

General Committee, Markham Council Tuesday June 16th 9:30

Members of the General Committee of Markham Council

Regarding ITEM 7.8: Minutes of the Markham Subcommittee

Thank you to Council for supporting the significant effort made to improve the water quality in Swan Lake. Phase 1 of the long-term water quality program resulted in significant improvements to the water quality in Swan Lake.

As reflected in the minutes of the April 30th Markham Subcommittee meeting, the Subcommittee approved Phase 2 (2026 – 2030) of the long-term plan. Friends of Swan Lake Park support the key elements of the Phase 2 plan but request three amendments to the Phase 2 plan documentation plus an amendment to the resolution passed by the Markham Subcommittee.

I) Proposed Amendments to the Phase 2 Program

1) Document the Return of the Fountain

For many years, Markham installed a fountain in Swan Lake. In 2020, at FOSLP's request, the fountain was removed because of concern about the high levels of cyanobacteria in the lake at that time. At that time, I was also told that the upon assumption of the lake, the city had undertaken to support and maintain the fountain and that a new unit would need to be acquired but that it would be returned once the water quality had improved.

In an email dated June 9th, Rob Muir stated that "reinstallation is supported given current water quality conditions" and that the Parks department has indicated that they have planned replacement in 2028.

We request that this undertaking be documented in the Phase 2 plan.

2) Define "Trigger Points" for Future Water Treatments

The significant reduction in phosphorus levels in the lake to approximately 20 ug/L is one of the milestone accomplishments of Phase 1. This can be largely attributed to the two scheduled chemical treatments (2021 and 2024) plus the ongoing geese management program. We endorse the stated goal of maintaining total phosphorus at mesotrophic levels during Phase 2 (less than 30 ug/L).

Markham's aquatic advisor, Dr. Tammy Karst-Riddock noted that the next chemical treatment may not be required for another 5-8 years. That would be wonderful however there is no documentation as to what would trigger that next treatment. Many of the current Council members or staff may not be present in 5-8 years. This is a 25-year program, and it is critical to document the intent of the program for future generations of Councillors and managers.

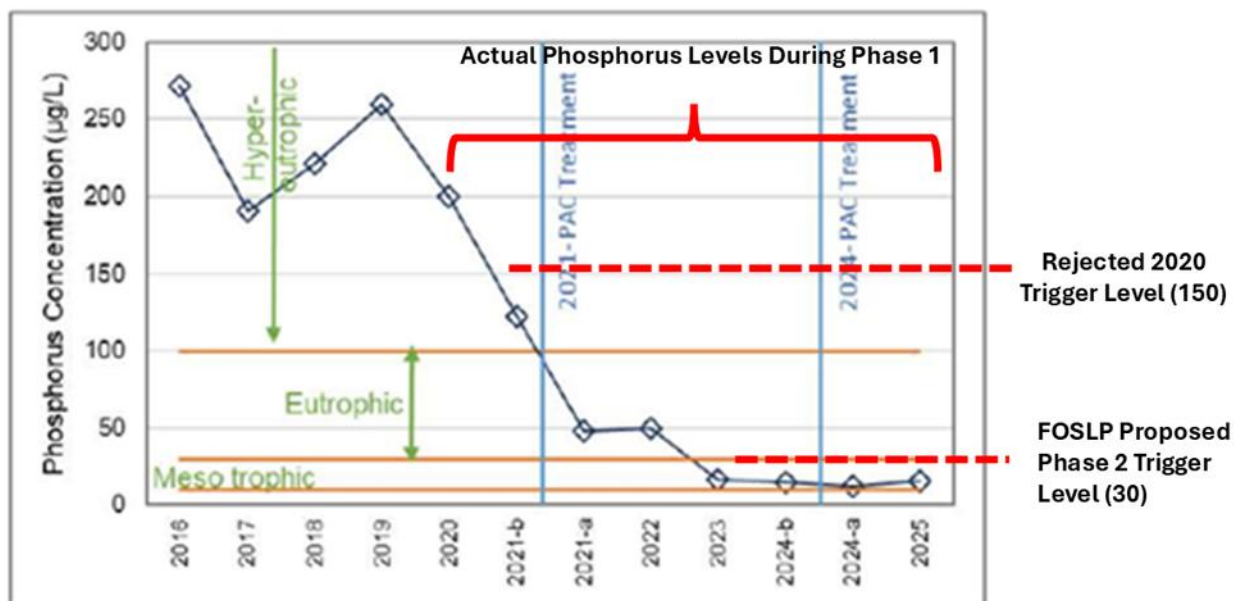
The plan notes that chemical treatments will be continued at a “modified dosage and reduced frequency”. However, should conditions deteriorate, the Phase 2 plan does not define the criteria that would trigger an action plan for the next chemical treatment

The Phase 1 plan was adopted 8 years after the initial Phoslock treatment. Conditions had deteriorated within two years of the original treatment, but years lapsed before the issues were addressed. Criteria should be established that indicates what actions will be taken when the stated goals are at risk otherwise conditions may deteriorate and much of the benefits derived during Phase 1 may be lost.

The original 2020 water plan proposed levels that would trigger subsequent treatments once conditions deteriorated for two consecutive years.

This approach was abandoned for the Long-term Plan in November 2021 when it was recognized that a three-year treatment program would provide more consistent results during Phase 1. We have certainly seen the benefits arising from that second treatment. The goal now is to retain those benefits.

We now have phosphorus and nitrogen within mesotrophic levels(2023 - 2025) following the second PAC treatment in 2024. The stated Phase 2 interim target for Total Phosphorus is to stay below the current level of 20 ug/L and to maintain at least mesotrophic levels (below 30 ug/L.) throughout Phase 2 however the mechanism that will do this is not defined.



There is no documentation in the plan outlining the current intent should conditions deteriorate. In an email dated June 9, 2026, Rob Muir states that “The Phase 2 plan has set targets for total phosphorus (average and event based) and exceedances will trigger

consideration of treatment considering other factors such as sediment testing. The City intends to respond proactively to preserve the quality improvements given ongoing monitoring, conservative 3-year lifecycle budgeting, and even the possibility of in-year budget requests in exceptional circumstances (e.g. significant deterioration in a single year). No criteria as requested are necessary at this time.”

The Phase 2 plan is currently silent on this stated intent, and we recommend that this intent and the criteria that would be used as guidelines for triggering action be documented in the Phase 2 plan.

Therefore, FOSLP requests that the Phase 2 plan define the conditions that if exceeded would “trigger” a remedial action plan as considered in 2020. We propose that should phosphorus levels no longer remain within mesotrophic levels for two consecutive years, then a requirement for treatment is triggered. It will still take another year to get approval through Markham’s budget cycle so the effect is that a treatment would occur in the fourth year following the initial trigger point being exceeded, hopefully before conditions have deteriorated significantly.

3) Review Options for Reducing Inflows from Stormwater Ponds

The Phase 2 plan notes that chloride levels remain “governed by external loading associated with road salt use and watershed processes” and by the groundwater.

The Flow Diversion Report outlined the potential to reduce total chloride inflows by 30% through minor alterations of the flow splitters at the two ponds.

We request that Phase 2 include a review of the feasibility of modifying the flow splitters once Markham has assumed control of the ponds. Staff have outlined several tasks this may entail such as assessment of the pond dynamics, downstream systems and the impact on the lake.

II) Amendment to the Resolution passed by the Markham Subcommittee

On June 23, 2020, the General Committee provided direction to staff that led to the development of the Phase 1 Long-term Plan (approved November 2021) and included the direction that ***“staff report back on this matter to the General Committee through the Markham Subcommittee with the participation of the Friends of Swan Lake Park”***.

The wording to work with FOSLP during Phase 2 has been dropped from the April 30, 2026 resolution approved by the Markham Subcommittee.

FOSLP benefits from engaging with staff on material issues outside of the formal Council meetings. Staff have shared information such as detailed water quality monitoring reports and analysis of sources of stormwater entering the lake. We have reviewed these materials and provided commentary to staff in advance of Council meetings which I believe has been beneficial to both parties.

We request that the General Committee reinstate the original wording.

“That Staff report back annually on water quality results through the Markham Subcommittee *with the participation of Friends of Swan Lake Park*”

Thank you to Markham Council and staff for the continuous effort to preserve the biodiversity of Swan Lake Park.

Fred Peters, Chair

Friends of Swan Lake Park