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Abstract. Existing urban forest literature is strongest in its quantification and qualification of the benefits and care of trees, and not in its ability to assess the results of lack of investment in trees. This paper presents the results of a literature review on the "Costs of Not Maintaining Trees" commissioned by the ISA Science and Research Committee. The authors summarized the literature from within the field of arboriculture/urban forestry to answer the questions: What are the costs of maintaining trees and the urban forest? And, What are the costs of not maintaining trees? Present here is a detailed summary of the literature on the costs of maintenance and lack of maintenance for types of tree care commonly included in municipal budgets (planting, pruning, removal, pest and disease management) and a brief review of costs associated with less-studied types of tree care (including tree risk management; watering; mulching; fertilizing and nutrient management; staking, cabling, and bracing; tree protection; and infrastructure repair). The authors suggest that future literature should aim to examine the influence of maintenance regimes on costs and tree outcomes, including examining how the frequency, intensity, duration, and extent of tree maintenance activities is connected to the structure, function, and benefits of trees.

Key Words. Cost of Not Maintaining Trees; Literature Review; Maintenance Costs; Pruning; Planting; Removal; Municipal Forestry; Deferred Maintenance; Urban Forestry; Urban Tree Maintenance.

Abstract. Many cities are making substantial capital investments in urban tree planting. Residents play active and diverse roles in enhancing and protecting the urban forest, and are therefore critical to many municipal-level policy objectives. The way residents perceive and value the urban forest can have implications for achieving urban forestry goals through residents and volunteers. However, urban residents are not a monolithic block or homogenous category; instead, they have diverse opinions, needs, and constraints. Moreover, relatively little is known about how residents hear about available resources, such as free trees, and decide to 'opt-in' to tree planting initiatives, choosing to plant and maintain trees on or near their properties. The focus of this study was to address three questions about participation in a request-driven program that provides free street trees to residents of New Haven, Connecticut, U.S.: 1) Who requests trees through this program? 2) How did the requesters hear about this program? 3) Why did residents request free street trees?

Survey respondents were primarily long-term residents of New Haven; mostly learned about the opportunity from their neighbors; and requested a street tree to replace a removed tree, because they value the aesthetics, and to a lesser extent the environmental benefits. Future research should systematically investigate differences between participants and non-participants in local tree planting initiatives, exploring possible trends across cities and programs. Such studies would identify opportunities and barriers to engaging private residents in efforts aimed at increasing canopy.

Key Words. Connecticut; New Haven; Residential Ecosystems; Survey; Tree Planting; Tree Requests; Urban Tree Canopy.

Abstract. Urban forests provide many benefits for those living and working in urban areas. However, urban trees face many challenges (e.g., poor soil, drought, high vapor pressure deficits). Therefore, finding tree species adapted to urban climates is essential to maintain a healthy urban forest. In a semi-arid climate, field-grown 'Autumn Blaze' (*Acer* × *freemanii* 'Autumn Blaze') and shantung (*A. truncatum*) maple trees were subjected to three reference evapotranspiration (ETo) based irrigation regimes (100%, 66%, and 33% ETo) over a three-year establishment period (2003–2005). During this time, weather data, tree water relations, gas exchange, and growth data were measured. Growing-season maximum air temperature was 40.1°C, and maximum vapor pressure deficit was 6.8 kPa. Pre-dawn leaf water potential was more negative for 'Autumn Blaze' trees, and trees receiving the least amount of irrigation. However, midday stomatal conductance was similar for trees receiving 100% and 66% ETo based irrigation regimes. In addition, stomatal conductance was greatest for 'Autumn Blaze' trees. Growth data were influenced by species and irrigation regime. However, despite differing irrigation volumes, greatest growth was not necessarily associated with trees receiving the greatest irrigation volume. Regardless of irrigation volume, these maple species maintained adequate growth and appearance when grown in an adverse, semi-arid climate. Despite reduced irrigation, each species appears to be adapted to harsh climates associated with urban environments.

Key Words. *Acer* × *freemanii* 'Autumn Blaze'; *A. truncatum*; Gas Exchange; Plant Factor; Reference Evaporation; Shantung Maple; Urban Forest; Vapor Pressure Deficit.

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Abstract. Information on street trees is critical for management of this important resource. Sampling of street tree populations provides an efficient means to obtain street tree population information. Long-term repeat measures of street tree samples supply additional information on street tree changes and can be used to report damages from catastrophic events. Analyses of several street tree populations reveal that a 2%–3% sample of block segments with known length within a city will likely produce estimates on the total number of trees with a standard error around 10% of the total population estimate (relative standard error of 10%). Ratio estimates of number trees per length of street sampled reduced the number of block segments needed to attain a 10% relative standard error. Communities with a small tree population, or analyses of specific subsets of the population (e.g., individual species information), will likely need a higher proportion of block segments sampled to attain the same relative precision. This paper presents a simple means to sample street tree populations to aid in street tree management and presents information on how many block segments need to be sampled to achieve a desired sampling precision. Results can be used to develop simple, cost-efficient, and accurate means to sample street tree populations.

Key Words. Block Sampling; Ratio Estimates; Sample Size; Street Trees.