

Tree Maintenance and Preservation

In a Nutshell

Tree maintenance and preservation are a collection of activities aimed at prolonging the life of trees and bushes. While planting trees is the more popular activity, maintaining and protecting trees is just as important, if not more important in the grand scheme of things. Protecting mature trees during development will provide environmental benefits and increase the value of the developed land.

The “How To”



Immediately after a tree is planted. In fact, no tree should be planted without a watering system. Watering is taking place in a heavily forested area. Proper watering and mulching can help protect trees from damage or kill trees when done improperly. Structural pruning should be done with care and is best left to professionals, such as arborists certified by the International Society of Arboriculture. [This website](#) has more information on tree care and how to find a certified arborist.

Tree preservation is a complex process that differs for each tree. Many times trees are spared from the bulldozer during construction only to die 5-10 years later, usually due to significant root damage. Trees that are structurally unsound should be removed, or they become a significant liability and a more costly removal once construction is complete.

Tree fertilization is very important to the life of a tree as well. Tree fertilization is often done improperly. Before putting fertilizer down, a soil test should be administered on the soil. University of Missouri [Extension](#) and University of Illinois [Extension](#) can test soil.

Planning & Zoning

Several local communities have ordinances that require tree protection during development (or redevelopment). Ordinances that encourage offsetting the removal of mature trees/wooded tracts with new planting do not realize the economic benefit to preserving mature trees. Prime examples include the [City of Lake Saint Louis](#) (Sec. 245.040), and the [City of Webster Groves](#). The latter also has a manual of best practices concerning trees. The City of Wildwood also has a [Tree Preservation and Restoration Ordinance](#). The [City of Crestwood's Landscape Code](#) requires preservation or replacement of trees of protected species of a certain size.

Dollars & Cents

Tree Resource Improvement and Maintenance (TRIM) grants from the [Missouri Department of Conservation](#) are one source of funding for city tree programs.

As mentioned previously, mature trees offer significantly greater environmental benefits over small trees. Thanks to ongoing research, these values can be quantified by the i-Tree software suite: www.itreetools.com.

The City of Wildwood developed a street [tree inventory](#), which calculated the yearly eco-benefits of the inventoried trees at \$228,220.83. The 24:1 Community's [Urban Tree Canopy Assessment](#) calculated the total annual ecosystem benefits of trees in the community at \$1,228,469 (including carbon storage, stormwater management, and air quality).

The value of using Conservation Development (including incorporating trees) over traditional development can be found here: http://www.landchoices.org/conservationsubs/advnt_consubs_devel.htm.

Discover More

Over time, the roots of street trees may cause sidewalks and roads to buckle. Brightside St. Louis demonstrates the use of "[silva cells](#)," which look like large plastic crates buried below a street or sidewalk, to form a porous support structure for tree roots. The cells help urban trees live decades longer by preventing the soil from compacting the roots. They also encourage the roots to grow out, rather than grow up, so they do not cause streets or sidewalks to buckle.

Case Studies

Forest ReLeaf of Missouri Tree Canopy Coverage Study

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Description

Our city trees provide valuable ecosystem services to urban and suburban citizens. Tree canopy shades and cools sidewalks and buildings, thus reducing the heat island effect and saving energy. Trees also sequester carbon dioxide, cleaning the air we breathe, and improve water quality by filtering and slowing storm water runoff. Beyond that, trees just make our cities and towns more livable! In 2009 Forest ReLeaf undertook an "urban tree canopy" (UTC) study that encompassed the entire City of St. Louis and parts of St. Louis County.

Forest ReLeaf is working collaboratively with OneSTL and promoting the use of new metrics such as UTC assessment, a useful tool for those planning for sustainable urban infrastructure.

Cost \$0