



## VEGETATION IN THE BUILT ENVIRONMENT

(R2001\*, R2007, R2020)

### Policy Statement

The American Society of Landscape Architects (ASLA) believes skillful use of vegetation in built environments is integral to quality of life, sustainability, and resiliency. Health, safety, and welfare is protected and enhanced by effective planning, design, management and use of vegetation. ASLA believes that contact with nature and vegetation in the built environment is essential to physical and mental wellbeing, and that vegetation creates a sense of place and identity in our communities. ASLA supports federal, state, and local standards and ordinances that require appropriately selected and located vegetation. ASLA encourages applied research and best practices in which vegetation significantly improves environmental conditions, economic stability, ecosystem services, and human health and culture. From regional planning to site design, ASLA promotes creative uses of vegetation that are multifunctional, evidence-based, engaging, and attractive.

### Rationale

The term “Built Environment” refers to sites created and/or modified by humans, and thus encompasses a wide range of character, scale, and function. Appropriate choice, use, and management of vegetation is integral to the purpose and identity of land uses, including business/industrial, residential, parks, civic spaces, transportation systems, public and private gardens, campuses, and greenways. Creative and strategic use of vegetation is essential in light of increasing development, extreme weather, and other issues.

Government, business, and the public recognize diverse benefits of vegetation, as evidenced in broad support of initiatives such as urban agriculture, green roofs, green infrastructure, therapeutic landscapes, Complete Streets, LEED, and SITES. As land uses and needs change, vegetation plays a crucial role in revitalization efforts. Vegetation also contributes to the transformation of brownfields, derelict infrastructure, postindustrial areas, and depleted lands. Phytoremediation, biophilic modeling and design, bio-filtration, living reef/living infrastructure, and other science-based approaches make urban greening even more persuasive as an inherent necessity of built environments.

Plants have proven to be long term solutions with multiple benefits. Trees, shrubs, herbaceous, and aquatic plants contribute significantly to ecological, functional, cultural, and economic stability. Examples of quantifiably proven impacts include:

- improved water and air quality
- reduction of flooding, erosion, storm surge, and other weather disasters

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\* Replaces Urban Forestry Policy (1991, R2001) and Atmospheric Pollution Policy (R2000, R2001)

- mitigation of climatic problems such as heat islands
- increased property values,
- increased use and comfort in business, tourism, and other activity areas
- habitat for wildlife and pollinators
- carbon sequestration
- increased physical activity and overall well-being
- increased connection with nature

Vegetation is a powerful and highly cost-effective tool for sustainability and resilience on individual sites as well as larger communities and ecosystems. As population and the extent of developed areas expand, the strategic, multi-functional use of vegetation becomes more critical. The United Nations (UN) reported that the world population living in urban areas grew from 30% in 1950 to 55% in 2018. By 2050, the UN projects that 68% will live in urban areas.<sup>1</sup> The physical impact of urbanization is growing faster than the population. Approximately 60% of the urbanized land projected to exist in 2030 will have been built between 2000 and 2030.<sup>2</sup> Scientific studies indicate more plants are needed in our built environments. We are currently losing vegetation, especially vital tree cover. In 2018, research showed the United States' metropolitan areas alone are losing 36 million trees per year.<sup>3</sup> Strategic planting at small and large scales mitigates loss of biodiversity as well as protects and even increases ecosystem functions and services as lands convert to agriculture and other development.

Extreme weather, fluctuating rainfall, salt water intrusion, and other factors related to climate change are causing current ecosystems and environmental conditions to change, sometimes dramatically. Long-held concepts, such as “native”, “introduced”, and “exotic” vegetation are evolving as plant zones shift. Climate change challenges traditional planning, design, and maintenance practices. Natives and important non-invasive plants that are part of our lifestyles and economy may no longer be able to survive in their historic ranges and contexts; different species will move in to fill gaps in the ecosystems or to become invasive. Historic and cultural landscapes, greenways, parks, civic areas and other established landscapes will need skilled, proactive interventions to continue to function and thrive. Ecosystem services critical to the health and sustainability of humans, animals, and other organisms must be maintained. Landscape architects, by their training and expertise, meet these challenges with creativity and innovation.

Vegetation has significance, meaning, and use far beyond physical function. Research from many disciplines indicates that plants have wide-ranging therapeutic benefits—physical, mental, social and cognitive. “People of all ages and abilities enjoy higher levels of health and well-being when they have nature nearby... Access to nature has

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<sup>1</sup> <https://population.un.org/wup/Publications/Files/WUP2018-Report.pdf>

<sup>2</sup> <https://www.sciencedirect.com/science/article/pii/S1877343515000433>

<sup>3</sup> [https://www.fs.fed.us/nrs/pubs/jrnl/2018/nrs\\_2018\\_nowak\\_005.pdf](https://www.fs.fed.us/nrs/pubs/jrnl/2018/nrs_2018_nowak_005.pdf)



been related to lower levels of mortality and illness, higher levels of outdoor physical activity, restoration from stress, a greater sense of well-being, and greater social capital.”<sup>4</sup> Government agencies and other public entities are actively setting open space goals and tree canopy cover minimums for public health as well as ecological and economic reasons. Business, industry, civic leaders, and the public recognize that vegetation is a highly cost-effective solution and an investment for the future.

Landscape architects lead the creative integration of sustainable vegetation into the built environment, significantly contributing to long term health, safety, and welfare. The following actions work to ensure effective and sustainable integration of vegetation into built environments:

1. Heightened interdisciplinary collaboration and research on the ability of plants to mitigate impacts of climate change, pollution, flooding, and other threats.
2. Revision and expansion of federal, state, and local policies regarding native, indigenous, noxious, and invasive species.
3. Post-construction evaluations inform innovative planning, design, and management practices.
4. Use of science, regional character, and local conditions for formulating open space goals and tree canopy cover minimums.
5. Increase biodiversity so as to improve resilience and provide habitat for wildlife and pollinators.
6. Mitigate loss of ecosystem services as lands convert to agriculture, built environments, and other development.

## Resources

“U.S. Cities Lose Tree Cover Just When They Need It Most,” Richard Conniff, *Scientific American*, May 7, 2018. <https://www.scientificamerican.com/article/u-s-cities-lose-tree-cover-just-when-they-need-it-most/>

“Building Greener Cities: Nine Benefits of Urban Trees,” Food and Agriculture Organization of the United Nations, November 30, 2016. <http://www.fao.org/zhc/detail-events/en/c/454543/>

Outside our Doors: the Benefits of Cities Where People and Nature Thrive. House, E., C. O’Connor, K. Wolf, J. Israel, & T. Reynolds. Seattle, WA: The Nature Conservancy, Washington State Chapter, 2016. <https://www.washingtonnature.org/cities/outsideourdoors>

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<sup>4</sup> <https://www.apha.org/policies-and-advocacy/public-health-policy-statements/policy-database/2014/07/08/09/18/improving-health-and-wellness-through-access-to-nature>