Financing the Urban Forest
Volunteers as a Source of Revenue and Program Support

By Gary Johnson, Richard Hauer, Ward Peterson, Dana Karcher, and Jennifer Gulick

Editor's note: This is the fourth in a series of articles we are publishing that focuses on trends and best practices in municipal arboriculture and urban forest management, based on findings from the research project, Municipal Tree Care and Management in the United States.

Think about this and be honest in forming an opinion: Every time a tree is planted on property that a municipality maintains, the price of that tree rises continuously for years until it reaches the point where it is returning more resources to the community than it is costing. That point of change can take many years to reach or is sometimes never reached. Trees at their finest are long-term investments. They are quality-of-life assets to neighborhoods, recreational areas, and transportation corridors; trees are assets to the whole community. Most residents of, and visitors to, urban communities will acknowledge this fact, and yet, most communities do not have urban forestry maintenance budgets that allow them to fully stock the available planting spaces, provide the best maintenance practices at the optimum cycles, and proactively minimize health, condition, and structural problems (Vogt et al. 2015). Far too often, there's a pause (sometimes brief, sometimes not so brief) between perceived values and the acknowledged necessity of care, primarily due to limited budgets and growing community needs. For municipal arborists, it may help to see this development as a challenge, though not necessarily as an obstacle.

Survey Fact Number One

In the 2015 survey *Municipal Tree Care and Management in the United States* (Hauer and Peterson 2016), a few of the many worthwhile findings hinted at some options for funding programs. One topic that rose to the top was the average salary for municipal arborists based on national (U.S.) responses: USD $47,000 (Hauer et al. 2015). This amount represents a respectable average salary, no doubt, and yet some would feel that it is woefully low for such a demanding profession. Falling from tall trees hurts. Being around and working with chain saws and chipper trucks is inherently dangerous. Bucked-up tree trunks are heavy and tricky to wrestle with. From that perspective, the average wage doesn't even approach the outrageous level that some people think arborists earn. Arborists, however, are expected to perform a lot more duties than the typical layperson may be aware: planting, mulching, watering, clearing sight lines, monitoring and reporting, invasive species management, inventorying, data entry, outreach, and developing strong beginnings for young canopy-producers. These different tasks possess various levels of risk, and require various degrees of training and expertise.

Using Resources Wisely

Given the fact that there are so many tasks involved in rearing a healthy canopy, it's natural to ask which of these tasks require the most experienced, most educated, most physically able "arborists." Certainly, mature tree management, including pruning, removal, and diagnosing and treating ailments. However, it could be argued that mulching, watering, planting trees (other than large and heavy ones), data entry, and some levels of pruning and monitoring are less demanding of experience, education, and stamina—or can be accomplished by different kinds of arborists. The best use of that $47,000 arborist would be to focus on tasks requiring the most professional of arborists. No argument here.

Perhaps, in the spirit of using maintenance dollars wisely, as well as assigning duties to those best suited to perform them, one may pursue options to stretch their resources. Consider volunteers, engaged community citizens, as alternative "sources of revenue." There are many arboricultural tasks that a volunteer can successfully perform that won't cost a community $47,000 each year (Figure 1). Even better, tasks that volunteers can check off of a to-do list are no longer distracting the skilled arborists from the duties they could best

perform. Mulching and watering trees are critical steps to establishing newly planted trees. Are these truly tasks that only a $47,000-a-year employee can perform? Be honest.

Survey Fact Number Two

Incorporating volunteers into urban tree management is common with two-thirds of responding communities (Figure 2). The average number of volunteers per community in the survey was 205. The average number of total volunteer hours contributed annually in a community was 852 (Figure 3) For the smaller communities (<5,000 residents) responding to the survey, the average number of volunteers was 34.

At first blush, the data may appear a bit too generous until one considers the number of Scouts, FFA and 4-H youth organizations, garden club members, and other service organization members who volunteer for tree-related events, like Arbor Day, or public service projects, as in the aftermath of local storm events. For the largest communities (1,000,000+ residents), the number rose to 4,000 on average. Each volunteer also provides nearly ten hours of time annually, on average. Looking at the math, smaller communities have more than twice the volunteer rate, per resident, than the largest communities. Shocker? Now, apply that analysis to the percentage of all tree care activities accomplished by volunteers, on average, for all responding communities. A volunteer rate of almost 5% occurred (4.8% to be exact). Not bad, or just a good start?

Representatives for the communities responding to the survey also acknowledged that, on average, secured grants accounted for 2.6% of their tree care budgets (Figure 4). Thirty percent of respondents have used grants. That's not a bad start, but this is an area that communities would be wise to pursue further—investing more time in securing funds that complement their annual budgets. Of all sources of potential revenue, grants represent one of the most frequently ignored pursuits, largely because of the tedious and time-consuming paperwork associated with them or simply because communities are unaware they exist. It's been said that if you only have a nickel left in your budget pocket, invest in a good grant writer. Maybe one of those eager volunteers in your community fits that description and should become your new best friend.

Grants can come from all directions, not just from federal sources. Private foundations, special-interest groups, service groups, groups that encourage diversity in the workforce or projects that improve social equity in the urban landscape, groups that favor edible landscapes or the reduction of food miles are all good bets for potential grant seekers. There is a lot of funding available for responsive, responsible community representatives who know how to put together a good plan, a reasonable and sustainable timeline, and an engaging story. And one more thing: many grants require the community to have a real commitment to their cause.

Most grants require some sort of match, either a cash match of some proportion (e.g., 50:50) and/or an "in-kind" match, perhaps constituting dollar values assigned

Figure 1. Members of a local Community Tree Inventory Team collecting field data.

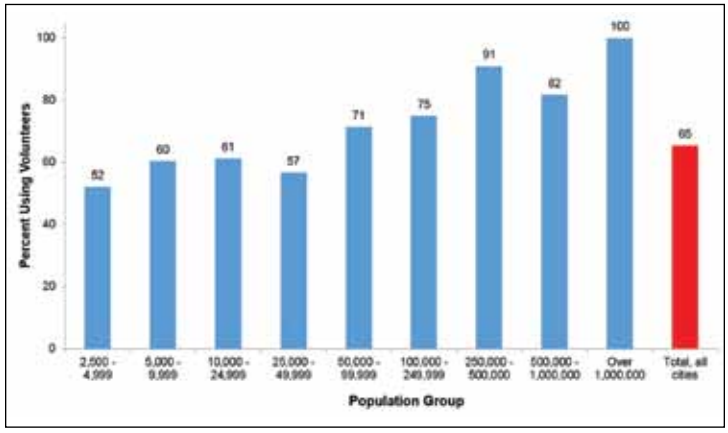


Figure 2. Does your community work with partners and/or volunteers (individuals or groups not paid for providing services) for tree planting, tree care, or other tree activities on public property? Results shown: (n = 644).

to cubic yards of mulch provided by a community, machine hours contributed to site preparation for plantings, or even volunteer labor hours. The national average value for one volunteer hour is $23.56 (2015 rate, www.IndependentSector.org). Using this value for the average community that had 852 volunteer hours contributed, yields an in-kind grant match value of more than $20,000. That in-kind match can parlay into a $20K, $40K, or possibly an $80K grant for some sort of urban forestry project. It could be the difference between grants accounting for 2.5% of a budget and 5.2% or more. Those volunteer hours not only get things done, they can carry an impactful dollar value if community staff successfully tracks and documents them.

Applying findings from the *Municipal Tree Care and Management in the U.S.* project, a national estimate of 345,466 (195,754 SEM) people volunteered 1,484,204 (665,460) hours with municipal tree activities. Stated another way, the volunteered hours equates to 714 (320 SEM) full-time equivalents (2,080 hour base year). At a

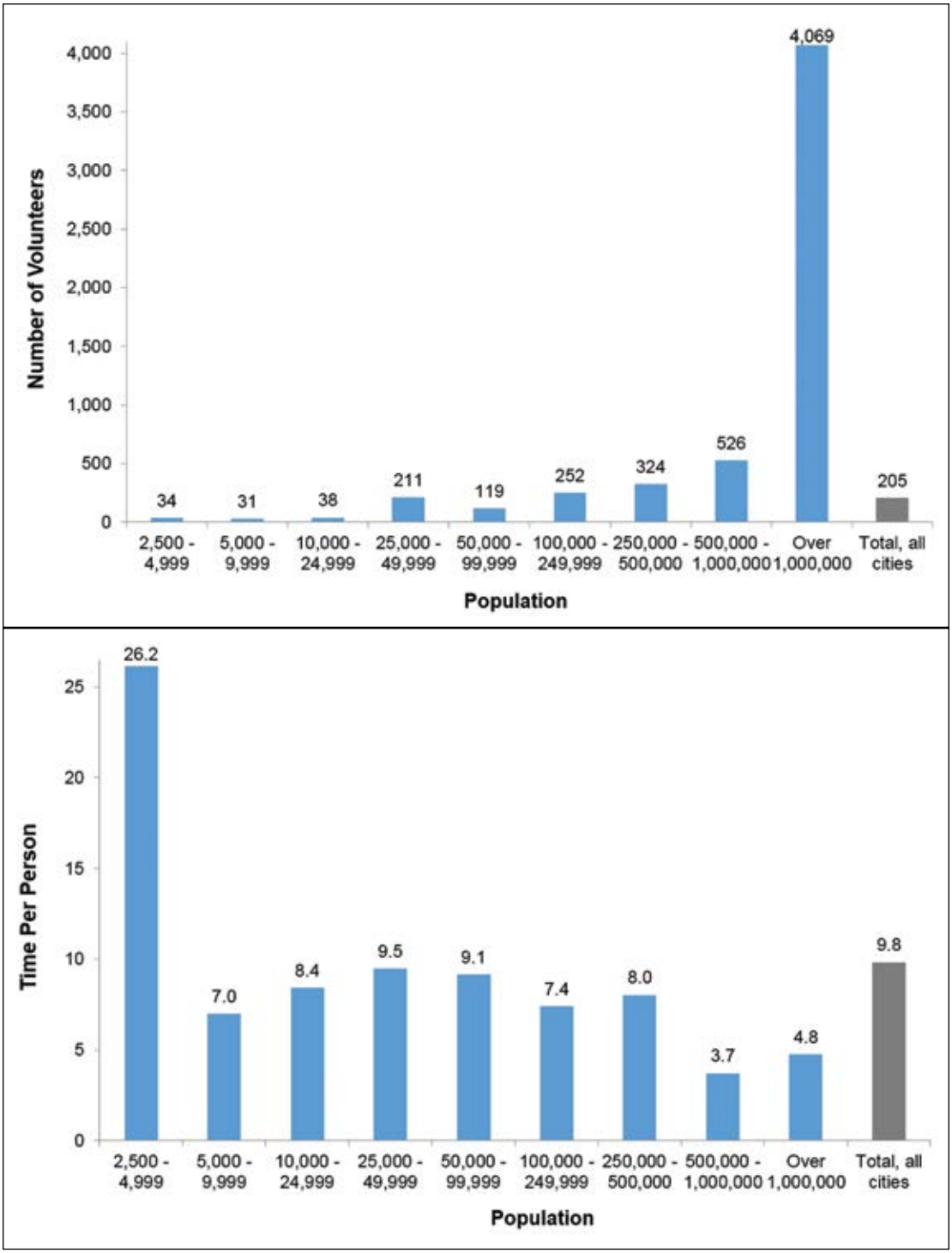


Figure 3. The number of people and amount of time per person invested in volunteering in the care and management of municipal trees (n = 200).

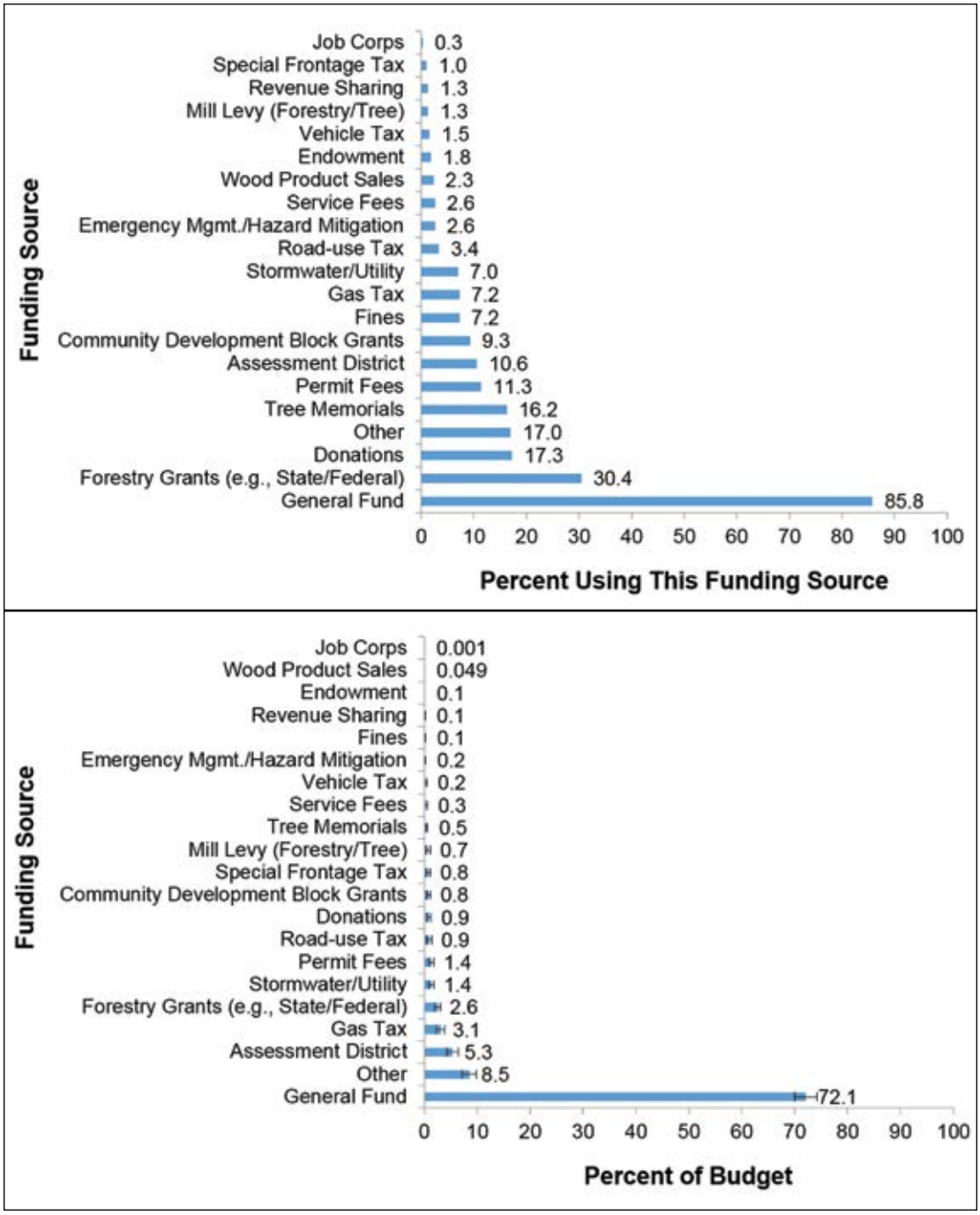
rate of $23.56 per hour, that's a $35 million volunteer impact with municipal tree care and management.

Survey Fact Number Three

Community survey respondents across the country also ranked the most common tasks that volunteers performed for the management and care of their green infrastructure. In order, the top four tasks were 1) planting trees; 2) watering trees; 3) outreach activities; and 4) pruning (Figure 5). Yes, pruning. It's not just for ropes and saddles or bucket trucks anymore.

The Citizen Pruner program, initiated and refined by the City of New York (www.treesny.org/citizenpruner), has spread across the country to communities both large

Figure 4. The sources of funding (top) and percent of budget used to fund a municipal tree management budget (n = 325).



and small (Figure 6). The early resistance and suspicion that met many of these kinds of volunteer groups have been largely overcome, and many communities have effectively expanded the original roles of the citizen pruners to more advanced pruning tasks.

These volunteer groups were originally designed to create a squad of volunteers focused on removing broken lower branches, "face-slappers," and suckers and watersprouts blocking sight lines at intersections. But some communities have successfully trained their volunteers to develop newly planted and establishing trees. It represents an important step-up for these engaged citizens, to learn how to recognize and remove codominant leaders and scaffold branches with included bark—critical tasks that pay off for the community years later.

Volunteer activities couched here are not activities that require ladders, pole saws, chain saws, ropes, saddles, and bucket trucks. They also don't exclusively require a $47,000-a-year municipal professional. With dedicated and trained volunteers at hand, a staff arborist can focus on the more technical and difficult tasks that are beyond the abilities and expertise of a volunteer.

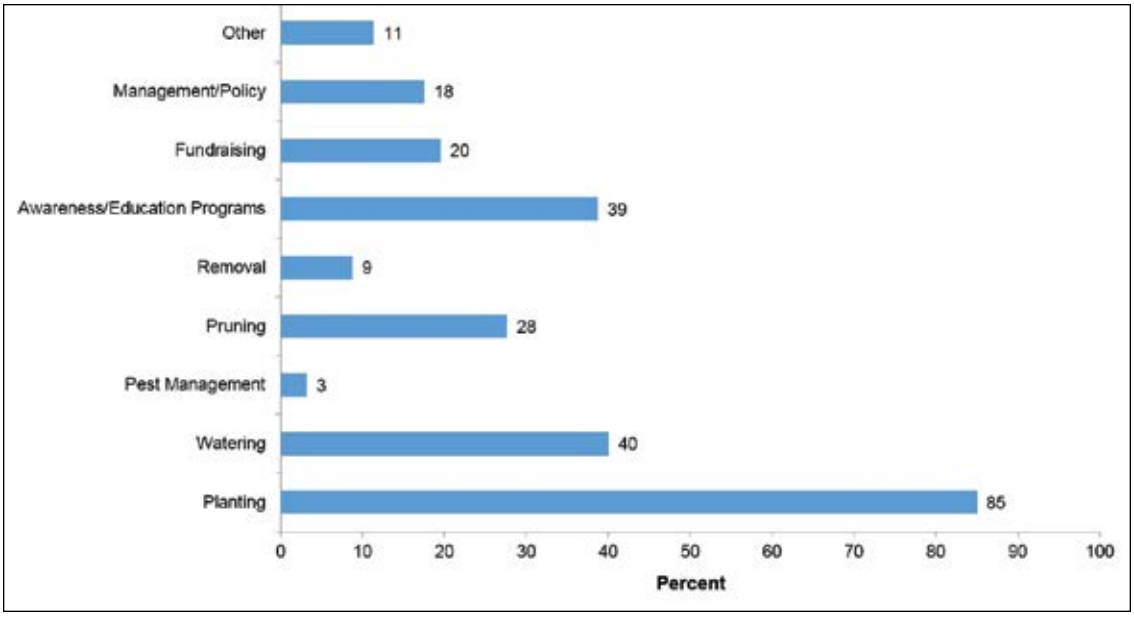


Figure 5. What activities do volunteers perform, and what percent of the total work time for all public tree activities is performed by volunteers? Results shown: (n = 307).

Figure 6. Citizen Pruners receiving on-site training from their city forester.

Everything Has a Price Tag

Volunteers as sources of tree care revenue do not come without an investment from the community. Since volunteers come from so many different areas (corporate volunteers, service groups, faith-based groups, youth groups, or as passionate individuals), they arrive with different senses of commitment, different skill sets, and quite honestly, different biases. Volunteers require supervision, training, more supervision, coaching, correction, and recognition to be true assets, which sounds a lot like developing valuable employees (Figure 7).

A successful community volunteer program involves three critical elements: engaged citizens, an enabling city atmosphere, and robust partnerships. These elements don't operate very well alone. The second most valuable relationship investment a community can make (after the accomplished grant writer) is the volunteer coordinator. This person will be dedicated to organizing, training, supervising, and mentoring individuals, as well as coordinating events and recognizing and retaining volunteers over time. And ideally, they'll be great at it. The local tree planting non-profit has a similar mission as a volunteer coordinator, except the staffing recedes with a partner organization. As urban and community forestry programs in cities and communities focus more and more on the benefits of trees, non-profit organizations have been growing and changing with the times. While some community tree organizations focus strictly on planting or advocacy, larger groups have developed sophisticated programs that include various trained professionals on staff. These programs and groups often include an ISA Certified Arborist® who leads and trains cadres of volunteers. If the standards for planting, pruning, and tree care for a city are well documented, volunteer groups with proper leadership can fulfill a role and relieve some of the burdens of the municipal arborist. These municipal/non-profit relationships are becoming increasingly important and serve as models for both municipalities and growing non-profits.

The Silent Majority

The time has come to address the volunteer resource with the biggest impact on a community's urban forest with the least strain on the tree care budget: the residential, business, or commercial property owner. City-owned and managed trees represent a relatively low percentage of the trees and tree canopy in a community's urban forest. Residential properties own most of the arboreal real

estate, and commercial properties can be equally influential in many cases.

The least expensive trees that a community can add to their resource are those that are planted on private properties. From the day the trees are planted, the property owners largely provide the resources to maintain those trees. A community's smart money invests in helping populate those properties. Subsidized annual tree sales are one-time investments in canopy. And although the city is not responsible for maintenance, every citizen benefits from their neighbors' trees: windbreaks, stormwater runoff management, community character and beauty, and urban wildlife habitat. In effect, every property owner becomes a volunteer, even though they are technically maintaining and controlling their personal canopy assets. Any amount a city invests when it comes to private properties represents the greatest return on investment.

The Greatest Value?

A very wise person once said, "Volunteers don't necessarily save money, but they do save programs." In the end, this value may overshadow revenues gained or saved via engaged citizen volunteers. In a perfect world, both would have equal value.

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Figure 7. To get the best out of your volunteers, always include a vetting protocol for selecting possible contributors.

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i-Tree Design

i-Tree Design allows anyone to make a simple estimation of the benefits provided by individual trees. With inputs of location, species, tree size, and condition, users will receive an understanding of tree benefits related to greenhouse gas mitigation, air quality improvements, and stormwater interception. With the additional step of drawing a building footprint—and virtually "planting" or placing a tree—this forestry assessment tool aids arborists and technicians in evaluating tree effects on building energy use.

Media type: tree benefits analysis tool

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VOLUME 25
NUMBER 4
AUGUST 2016

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