

Conserve the Canopy

Why trees?

Trees are often an overlooked asset in the home landscape. Many homeowners fail to realize that their trees can translate to real dollars when it comes to real estate value. Studies have shown that the presence of mature trees in a well-maintained home landscape increases property values by 7%, on average, over comparable properties without trees. This benefit extends beyond the property line. Neighborhoods with large tree canopy cover attract more potential home buyers, increasing market demand.

In addition to increasing curb appeal, mature trees perform many other ecosystem services which have economic and environmental benefits. Through shading in the summer, trees help reduce cooling demands resulting in lower cooling costs for your home. They help clean the air by capturing particulate matter in their leaves. These fine particles are a major contributor to air pollution and are linked to cardiovascular and respiratory disease. The presence of trees has also been shown to relieve stress, reduce noise, and improve overall health and well-being.

Trees – Natural Stormwater Solutions

One often overlooked benefit is the role trees, especially large mature trees, play in regulating stormwater runoff. Stormwater runoff increases with development and must be managed to protect area creeks and streams. Uncontrolled runoff introduces large volumes of water into streams which causes erosion and destroys aquatic habitats. Communities that regulate their stormwater discharges are turning to more natural ways to manage stormwater using green infrastructure. Green infrastructure incorporates natural elements into a design scheme to manage excess volume and provide water quality treatment benefits. Trees play a key role in many of these efforts.

How does it work?

There are several functions that trees perform in mitigating the effects of stormwater runoff:

- *Interception:* Above ground surfaces like leaves and branches capture rainfall, allowing it to evaporate into the atmosphere.
- *Throughfall:* Leaves and tree surfaces help to disperse rainwater and slow it down so it impacts the ground with less intensity.
- *Transpiration:* Tree roots draw water from the soil. A small amount of this water is utilized by the tree, but the rest is released back to the atmosphere as water vapor. This action reduces soil saturation.
- *Improved infiltration:* Tree roots open conduits in the soil allowing water to more readily soak into the ground.

Interception and throughfall reduce the volume and intensity of rain water hitting the ground. The larger the tree canopy, the greater the benefit. These actions work with transpiration and infiltration to reduce the quantity of runoff entering our storm sewer systems, minimizing the risks of erosion and flooding.

Remember, trees are a valuable asset. Do your part to maintain your mature trees.

- Consult an arborist to assess your trees for signs of disease and decay;
- Use proper pruning techniques;
- Mulch around trees to protect roots and improve water retention;
- Keep trimmers and mowers away from the trunk.

Suggested Social Media Text

Large, mature trees are an asset to you and your community. They increase neighborhood property values and play an important role in reducing air and water pollution and stormwater runoff. Have your trees assessed by a professional and perform pruning in the dormant seasons.

References and Resources:

Benefits of Trees – USDA website summary - <https://www.fs.usda.gov/news/releases/usda-forest-service-research-helps-quantify-value-trees-communities-across-nation>

Center for Watershed Protection: The Role of Urban Trees in Stormwater Management.
https://www.cwp.org/wp-content/uploads/2017/01/cwp_rr_jan17.7.pdf

EPA Website: Stormwater to Street Trees

<https://nepis.epa.gov/Exe/ZyPDF.cgi/P100H2RQ.PDF?Dockkey=P100H2RQ.PDF>

L. Herrmann, Matthew E. Hopton (2017). *The role of trees in urban stormwater management*, Landscape and Urban Planning, Volume 162, Pages 167-177.

<https://www.sciencedirect.com/science/article/pii/S0169204617300464>

Tree Benefit Calculator: <http://www.treebenefits.com/calculator/>