

# COOPER CREEK'S UNIQUE ECOSYSTEM

BEFORE YOU IS THE WOODLAND HOME of thousands of creatures who crawl, swim, fly, and wriggle. At the heart of their home is the creek itself—the lifeblood that makes the soil wet and fertile so that lush plant communities can thrive. Riparian woodlands like this support a greater diversity of life forms than drier upland woodlands, making them among the most diverse—and therefore resilient—ecosystems in Kansas.

An ecosystem is made up of complex relationships among life forms that have evolved together over millennia in a specific place. When such a system is healthy, life flourishes. Everyone from the tiniest soil-dweller to the hawk circling overhead has the food, water, and shelter they need to survive. But when the system is disrupted, as happened when non-native plants took over Cooper Creek's banks, the habitat becomes imperiled. The native plants can't take root and the creatures that depend on those plants are in danger.



New England Aster  
(*Sympyotrichum novae-angliae*)

## BENEFITS OF A RESTORED RIPARIAN WOODLAND



Common Muskrat  
(*Ondatra zibethicus*)

For our native creatures, the benefit is life itself. We can hope to see long-absent species return to the area, attracted by the newly-planted native plants and trees. The ecosystem as a whole should gradually come into greater balance, providing a healthier home for flora and fauna alike. The restored woodland will also serve as a safer, more efficient wildlife corridor by which animals can travel freely from one habitat to another across the Kansas landscape.

Humans are among the creatures who benefit from a healthy riparian woodland. It offers us the following services:

### FLOOD PREVENTION

Well-established trees and plants physically slow the flow of water, making flooding downstream less likely. Stormwater filters through the soil, replenishing groundwater supplies, and roots take up what they need. The rest is slowly released into the creek.



Northern Flicker  
(*Colaptes auratus*)

### EROSION CONTROL

Roots of trees and native plants reach deep and wide, holding streambank soil in place so it doesn't wash away.

### WATER FILTRATION

Even woodlands as narrow as Cooper Creek, 50 feet wide on each side of the stream, substantially reduce pollutants from urban runoff.

### AIR PURIFICATION

Riparian trees and plants clean the air we breathe by absorbing toxic gases and particles through tiny pores in their leaves, exchanging them for life-giving oxygen.

### TEMPERATURE REGULATION

In hot weather, trees and plants can lower the temperature of the surrounding air and land surface.

### CARBON SEQUESTRATION

Trees and plants take in carbon dioxide, a major greenhouse gas that contributes to global warming, and store it as carbon within the plant and surrounding soil.



American Red Fox  
(*Vulpes vulpes fulva*)

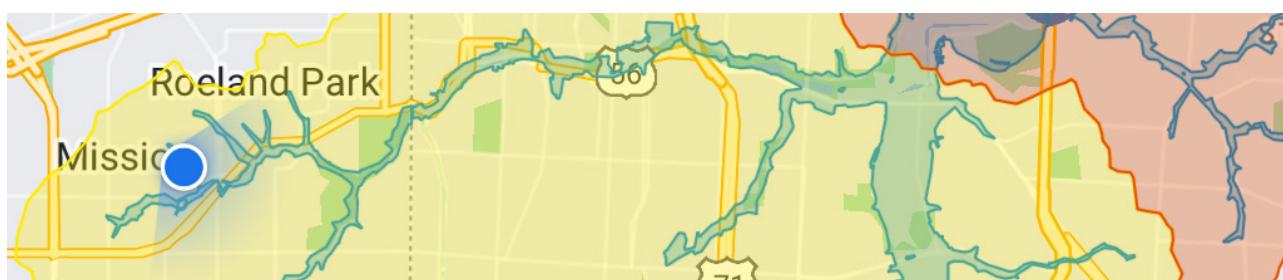
## NATIVE TREE SELECTION

IN ADDITION to the native trees, shrubs, grasses and wildflowers planted along the banks of Cooper Creek, ten trees of different species were chosen to replace the invasive Callery Pears and Tree of Heaven that were removed. Diversity of species was a priority because if a disease or pest sweeps through—like Dutch Elm Disease or the Emerald Ash Borer—it won't kill multiple trees. In diversity there is strength.

Each tree is native to this region (not a cultivar), suited to this location, hardy, and long-lived.

1. **BLACK CHERRY** (*Prunus serotina*) ..... 100+ year lifespan, up to 60 ft tall, flowering.
2. **BUR OAK** (*Quercus macrocarpa*) ..... 100+ year lifespan, up to 80 ft tall.
3. **CHINKAPIN OAK** (*Quercus muehlenbergii*) ..... 100+ year lifespan, up to 60 ft tall.
4. **EASTERN REDBUD** (*Cercis canadensis*) ..... 50+ year lifespan, up to 35 ft tall, flowering.
5. **FLOWERING DOGWOOD** (*Cornus florida*) ..... 50+ year lifespan, up to 35 ft tall, flowering.
6. **KENTUCKY COFFEE TREE** (*Gymnocladus dioicus*) 100+ year lifespan, up to 60 ft tall.
7. **RED BUCKEYE** (*Aesculus pavia*) ..... 50+ year lifespan, up to 25 ft tall, flowering.
8. **SHUMARD OAK** (*Quercus shumardii*) ..... 100+ year lifespan, up to 100 ft tall.
9. **SWAMP WHITE OAK** (*Quercus bicolor*) ..... 100+ year lifespan, up to 80 ft tall.
10. **WHITE OAK** (*Quercus alba*) ..... 100+ year lifespan, up to 120 ft tall.

## OUR PLACE IN THE NETWORK OF RIVERS AND STREAMS



RIVER BASIN MAPS

<https://www.reeldealanglers.com/the-veins-of-america-stunning-map-shows-every-river-basin-in-the-us/>

### WATERSHEDS AND DRAINAGE BASINS

<https://www.usgs.gov/special-topics/water-science-school/science/watersheds-and-drainage-basins>

### FROM COOPER CREEK TO THE SEA: AN INTERACTIVE MAP

<https://river-runner.samlearner.com/>

## OTHER RESOURCES

<https://deproots.org/>

Deep Roots has information about native and invasive plants, local nurseries, plant sales, and educational events.

<https://grownative.org/>

GrowNative! maintains a native plant database and directs you to local plant sources.

<https://homegrownnationalpark.org/>

Homegrown National Park is a massive cooperative conservation effort focused on increasing the amount of land devoted to native plantings.

### HISTORY OF THE COOPER CREEK PARK RESTORATION PROJECT

IN 2021, 15 Roeland Park residents began meeting with the intention of working with the City and the Parks Committee to revitalize Cooper Creek Park and restore its riparian ecosystem. Councilmember Trisha Brauer submitted their ideas to the City Council in three phases of budget objectives (2021, 2022, and 2023), which were approved and completed by the residents, the Parks Superintendent, the Parks Committee, the Public Works Department, and Habitat Architects, a company specializing in habitat restoration.