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 30 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 soils 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
- pet waste
- lawn and household chemicals
- oil and other automotive fluids
- 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.

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, 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.

- To establish native plants, water for first year and mulch sparingly (0.2 inches). Most natives are established by the second year but specific environments and plants vary.

Know Your Roots

Native Landscaping and Water Quality

Marion Bartley Foundation

Native Plantings can suit yards of any size.

Top left: Butterfly garden surrounds a mailbox in Parkville, Missouri.
Top right: Natives in midtown, Kansas City, Missouri.

Clean Water, Healthy Life.
Engaged Water Quality Education Program
Native and non-native root comparison chart

Root depths of species commonly found in the Kansas City region

Non-Natives

- Spirea
- Daylilies
- Perennial Fountain Grass
- Fireworks Festuca sp.

Natives

- Prairie Dropseed
- Black-eyed Susan
- Buffalo Grass

Common Ninebark

Differences in maintenance costs between a turf grass lawn versus a native planting are substantial. Once established, a native landscape will save money over time.

Average maintenance cost per acre, over a 10-year period:

- Turf Grass: $7,691.44
- Native Planting: $2,167.76

Most lawns in the Kansas City region are planted with non-native turf grasses like fescue (above). While these grasses are attractive and colorful, their short roots do not absorb and filter water effectively. Instead, they function as hardscape, like driveways and rooftops.

According to the Environmental Protection Agency, it takes 162,924 gallons of water to irrigate a half-acre of turf grass lawn during the summer months (12 weeks).

Per half-acre during summer months

162,924 GALLONS

Native species common to the Kansas City region

Photos courtesy of GrowNative! (www.grownative.org) and Missouri Department of Conservation (www.mdc.mo.gov)

- Purple Poppy Mallow
- Callirhoe involucrata
- Buffaloberry
- Physocarpus opulifolius
- Marsh Blazing Star
- Liatris spicata
- Prairie Dropseed
- Sporobolus heterolepis
- Black-eyed Susan
- Rudbeckia hirta
- Switchgrass
- Panicum virgatum
- Black Gum
- Nyssa sylvatica
- Shagbark Hickory
- Carya ovata
- Lancelot Coreopsis
- Coreopsis lanceolata
- Ohio Spiderwort
- Tradescantia ohiensis