

## What can you do?

Landscaping with native plants 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 originate and evolve in a region over time. These plants adapt to local climate and ecological conditions. Native plants have deep roots which can penetrate the native soil to depths of up to 16 feet! During the dry summer months native root systems reach deep into the ground to find water, which is why native plants are more drought resistant than non-natives.

### Native plants are low maintenance

Native plants require very little maintenance because they have evolved and adapted natural defenses to local conditions such as drought, nutrient-poor soil, winter conditions, disease and insects which can be problematic to non-native species. This means that natives save residents time and money because they require little or no lawn chemicals and less irrigation than nonnative plants.

### Native plants reduce stormwater runoff

Attractive and easy-to-maintain landscaping features can reduce the amount of runoff from roofs and lawns. Downspouts can be redirected to help irrigate rain gardens — shallow depressions planted with native plants specifically adapted to wet conditions. Rain gardens are a great way to help runoff soak into the ground.

Another way to improve your property's ability to absorb runoff is by reducing the amount of turf grass, and replacing it with larger garden beds which include native plants. A typical lawn absorbs only 10 percent of the amount of stormwater that a natural landscape can absorb. Native plant gardens will also bring more native songbirds and butterflies to your yard.

Replacing lawns with drought-tolerant native grass is another way to improve drainage and reduce runoff. Most turf grasses are high maintenance, especially during drought conditions, but native buffalo grass is an effective alternative because it is low maintenance, increases infiltration and is drought resistant due to its long roots. Turf grass roots are 1-2 inches long, while buffalo grass has roots that reach up to 6 feet!

### Native landscaping enhances communities

Local communities spend a lot of time and money maintaining parks, roadways and medians. Planting native plants along roadways, medians or in appropriate park lands can drastically reduce maintenance costs and improve air and water quality.



## Our Roots

When European 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 Kansas City area has grown from a small settlement on the banks of the Missouri river into a major center of commerce, industry and transportation. Urban development practices continue to alter the natural landscape that historically defined our region. The design of new roads and rooftops, and the introduction of non-native species of plants, grasses and flowers reduces nature's ability to absorb rain water, increasing stormwater runoff that pollutes our streams, lakes and rivers.

## What's the problem?

The dense clay soils in our region make it difficult for water to soak into the ground quickly. Native plants have deeper root systems that substantially increase the ability of soil to absorb and retain water. As natural vegetation is replaced with popular turf grasses, less stormwater is absorbed into the ground, leading to more stormwater runoff and water pollution.

When stormwater isn't able to seep into the ground, it runs off onto lawns, sidewalks, driveways and streets, picking up pollutants along the way. Stormwater runoff eventually finds its way to storm sewers where it is transported to a nearby stream or lake — untreated. Common pollutants found in stormwater runoff include lawn chemicals, pet waste, household chemicals, oil, and soaps used for car washing. 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.

# Know Your Roots

*Native Landscaping and Water Quality*



Clean Water. Healthy Life.  
Regional Water Quality Education Program

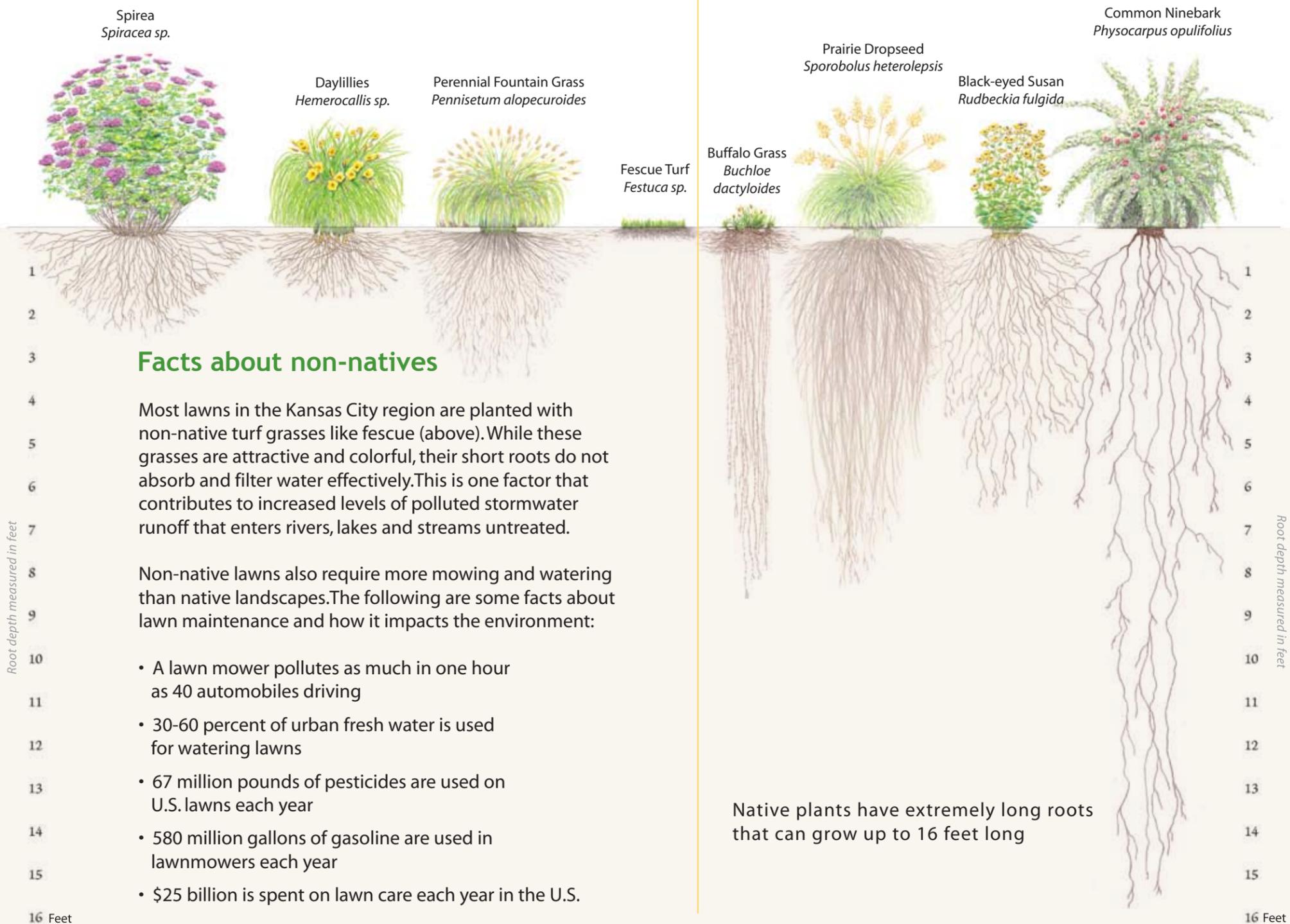
For more information, visit  
[www.marc.org/water](http://www.marc.org/water)  
or call 816/474-4240

# Native and non-native root comparison chart

Root depths of species commonly found in the Kansas City region

## Non-Natives

## Natives



### Four species of natives common to the Kansas City region



***Buchloe dactyloides***

**Common Name: Buffalo Grass**

Buffalo grass is a low-growing, warm season perennial grass that commonly only reaches 8-10 inches high. Individual leaf blades may reach 10-12 inches in length, but they fall over and give turf a short appearance. Buffalo grass is tolerant of environmental conditions such as prolonged drought and extreme temperature changes.



***Physocarpus opulifolius***

**Common Name: Ninebark**

Clusters of white to pinkish flowers resembling spirea bloom May-June. Birds eat the seed formed in drooping reddish fruit clusters in fall. The bark provides winter interest as it peels away in strips to reveal layers of reddish to light brown inner bark on mature stems.



***Rudbeckia fulgida***

**Common Name: Black-eyed Susan**

This plant is easy to grow, grows fast, and gives a bright show of color; but it is rather short-lived. Black-eyed susans will self seed after blooming to give another display later in the year, flowering mid-spring through summer. Features include large golden yellow flowers with dark brown conical centers.



***Sporobolus heterolepsis***

**Common Name: Prairie Dropseed**

Very thin, emerald green leaves form a dense arching tuft. Seed heads form in August and give off a distinct aroma. These graceful clumps turn yellow or deep orange in fall. Provides food and cover for wildlife.

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