

As we celebrate 25 years of Swan Lake Village, we must recognize that Swan Lake Park, as we know it today, has also been around for about 25 years.

Swan Lake is much older. It started as a gravel quarry in the 1850's. When quarry operations ended in the late 1960s, it filled with water and became the local skating and fishing pond for several decades before being converted into Swan Lake Park.

Friends of Swan Lake Park, founded only three years ago, is driven by a goal to have the City of Markham address the deteriorating conditions and to restore both Swan Lake and Swan Lake Park.

Reparations in Swan Lake Park

Fortunately, Markham has responded well and immediately addressed several issues related to accessibility for those with mobility challenges by repairing park pathways and adding new sidewalks around the traffic circle. Markham moved quickly to address some of the invasive plant species identified by our volunteers, and initiated the planting of pollinator flowers near the windmill.

One of the major changes to come was unveiled in April—a redesign of the shoreline area to remove some of the high reeds around the south and east side of the lake to reopen viewing of the lake while creating barriers to reduce the attractiveness of the area for nesting by Canada geese.

We continue to press Markham to improve the habitat within the park area and to install a new viewing deck area on the Williamson Street side of the lake.

Restoration of Swan Lake

Restoring Swan Lake is a much bigger and more expensive undertaking. Fortunately, we were successful in getting the city to adopt a more aggressive and timely chemical treatment program to reduce the algae that gives the lake its dark green colour and the bacteria that is harmful to humans and deadly for small animals. A treatment was applied in 2021 and another is scheduled for 2024.

Unfortunately, the program adopted by the city falls far short of restoring the water quality in Swan Lake, primarily because it is only focused on reducing the excessive amount of phosphorus in the lake. The city policy also sets out a “no contact” restriction on use of the lake, meaning no canoeing, kayaking or ice skating. Fishing and a fountain will be restored once water quality improves.

We believe success is tied to addressing two other critical challenges facing Swan Lake—low oxygen levels and excessive chloride from road salt. The current plan places little emphasis on addressing these two critical areas.

A Stagnant Pond that Needs Circulation

Swan Lake is not connected to any natural flowing streams that help bring new oxygen into the lake. Swan Lake is in essence a stagnant pond. We continue to press the city to find ways to improve oxygen levels. Higher oxygen levels will be beneficial to restoring aquatic life within the lake, which in turn is helpful to the land-based wildlife and to Markham as a whole. But higher oxygen levels also help reduce the amount of phosphorus drawn from the sediments at the bottom of the lake and therefore reduce algae and the future dependency on more chemical treatments. Everything is interdependent.

The city continues to reject our efforts to find ways to increase oxygen levels within the lake by recycling water through the North Channel. We have been encouraged by water quality specialists to pursue this approach and it remains one of our primary areas of focus.

Ending Swan Lake's Role as a Stormwater Pond

The one perpetual challenge is keeping road salt out of Swan Lake. The water is no longer categorized as fresh water. The chloride levels are well above levels that are viewed as harmful to small aquatic life that consume algae. We are killing off nature's way of controlling algae.

We contacted local research institutions and have asked Markham to finance two projects to help improve the water quality in Swan Lake. One project by Fleming College professionals will investigate the use of chemicals to help improve oxygen levels. The other project by York University researchers will investigate ways to remove the chloride already in the lake.

Designating Swan Lake Park as Natural Heritage Network

Most importantly we are asking the city to designate Swan Lake Park as a component of Markham's Natural Heritage Network. This will recognize the park as an environmentally sensitive area, comparable to Toogood Pond and Milne Park. While Swan Lake is not considered a part of the Rouge River watershed it is an influential element connected to the local aquifer and an ecologically important area for birds and other species.

We remain focused on pursuing three core changes:

- 1) Having Swan Lake Park designated as a significant component of the Natural Heritage Network and provided with the associated environmental protection
- 2) Ending Swan Lake's role as a stormwater pond
- 3) Supporting greater human interaction in Swan Lake.

And we hope to have all of this done before our 25th anniversary! □