Environment at the University of Washington, and an associate with the U.S. Forest Service Pacific Northwest Research Station. Information about her research program can be found at www.naturewithin.info.*


*She will be making a presentation on this same subject at the 9th Annual Urban Forest Symposium, "Equity and the Urban Forest," May 23, 2017, from 9 a.m. to 4 p.m. (reception to follow) at the Center for Urban Horticulture, 3501 NE 41st St., Seattle, Wash. The event is being co-hosted by University of Washington Botanic Gardens and PlantAmnesty. For more information or to register, visit http://bit.ly/urban-forest or call or email 206-685-8033 or urbhort@uw.edu.*

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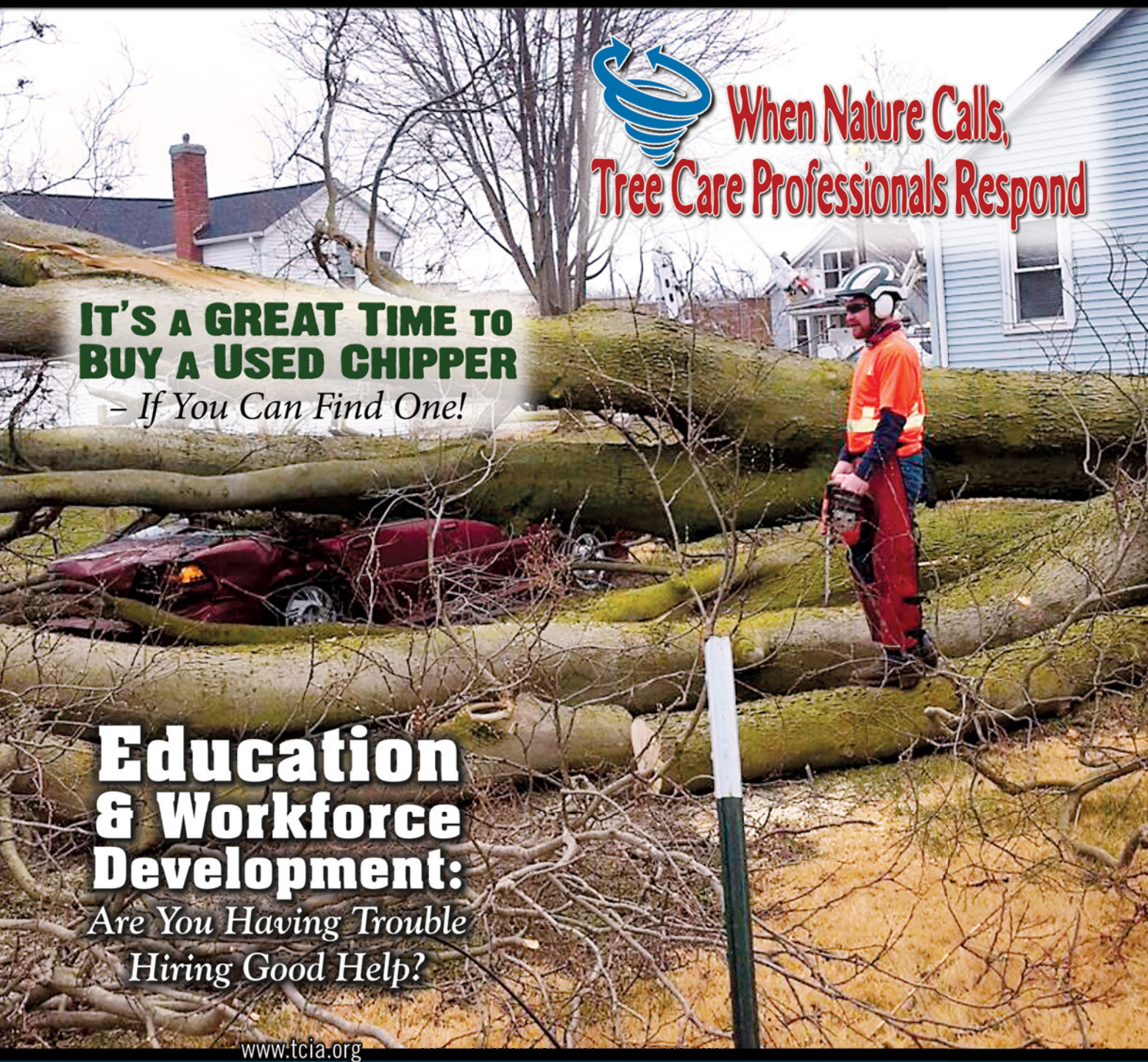

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