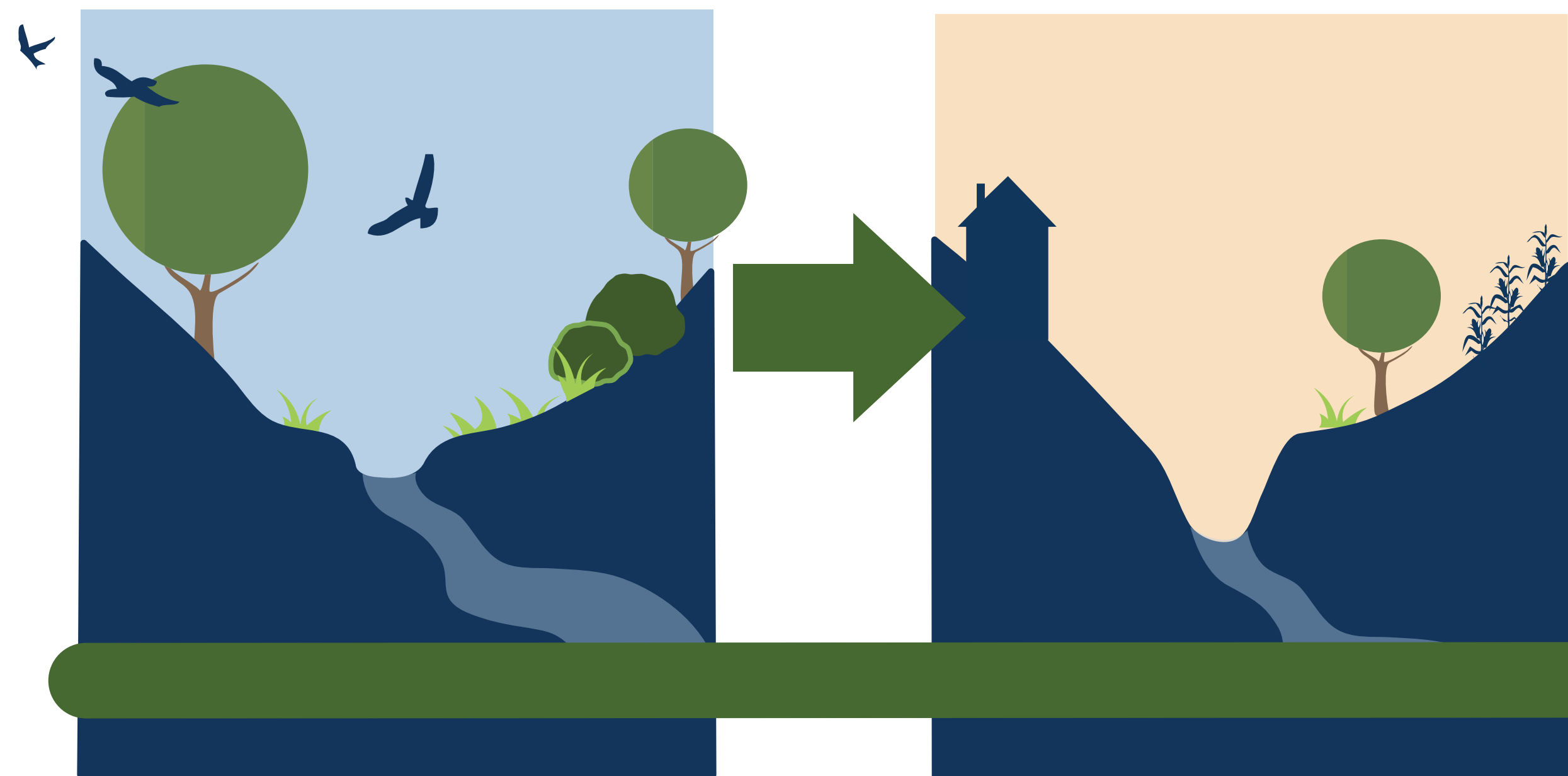


# WHY RESTORE Lower Riley Creek?

Riley Creek is unhealthy due to high levels of sediment in the water. There is active erosion occurring along the creek because of increased stormwater discharge. If nothing is done, the creek will continue to erode the streambanks and surrounding slopes, picking up more sediment. The Riley Purgatory Bluff Creek Watershed District with the City of Eden Prairie and the Lower Minnesota River Watershed District are working together to stabilize and enhance the creek. You can help by implementing water friendly practices that decrease stormwater runoff. Together, we can make a difference in the health of Riley Creek.



## 200 Years ago

more water soaked into the ground when it rained, and less flowed into the creek. The creek channel was connected to its floodplain, and water spilled out during heavy rains, slowing the flow of the creek. Native plants with deep roots held the soil in place and created habitat for fish and animals.



## Now

less water can soak into the ground because of houses, roads, and other impervious structures that have been built. More water rushes more quickly to the creek, increasing erosion. The creek bed has eroded deeper, and is cut off from the floodplain, further increasing the power of the stream to erode its banks. Invasive plant species like buckthorn are common.



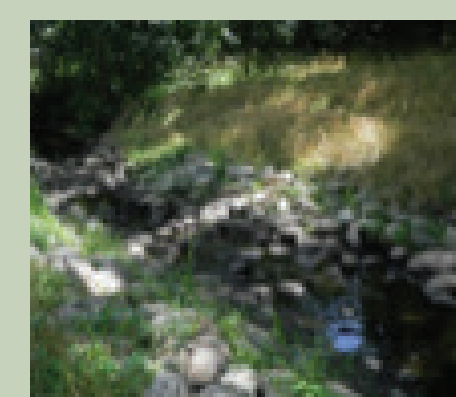
RESTORATION



## By restoring the creek

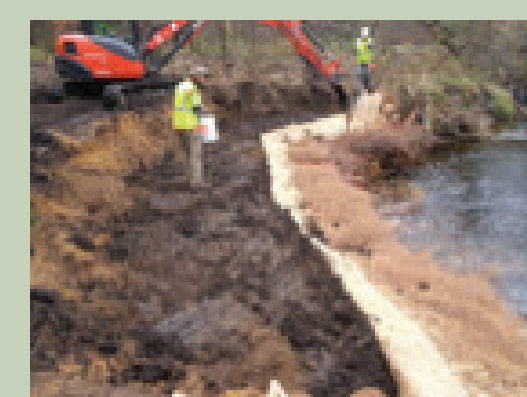
this project will stabilize the streambanks of Lower Riley Creek which will reduce erosion, improve water quality and improve habitat in and along the creek. The project will also reconnect the creek to its floodplain. By establishing a stable stream corridor, the project will address sediment pollution problems in the creek.

## What Does Restoration Look Like?



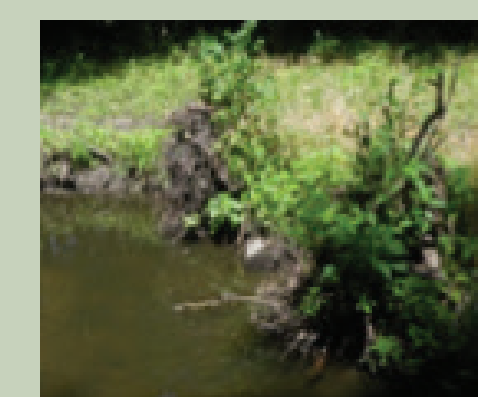
### Rock riffles

Gravel or cobble-sized material installed in the stream bed to create natural flow patterns and control stream bed elevations. The variety in flow and channel substrate size provides habitat diversity for aquatic species.



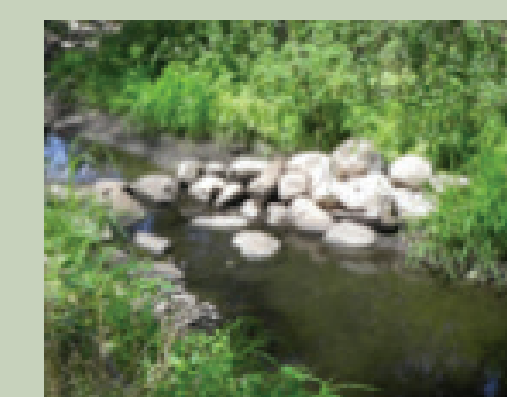
### VRSS/Toe stabilization

Soil lifts created with a combination of root wads and long-lasting, biodegradable fabric and vegetated to stabilize steep slopes and encourage establishment of root systems for further stabilization. Creates undercut/overhanging bank habitat features.



### Root wads

Tree trunks with the root ball attached, installed to increase bank roughness and resistance to erosion, re-direct flows away from banks, and provide for establishment of vegetation. Creates overhanging bank habitat features.



### Cross vanes

Boulders buried in the stream bed and extending partially or entirely across the stream to: re-direct flows away from banks, encourage sediment deposition in selected areas, and control stream bed elevations. Scour pools develop over time near the vane, which provide habitat diversity.



## If we don't act

the channel will continue to incise, destabilizing the banks which can cause slope failures. These failures will widen the channel, threatening physical and natural infrastructure like houses and trees respectively. Sediment will continue to pollute the water and degrade habitat all around.

What's happening