



## Society of American Foresters

5400 Grosvenor Lane • Bethesda, Maryland 20814-2198 • (301) 897-8720 • fax (301) 897-3690 • www.safnet.org

# *Urban Forestry*

## **The Position of the Society of American Foresters**

Initially adopted by the Society on April 24, 1990, periodically revised and last extended by the SAF Council on December 8, 1997 and November 11, 2002. It shall expire on November 11, 2007, unless after subsequent review, the SAF Council decides otherwise.

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### **Position**

The Society of American Foresters (SAF) believes actions and practices that strengthen and improve the urban and community forestry discipline within the broader profession of forestry are vital to the social and economic well-being of the nation. The SAF strongly supports activities and funding levels that promote the establishment, maintenance and sustainability of healthy urban forest ecosystems for all urban communities. The SAF supports integrating the science and art of urban forestry into urban land use planning systems and related commitments. Urban and community forestry is a viable and complementary component of managing the nation's forest ecosystems and a viable part of urban ecosystems. Urban forestry also improves the quality of life in urban areas. Prior to the establishment of an urban forestry program, a socioeconomic analysis needs to be done of the area and community involved. After implementation, a monitoring and evaluation plan should be developed to ensure program objectives are being met.

The Society believes that the sustainable management and use of urban forest resources requires appropriate policy, a modest regulatory framework, and forward-looking research and investment programs, as well as institutional strengthening to make government and private sector investments and partnerships in urban and community forestry more effective and efficient. The ultimate success of such programs will also depend upon the efforts of individual citizens from all ethnic and socioeconomic levels who, on a voluntary basis, participate with local, state, and federal governments to ensure program objectives are met.

### **Issue**

It is highly uncertain as to whether existing programs throughout the nation will meet the increasing demand by the urban communities; and whether sufficient financial support and long-term commitments exist for managing urban forest ecosystems sustainability. Some of the concerns include unplanned intrusion and lost opportunities for design in urban sprawl, a lack of funding and need for the preservation of unique forest characteristics.

Urban and community forestry play an important role in enhancing urban environmental quality by providing a multitude of benefits such as enhanced aesthetics; improved air, water and soil quality; increased recreational opportunities; improved physical and mental health; and

42 community strengthening and pride. Societal benefits associated with urban and community  
43 forestry are opportunities for forest resources education and economic and community  
44 betterment and development.

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## Background

47

48 Urban forestry is the integrated biophysical management of urban forest ecosystems for  
49 improving the quality of life (SAF B2 WG 2002). This includes the art, science and technology  
50 of managing trees and forest resources as an integral part of urban community ecosystems for  
51 physiological, sociological, economic and aesthetic benefits.

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53 Urban and community forests are made up of trees and associated vegetation within the environs  
54 of populated places – from the smallest villages to the largest cities. Such forests involve trees  
55 along streets, within greenbelts, greenways, parks, public spaces, residential yards and  
56 neighborhoods, municipal watersheds, and other areas. There are 70 million acres of such forests  
57 in the nation in communities where 80 percent of our citizens live, work and play. The unique  
58 demands on urban forests, their location within heavily populated and developed areas, and their  
59 potential as a medium to educate and engage the public in natural resource issues require unique  
60 management approaches. A recent assessment by the USDA-Forest Service indicated the extent  
61 and importance of our nation's urban forest (Dwyer et.al. 2000).

62

63 Urban forests provide a multitude of benefits, including the reduction of energy costs through  
64 summer shade and winter wind protection (Akbari et.al. 2001, McPherson et.al. 1993, Laverne  
65 1996). Summertime studies have shown a 1° to 2°F (0.5° to 1.0°C) decrease in temperature for  
66 every increase of 10 percent vegetation cover (Nowak et al. 1994). Houses shaded by trees need  
67 4 to 25 percent less energy for cooling than those in the open. Homes sheltered from the wind  
68 have winter heat savings of as much as 10.3 thousand BTUs or approximately \$52 annually  
69 (Nowak et al. 1994). Urban trees will continue to be increasingly important for their energy-  
70 saving value as fossil fuels become more scarce and more expensive in the future and as the  
71 impacts of global climate change occur.

72

73 Additional benefits of urban forests include slowing and reducing stormwater runoff, flooding  
74 and erosion, thus reducing potential sources of water pollution. Tree foliage works as a natural  
75 air filter of particulate matter and pollutants such as ozone, nitrogen oxides, ammonia, and sulfur  
76 dioxides (Abdollahi et.al. 2000). Foliar filtration, when combined with the intake of carbon  
77 dioxide and the production of oxygen through photosynthesis and the natural cooling effects of  
78 evapotranspiration, can have a significant effect on smog and reduce overall air pollution. The  
79 cooling effects of trees help reduce the need for utilities to increase power generation capacity to  
80 meet peak energy load demand. Consequently, less CO<sub>2</sub> is produced and energy savings are  
81 passed along to the public (Abdollahi, et.al. 2000). Nationally, between 400 and 900 million  
82 metric tons of carbon are stored in the country's urban forest (Nowak et al. 1994). Urban and  
83 community forests directly increase property values, therefore making communities more  
84 attractive to tourists and industry (Morales 1980).

85

86 Whether or not to develop, support, or enhance urban and community forestry programs should  
87 not, however, be based solely on economic criteria. While studies have revealed potential  
88 benefits of urban forests to human physical and psychological health (Ulrich 1984, Lohr 1996)  
89 and to community stability and crime reduction (Kuo, et. al. 2001), the aesthetic value of trees  
90 and urban forestland constitute solid justification on their own. Accessible green open space has  
91 been found to reduce the chronic mental fatigue of urban life (Kuo, et. al. 2001). Trees, shrubs,  
92 and related plants are valuable community assets that enhance neighborhood beauty, recreational  
93 opportunities and wildlife habitat, and also provide city dwellers with opportunities to experience  
94 and understand forest-related benefits (Kuo, et. al. 2001). These opportunities in turn, help them  
95 to understand and better appreciate the value of the nation's rural forest resources and their  
96 management.

97  
98 Establishing and maintaining urban and community forests requires an investment of significant  
99 resources in community infrastructure (Dwyer, et. al. 1992). Unlike a timber harvest operation  
100 where seedlings are used to reforest an area, urban forestry deals almost exclusively with larger  
101 saplings and full-grown trees. This difference arises because of the high mortality rate and theft  
102 of seedlings in urban areas. The effect of using larger planting stock is the greater cost per tree  
103 (Urban Resources Initiative 1995).

104  
105 One cost important to factor into program funding is the annual maintenance cost per tree. This  
106 becomes very important, particularly when considering such needs as utility line clearance, storm  
107 damage repair, debris removal, and protection from various pathogens. Because of the increasing  
108 financial crises faced by American cities, the planting and maintenance of urban forests has  
109 decreased dramatically, to the detriment of these communities. Communities can reduce some of  
110 these costs by proper selection and location of trees to avoid future problems. Unfortunately,  
111 many communities lack the information and funding necessary to make correct planning  
112 decisions. Urban forests and tree programs, therefore, deserve our sustained support through  
113 adequate funding for good planning and implementation to protect and maintain them as integral  
114 components of urban ecosystems and the nation's overall forest estate.

115  
116 The Government Accounting Standards Board (GASB) Ruling 34 helps capture the capital  
117 represented by the natural environment. Until Ruling 34 it was ignored or assumed to be prices  
118 at zero dollars. Ruling 34 captures these hidden assets for bond markets to take into account in  
119 underwriting municipal bonds. Including ecosystem services into municipal accounting systems  
120 will provide for long term maintenance of this natural capital asset at the municipal level.

121  
122 Urban and community forests are an appreciating resource asset estimated to have a value of  
123 nearly \$30 billion. This value lies primarily in their aesthetic contribution to urban and  
124 community landscapes. Value also includes contributions to the quality of life through  
125 moderating temperatures; improving air, water, and soil quality and management; increasing  
126 employment opportunities; creating community cohesion; reducing crime; and improving human  
127 physical and mental well being. Community trees and forests can help maintain air quality  
128 standards, thus helping communities avoid nonattainment status that would otherwise reduce  
129 their municipal bond rating and their ability to engage in continued development. While difficult

130 to quantify, these attributes are important, positive societal benefits of establishing and  
131 maintaining healthy urban and community forests.

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133 Long-term planning, appropriate tree species selection, care and management practices, and  
134 establishing local budgets that allow municipalities and communities to avoid crisis management  
135 (characterized by unhealthy forests and damage litigation) and favor lower costs for forestry  
136 programs in urban settings. Costs of urban and community forest management under planned and  
137 efficiently administered systems are far outweighed by benefits accrued to the public and the  
138 community at large.

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140 Coordination among federal, state, and local governments; non-profit organizations; educational  
141 institutions and jurisdictions on planning and management of our urban and community forest  
142 resources are essential to the success of these efforts. Creating opportunities and meeting the  
143 wishes of communities to improve their natural resources and forest environments will help  
144 engage and educate the public to improve the quality of life for all citizens.

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**ABOUT THE SOCIETY**

The Society of American Foresters, with about 17,000 members, is the national organization that represents all segments of the forestry profession in the United States. It includes public and private practitioners, researchers, administrators, educators, and forestry students. The Society was established in 1900 by Gifford Pinchot and six other pioneer foresters.

The mission of the Society of American Foresters is to advance the science, education, technology, and practice of forestry; to enhance the competency of its members; to establish professional excellence; and to use the knowledge, skills, and conservation ethic of the profession to ensure the continued health and use of forest ecosystems and the present and future availability of forest resources to benefit society.

The Society is the accreditation authority for professional forestry education in the United States. The Society publishes the *Journal of Forestry*; the quarterlies, *Forest Science*, *Southern Journal of Applied Forestry*, *Northern Journal of Applied Forestry*, and *Western Journal of Applied Forestry*; *The Forestry Source*, and the annual *Proceedings of the Society of American Foresters* national convention.