

NEWS RELEASE

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Something to Root for: Building Community Gravel Beds for Tree Cultivation and Education

Virginia Cooperative Extension Loudoun (VCE Loudoun) and VCE Loudoun Master Gardeners are partnering with Loudoun County Parks, Recreation & Community Services (PRCS) in two community gravel bed projects to foster healthy tree roots and serve as educational demonstration beds.

What is a Gravel Bed?

A gravel bed is an irrigated bed or pile of gravel to place and safely hold bare root or washed containerized saplings for up to three-to-six months. Doing this dramatically increases fibrous root volume, which decreases transplant shock and increases survivability of the plant.

Benefits of gravel beds include:

- Improving the overall plant health and survival rate by developing robust, fibrous root systems. This improves plant health and reduces transplant shock.
- Increasing species availability. Usually there are more native species available for purchase as bare root stock than in containerized or balled and burlap stock.
- Cost savings. Bare root stock costs significantly less than balled and burlap or container trees.

Getting Started

In March 2023, VCE Loudoun was awarded a \$10,000 grant from Amazon InCommunities to fund the gravel bed project. Additionally, PRCS allocated small pieces of land at Claude Moore Park and Franklin Park for the installation of gravel beds.

Starting in July 2023, VCE Loudoun Master Gardener Tree Stewards designed the prototype 10-by-10-foot gravel bed and constructed it at Claude Moore Recreation Center. At the end of July, the first bare root native saplings, including river birch, ironwood and black cherry, were placed in the gravel bed.

Initial Success

In early November, after just three months in the gravel bed, the 24 saplings were transplanted in the nearby woods at Claude Moore Park. Over the span of three months, 17 saplings had an increase of an inch or more in width.

The success at Claude Moore Park paved the way for VCE Loudoun Master Gardener Tree Stewards to construct a larger 10-by-20-foot gravel bed in Franklin Park. This bed can hold up to 50 saplings.

Moving Forward

Beginning in April 2024, up to 75 new bare root saplings will be installed annually in the gravel beds. This will provide six months of fibrous root growth opportunity until the trees are planted in the fall.

Significance to Loudoun County and Beyond

Loudoun County's tree canopy is facing challenges and stresses brought on by new insects, diseases and climate change. Emerald ash borer decimated ash trees across the region, and the [spotted lanternfly](#) stands poised to stress the ecosystem further. These combined issues are decreasing the tree canopy and carbon sequestration not just in Loudoun County, but across the region and world.

In the spring, VCE Loudoun Master Gardener Tree Stewards encourage the public to visit the demonstration gravel beds at Claude Moore and Franklin parks to learn more about the importance of trees and the impact gravel beds can have in helping support ecosystem resiliency.

More Information

- More information about VCE Loudoun is online at loudoun.gov/extension.
- More information about Loudoun PRCS is online at loudoun.gov/prcs.



A gravel planting bed with tree saplings at Claude Moore Park.