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TREES SERVE AS SPEED BUMPS FOR THE RAIN

Seattle has long been known as the Emerald City for our lush green color. In past decades, however, that green has been fading. Estimates have been made that in the 1970s, 40% of Seattle was covered in trees. Today, Seattle has 23% canopy cover.

Trees are important because they not only provide us shade and oxygen; they also play an important role in slowing the flow of rainwater. As rain falls in Seattle, much of it runs off hard surfaces and into our storm drains and sewers. These systems can become overwhelmed after a hard rain, forcing them to expel raw sewage and other contaminants into our waterways. Seattle's trees slow rain as it falls, helping to avoid such spillage. Trees also absorb water through their roots, helping to soak up standing water in wet areas.

If you've ever been stuck outside in a rainstorm, you know you'll stay dryer if you stand under a tree rather than out in the open. This happens because raindrops are trapped by the tree's branches and leaves. In this way, trees serve as speed bumps for the rain. The more trees Seattle has, the slower rain will enter our stormwater systems.

In the fight to slow the rain, large trees are more effective than small trees. This is because large trees have more surface area on which to capture raindrops. Large evergreen trees are even better, because these trees hold their needles throughout the year, creating a more effective canopy to trap rainwater than deciduous trees that drop their leaves right as our rainy season begins. This means that evergreen trees are capable of reducing stormwater approximately 50% more than deciduous trees.

Recognizing the many benefits of urban trees, Seattle has set tree planting goals as part of its Urban Forest Management Plan. That plan, developed in 2007, is a guide for Seattle to raise tree canopy cover from our current 23% to 30% by 2037. Reaching 30% will require planting approximately 300,000 net new trees. Some of these new trees will be planted on parkland or along streets. Yet there is only so much public space. Sixty seven percent of Seattle is residential property. Therefore, the majority of the new tree planting in Seattle needs to take place on residential property.

The Seattle reLeaf program addresses this need for residential tree planting through initiatives such as the Trees for Neighborhoods program. *Trees for Neighborhoods* encourages planting by giving Seattle residents free trees and workshops on tree care. To ensure these trees survive to maturity, and provide maximum benefits, homeowners are encouraged to plant in fall and water through the first couple summers. More information on Seattle reLeaf can be found at www.Seattle.gov/trees

Getting people to plant the large trees that trap the most rainwater can be challenging. Residents usually prefer small trees that fruit and flower, says Jana Dilley, Program Manager at reLeaf. The most popular species in the 2010 *Trees for Neighborhoods* program were dogwood, magnolia, and a fruiting plum tree. Large trees can be difficult to plant in small urban yards, given such factors as space constraints, power line concerns, or views. Dilley said it's important to encourage those who do have enough space to plant large trees. In 2010, Trees for Neighborhoods' large tree offerings included shore pine, western red cedar, Douglas fir, katsura, and red oak. As these trees grow and add canopy, we can reduce rainwater runoff and create a greener, more sustainable city.

Trees are important in slowing rainwater but they have many other benefits as well. Trees remove pollutants from the air. Trees along streets calm traffic, leading to fewer accidents. Trees encourage residents to walk outside more, creating healthier residents and communities. Dilley commented "As Seattle's population grows it will take creative thinking to strike a balance between density and open space for trees and greenery."