

Completing Shanes Creek's Stream Restoration: Part 1

By Greg Sykes (greg@grsykes.com)

The Shanes Creek stream restoration within Royal Lake Park is in its final stages! All the major work and rechanneling that started in spring 2022 is complete. The final price: \$2,905,914. Background on the history and strategy behind the restoration efforts are in this series' reference section. Now and looking ahead, many neighbors ask how the job went and what is next? The following are some answers and observations.



Figure 1. A major factor driving the stream restoration was Shanes Creek's heavily eroded and sunken streambed (A), also seen in some of its tributaries. Years earlier, the creek flowed to the right of the then mostly buried sewer manhole tower. The project elevated streambeds and water tables (B, photographed at the same location after restoration). Some sections were rechanneled. Strategic combinations of stones, logs, and native plants now line and reinforce the streambanks. The concrete-filled, four-inch-diameter PVC tubes are permanent stream stability monitoring stations (C), installed at several places along the restored waterway.

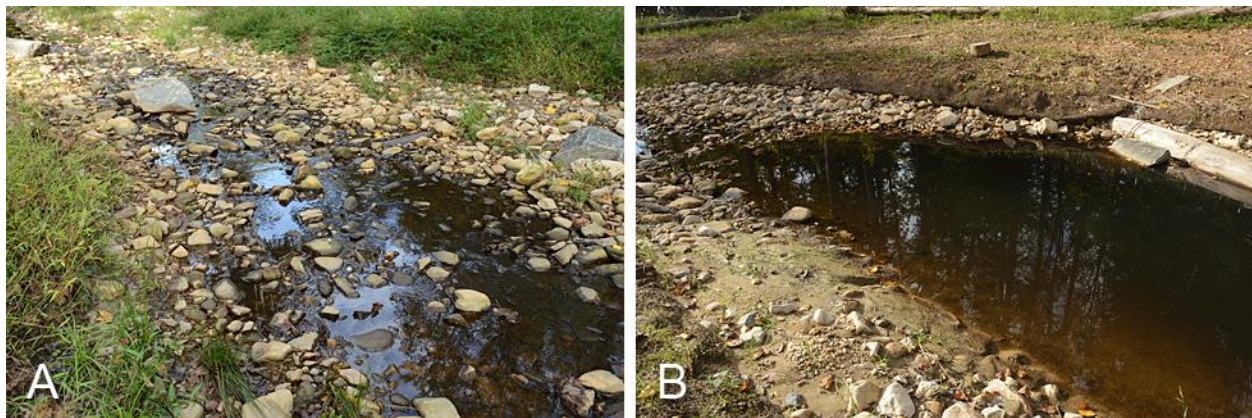


Figure 2. Much of the creek has either shallow rocky areas called riffles (A) or deep pools (B). The water running through the riffles gets oxygenated while the pools offer cooler spots for heat-sensitive critters. You can play a vital role in the restoration effort! Please leave all stones where they are because they serve important purposes such as stabilizing the streambed and holding the underlying geotextiles in place that could otherwise washout during a severe storm.



Figure 3. The pre-restoration bridge across Shanes Creek was removed. Where trails cross the stream, elevated, fair-weather steppingstones are in place (A). Plan your walk accordingly if heavy rain is in the forecast. Carved, partially submerged boulder arrangements called “sills” (B) control the stream. They might look like rustic sidewalks but are not and can be dangerously slippery with algae. Please stay off the sills. Water levels are low in both images due to a drought.



Figure 4. The centuries-old thoughts of digging ditches to quickly drain water and filling depressions are replaced by the new school of wetland preservation and the benefits that come with it. This restoration project adds creek overflows and pools close to the main waterway. In image (A), Arrow 1 indicates the primary stream's flow direction and Arrow 2 shows where stormwaters flood an artificial wetland. These features slow and disperse water across a wider area than the narrow, deep-trenched, pre-restoration creek that was prone to eroded banks. The shallow wetlands hold some of the surplus stormwater (B). More water in the ground recharges the aquifers and helps the area through droughts when that water slowly releases. Additionally, these water-capture devices are superb amphibian habitats! Already, frog and salamander populations are on the rise here (C, a young green frog, *Lithobates clamitans*)!

At presstime, the single trail running between Roberts Road and Royal Lake still needs work. Pre-planning discussions with County officials indicated the surface will be natural and unpaved. It should be wide enough to accommodate a Gator for staff to haul repair equipment—a good width for two people to pass each other. Low spots where water collects will be addressed. Final implementation was escalated.

[Part 2](#) of this series examines Shanes Creek's new largest wetland, looks at revegetation, and contains the reference section.

* * * * *