

## Our Roots

When settlers arrived in the Kansas City area, the natural landscape looked significantly different than it does today. Sweeping prairies and oak savannas covered almost 90 percent of the land, while hardwood forests and wetlands made up the remaining 10 percent. Today, prairies make up only 2 percent of the region's land. The addition of new roads and buildings and the introduction of non-native species of plants reduced the soil's ability to absorb rain water, increasing stormwater runoff that pollutes our waterways.

The dense clay soils in our region make it difficult for water to soak into the ground. As native vegetation is replaced with popular turf grasses less stormwater is absorbed into the ground, leading to more stormwater runoff and water pollution.

When it rains, water runs off rooftops onto lawns, down sidewalks, driveways and streets, picking up pollutants along the way. Stormwater runoff eventually finds its way to storm drains where it flows into a nearby stream or lake — untreated.

Common pollutants found in stormwater runoff include:

- litter
- oil and other automotive fluids
- pet waste
- soaps used for car washing
- lawn and household chemicals

Even small amounts of pollution in stormwater runoff can add up to a big problem for lakes, streams, rivers and even oceans — especially when it comes from a large metropolitan area such as Kansas City.

### Why native plants?

Increasing the number of native plants in your landscaping is a great way to reduce the amount of runoff that leaves your property. Native plants are trees, shrubs, flowers, grasses, ferns and other plants that evolve in a region over time. These plants have adapted to local climate and ecological conditions.

Native plants have deep roots which can penetrate the soil to depths of up to 16 feet. During dry summer months, root systems

reach deep into the ground to find water, which is why native plants are more drought-resistant than non-natives — and in turn need less watering.

### Native plants are low maintenance

Once established,<sup>1</sup> native plants require very little maintenance because they have evolved and developed natural defenses to local conditions such as drought, nutrient-poor soil, winter conditions, disease and insects. This means that natives save you time and money because they require little or no lawn chemicals, less irrigation than non-native plants and improve soil.

### Native plants are a critical part of the ecosystem

Native plant gardens also bring more native songbirds and butterflies to your yard. Consider turning even a 4-square-foot area into milkweed for monarch butterflies, or a 20-square-foot area of your lawn into Prairie Dropseed that you may only need to mow once a year.

<sup>1</sup> To establish native plants, water for first year and mulch sparingly (1-2 inches). Most natives are established by the second year, but specific environments and plants vary.



For more information, visit [marc.org/water](http://marc.org/water) or call 816-474-4240

The MARC Water Quality Public Education Program is proud to be a member of the Blue Thumb Initiative. [BlueThumb.org](http://BlueThumb.org)



Missouri Prairie Foundation ([moprairie.org](http://moprairie.org)), home of the Grow Native! program ([grownative.org](http://grownative.org)) served as a resource for this brochure.



Native Plantings can suit yards of any size.

*Top left:* Butterfly garden surrounds a mailbox in Parkville, Missouri. *Left:* Raingarden in Parkville, Missouri.

*Top right:* Natives in midtown, Kansas City, Missouri. *Right:* Shorter native species can be useful in spaller urban spaces, such as these in midtown, Kansas City, Missouri.



## Know Your Roots

Native Landscaping and Water Quality



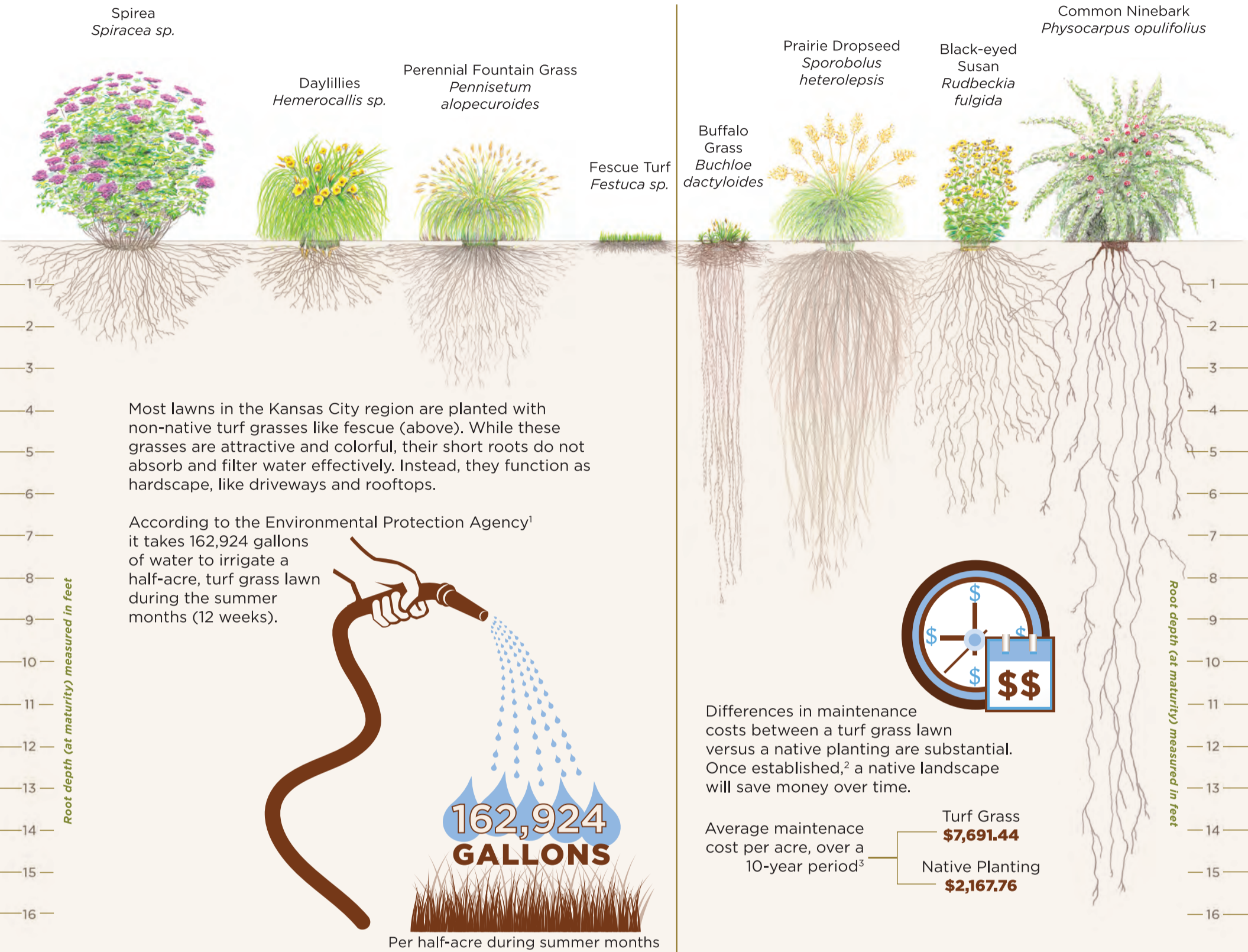
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# Native and non-native root comparison chart

Root depths of species commonly found in the Kansas City region

## Non-Natives

## Natives



<sup>1</sup> [https://archive.epa.gov/greenacres/web/html/conf\\_knwldge.html](https://archive.epa.gov/greenacres/web/html/conf_knwldge.html)

<sup>2</sup> To establish native plants, water for first year and mulch sparingly (1-2 inches). Most natives are established by the second year, but specific environments and plants vary.

<sup>3</sup> Natural Landscaping for Public Officials: A Sourcebook. Chicago: Northeastern Illinois Planning Commission, 2004. Figures adjusted for inflation in 2016.

## Native species common to the Kansas City region

Photos courtesy of GrowNative! ([www.grownative.org](http://www.grownative.org)) and Missouri Department of Conservation ([www.mdc.mo.gov](http://www.mdc.mo.gov))



**Purple Poppy Mallow**  
*Callirhoe involucrata*  
Bloom: May to June  
Light: Full sun  
Height: 4-6 inches  
Spread: 24-36 inches



**Buffalo Grass**  
*Buchloe dactyloides*  
Light: Full Sun  
Height: 6-9 inches  
Spread: 6-12 inches



**Ninebark**  
*Physocarpus opulifolius*  
Bloom: May to June  
Light: Full sun to part shade  
Height: 5-10 feet  
Spread: 6-10 feet



**Golden Groundsel**  
*Packera obovata*  
Bloom: February to April  
Light: Full sun to full shade  
Height: 10-14 inches  
Spread: 12-18 inches



**Marsh Blazing Star**  
*Liatris spicata*  
Bloom: July to August  
Light: Full Sun  
Height: 24-36 inches  
Spread: 18 inches



**Prairie Dropseed**  
*Sporobolus heterolepis*  
Light: full sun  
Height: 18-30 inches  
Spread: 24-30 inches



**Black Chokeberry**  
*Aronia melanocarpa*  
Bloom: May  
Light: Full sun to part shade  
Height: 3-9 feet  
Spread: 4-8 feet



**Aromatic Aster**  
*Symphotricum oblongifolium*  
Bloom: July to frost  
Light: Full sun  
Height: 12-30 inches  
Spread: 16-20 inches



**Black-eyed Susan**  
*Rudbeckia hirta*  
Bloom: May to June, July to frost  
Light: Full sun  
Height: 12-24 inches  
Spread: 8-18 inches



**Switchgrass**  
*Panicum virgatum*  
Light: Full sun  
Height: 3-6 feet  
Spread: 2-5 feet



**Black Gum**  
*Nyssa sylvatica*  
Light: Full sun to part shade  
Height: 30-50 feet  
Spread: 20-30 feet



**Ohio Spiderwort**  
*Tradescantia ohioensis*  
Bloom: May to June  
Light: Full sun to part shade  
Height: 24-30 inches  
Spread: 18-24 inches



**Shining Blue Star**  
*Amsonia illustris*  
Bloom: May to June  
Light: Full sun to part shade  
Height: 36-48 inches  
Spread: 36-48 inches



**American Beakgrass**  
*Diarrhena obovata*  
Light: Part sun to full shade  
Height: 20-30 inches  
Spread: 16 inches



**Shagbark Hickory**  
*Carya ovata*  
Light: Full sun to full shade  
Height: 60-80 feet  
Spread: 40-60 feet



**Lanceleaf Coreopsis**  
*Coreopsis lanceolata*  
Bloom: May to June  
Light: Full sun  
Height: 16-24 inches  
Spread: 12-18 inches