



Growing a Healthier DC: Green Residences



In a healthier D.C., homes are green

Yards bloom with flowers in spring, homes are covered by the cool shade of trees and entire neighborhoods come alive with brilliant fall color. Family, friends and neighbors gather on patios and porches surrounded by beautiful trees and landscape. Condominiums and apartment buildings use courtyards and rooftops to create green outdoor common spaces. Residential sites use simple techniques to reduce runoff and pollution to our rivers. Home landscapes provide habitat for birds, bees and butterflies. Parents introduce children to nature right outside their door.



Green residences

- Help clean our rivers by capturing and using rainwater onsite
- Create friendlier, safer and more walkable neighborhoods
- Are home to healthier, more active residents
- Are more desirable to tenants and buyers
- Cost less to cool and heat
- Are beautiful!

Trees are
nature's air
conditioners.



People thrive in green environments

Healthier minds and bodies. According to the US Centers for Disease Control, only half of DC residents are as physically active as recommended.¹ Green surroundings encourage outdoor activity. Views of green reduce mental fatigue and improve our ability to deal with problems and everyday stress.

Higher property values. Trees can significantly increase the selling price of residential units. In a Philadelphia study, homes with street trees, median plantings and other improvements sold for 28% more than similar homes in areas without them.²

Energy savings. Trees can shade buildings, windows and air-conditioning units. Homes with well-sited trees have annual energy costs that are 8-12% lower than those without trees.³

Healthier communities. Residents of "greener" buildings spend more time immediately outside their buildings and have stronger ties to their neighbors.⁴ Trees and landscaping are linked to a greater sense of safety, healthier patterns of play in children and lower crime.⁵





Our yards are important parts of the city's green infrastructure.

The Challenge and Opportunity

With 280,000 households, residential properties comprise about 45 percent of the land area of Washington, DC. The care residents invest in their yards and common spaces not only makes our communities more attractive, but also has a profound impact on our health and environment. For example, residential properties contain over 30 percent of the District's tree canopy, which is essential for keeping our air and water clean and our city cool during warm weather.

Detached homes, rowhouses, condominiums and apartments all represent opportunities for greening – from yards to rooftops to window boxes. Caring for established trees and planting new ones helps restore our historic canopy and helps meet neighborhood canopy goals. Using native plants reduces watering requirements and provides habitat, while planting invasive species like English ivy can threaten nearby trees and natural areas. Minimizing paved surfaces reduces polluted stormwater runoff. Rain gardens can capture and filter stormwater in attractive landscape areas, while rain barrels store runoff from roofs so that it can be used to water plants.⁶ Green roofs can be installed on many buildings to prolong the roof life, manage stormwater, save energy and provide beauty.

Recommendations

- Plant deciduous shade trees on the southwest, west and southeast sides of homes and buildings to maximize energy savings.
- Reduce paved surfaces and use rain gardens, rain barrels and permeable pavers to minimize stormwater runoff.
- Design new buildings with green roofs and retrofit existing buildings as old roofs need to be replaced.
- Use native landscaping to reduce maintenance and watering requirements; avoid planting invasive species.
- Plant trees to shade and beautify patios, walkways, courtyards and common areas.

Low-cost landscape choices can yield big benefits.

Green Residences is one in a series of issue briefs from *Casey Trees*. The *Growing a Healthier DC* series is a product of conversations with a panel of national and local experts convened in cooperation with District agencies, organizations and foundations. The panel examined how green infrastructure could be used to maximize social, economic and ecological benefits in the District of Columbia.

Visit www.caseytrees.org for more information on the topic addressed in this brief or the complete series:

- Green City
- Green Neighborhoods
- Green Streets
- Green Parks and Open Space
- Green Schools
- Green Business Districts
- Green Parking Lots
- Green Residences
- Green Jobs

¹ *District of Columbia: Summary of Physical Activity* by US Centers for Disease Control, <http://apps.nccd.cdc.gov/PASurveillance/StateSumV.asp>, 2005.

² *Public Investment Strategies: How They Matter for Neighborhoods in Philadelphia* by Susan M. Wachter and Kevin C. Gillen, The Wharton School, University of Pennsylvania, Oct 2006.

³ *Energy Efficient Landscapes* by E. Gregory McPherson, Rowan A. Rowntree, and J. Alan Wagar, *Urban Forest Landscapes: Integrating Multidisciplinary Perspectives*, University of Washington Press, 1995.

⁴ *Fertile Ground for Community: Inner-city Neighborhood Common Spaces* by Frances E. Kuo, William C. Sullivan, Rebekah Levine Coley, and Liesette Brunson, *American Journal of Community Psychology* 26(6), Dec 1998.

⁵ *The Role of Arboriculture in a Healthy Social Ecology* by Frances E. Kuo. *Journal of Arboriculture*. 29(3), May 2003.

⁶ The District Department of the Environment's RiverSmart Homes program provides practical information and financial incentives: <http://ddoe.dc.gov/riversmarthomes>