A Bioengineered Streambank

Using nature to protect our streams

Imagine standing at the edge of your property and literally watching it wash away. That is the reality for many landowners—not only in Missouri, but across the country. Beyond the loss of land, eroding streambanks are among the biggest threats to our rivers and streams—dumping millions of tons of sediment and pollutants into the water, which harms people and aquatic communities alike.

In McDonald County, we are implementing a nature-based bioengineering technique in an attempt to stabilize an extremely unstable and eroding 1,800-foot reach of streambank on the Elk River. Upstream changes in land use and increased heavy rainfall events have accelerated the pattern of significant erosion to the streambank—resulting in an estimated 150,000 tons of soil lost from the site in the past 20 years. These lost soils flush into the Elk River system, damaging the recreational asset of Lake St. Clair, increasing stress on downstream infrastructure, and diminishing the aquatic habitat that many freshwater species rely upon.

The techniques being tested along the banks of the Elk can be replicated to provide solutions for landowners across the state and are a critical tool for a sustainable Missouri.

“This project is intended to help transform how streams are managed for people and nature,” says Drew Holt, the Conservancy’s Western Ozark Waters Coordinator. “Sound science and engineering practices, combined with innovative soil and water conservation strategies, will help advance learning and techniques surrounding streambank stabilization and restoration practices locally and statewide,” Holt adds.

Learn more at nature.org/mofreshwater
Healthy Cities
Bringing nature’s power into cities

In 2008, for the first time, there were more people living in cities than in rural areas. By 2050 it’s expected that nearly 70 percent of the population will reside in urban areas. This historic urban growth, coupled with a changing climate, challenges us to team up with communities and partners to ensure that cities are resilient, equitable and sustainable—for both people and nature.

“Many of the crises we’re facing on the planet are driven by human behaviors, meaning that the solutions to these challenges will also be driven by human behavior,” says James Cole, Director of Conservation Programs in Missouri. “We need to engage with big communities to catalyze big solutions.”

In St. Louis, we’ve invested in a Cities Program Manager whose initial focus includes green infrastructure demonstrations—prioritizing on stormwater retention and Mississippi River nutrient reduction—while maximizing benefits to underserved neighborhoods within the city, thereby helping create more resilient urban communities. “St. Louis sits at the confluence of two of the biggest river systems in the country and as so, we are uniquely positioned as a city to invest in practices that reduce the nutrients that flow into these systems,” says Cole.

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James Cole, Director of Conservation Programs

These are complex challenges that combine environmental, social and economic stresses; and we know that we don’t have all the answers. “There is already great work under way in St. Louis, and we are excited to bring our science to the table to collaborate with partners and catalyze transformational change,” says Cole. “Additionally, the Conservancy has incredible cities projects in action across the country that we can draw from.” Likewise, the work we do in St. Louis can be used to advance these same strategies in cities and communities across the state.

Read more at nature.org/mocities

Farming’s Future
As world population and food production demands rise, how we manage that production becomes increasingly important. Agriculture covers over two-thirds of Missouri’s landscape, and at $88 billion a year, it’s our state’s biggest industry and economic driver. By 2050, the global demand for food is expected to rise by 60%—which we’ll need to meet with less water input and fertilizers, and without expanding agriculture’s footprint.