Remember the good old days!

Friends of Swan Lake Park

by Fred Peters

Remember the good old days, back in February, when all we had to worry about was climate change destroying our planet and the poor water quality in Swan Lake?

The Friends of Swan Lake Park was launched last fall with the mission of getting the City of Markham to restore Swan Lake and Swan Lake Park and to establish a long-term Stewardship Policy that recognizes the broader community and environmental role of the lake and park. These objectives were endorsed by over 90% of Swan Lake Village residents attending our meeting on March 9.

Three Basic Requests

The issues in Swan Lake and Swan Lake Park are well documented. The city's water consultant has recommendations to focus efforts for restoration of the water quality. The Friends of Swan Lake Park have built upon this information to outline additional approaches to address water issues in Swan Lake. We also identified other issues within the land-based elements, such as invasive species that require attention. Our views are set out in a 66-page report provided to senior staff and distributed to council members. The report, titled "Pathway to Sustainability" is available on our website www.friendsofswanlakepark.ca.

We have requested three basic actions by the city:

1) Restore water quality in Swan Lake
2) Restore the aquatic and land-based habitat
3) Commit to a long-term stewardship plan

In March we were pushing hard for a start on these programs with restoration of water quality in 2020 but this opportunity has slipped away. We believe there are several low-cost activities that can still be accomplished in 2020. We do not know the scope of the proposal, but in mid-June, Council will be asked to approve a plan for Swan Lake Park. Due to the financial pressures the city faces due to COVID-19, budgetary support for the essential primary activities in 2021 is uncertain.

Restore Water Quality

Based on the information provided by the city's consultant and our own research on what has worked for others we recommended a three-prong approach for restoring and maintaining water quality in Swan Lake:

1) Minimize the amount of phosphorus entering the lake each year
2) Apply a chemical treatment to remove the excess phosphorus currently in the water
3) Develop annual programs to remove excess phosphorus

Minimizing the Amount Entering the Lake

The sources of excess phosphorus entering the lake each year are evenly split between stormwater runoff and migrating geese.

The stormwater runoff comes from areas that drain directly into the lake or from overflows of stormwater from Swan Lake Village. This flow can be reduced by making a one-time investment to redirect runoff from several areas directly into the existing stormwater ponds or by installing underground basins that help clean the water before it enters the lake such as the one on the Amica property.

Currently the city hires a firm to help scare away migrating geese using dogs and each spring has a program to oil the eggs to minimize the number of geese that spend time on the lake each summer. There has been some success, but we recommended that the city hire the independent expert adviser we identified to assess the scope of the current goose mitigation program and to identify ways to reduce the attractiveness of the habitat. This adviser has developed

relocation programs for other municipalities and perhaps this would help Swan Lake.

Our other recommendation was for the placement of floating strobe lights on the lake to disrupt geese from staying on the lake at night.

Immediately Treat the Legacy Phosphorus in the Swan Lake

The current excess phosphorus in the lake represents over 60% of the problem. In the short term, this can only be brought under control by applying a chemical treatment of either Phoslock or aluminum. Pre-COVID, there was discussion of applying this treatment in the spring of 2021. We hope this can still happen.

Three Low Cost Approaches for Keeping the Excess Phosphorus under Control

We proposed three low cost programs that should help reduce the need for future chemical treatments.

1) Investigate and invest in aeration and water circulation equipment that will increase oxygen levels and help reduce internal phosphorus load in the lake.
2) We estimate that 15% of phosphorus content could be eliminated each year by drawing down about 10% of the most phosphorus dense water for use in Markham's park irrigation trucks. The lake will be replenished by fresh water from underground sources.
3) Convert the dry channel along the north end of the lake into a bioswale planted with nutrient absorbing plants, such as bulrushes. This channel would be serviced by phosphorus dense water from the Lake. Creating circulation in the Lake should be of benefit in general. The water returned to the Lake through the bioswale would return with less phosphorus and be oxygen enriched through the process.

Restore Environmental Elements

Adopt the standards of the Toronto and Region Conservation Authority and enlist their support to develop a restoration program for both the land based and aquatic elements in the Swan Lake Park, similar to a recent study undertaken for Toogood Pond.

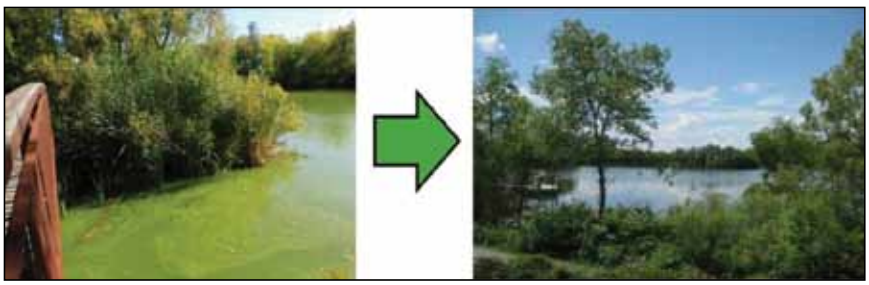
Make This Sustainable – Commit to a Stewardship Policy

The above actions will improve water quality and restore the environmental elements. A sustainable solution can only be assured if the city makes a commitment to a Stewardship Policy for Swan Lake and Swan Lake Park built upon two key elements:

1) Reversing the policy of treating Swan Lake as a stormwater pond and reinstate the original purpose and community objectives for Swan Lake and Swan Lake Park.
2) Establishing management goals for all environmental elements and trigger mechanisms for water quality and for the aquatic and land-based elements in the lake and park based upon the standards of the Toronto and Region Conservation Authority.

We remain committed to achieving a long-term sustainable solution for Swan Lake and Swan Lake Park. The timetable may have slipped but the need remains as strong as ever. □

WE WANT TO GO BACK TO THE FUTURE



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