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Sent: Thursday, November 15, 2018 6:13 PM
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Cc:
Subject: Hamlyn Street Hydro/SWM

Based on the EEPAC review of the AECOM SWM Report for the proposed storm/drainage and SWM Servicing works for Sifton Property [6019 Hamlyn Street -Draft](#) of Subdivision, and the MTE Preliminary Hydrogeological Investigation for the same site, EEPAC comments are as follows:

City Council and MOECP accepted the Dingman Creek Subwatershed Study Updates (DCSSU) and the Pincombe Drain Municipal Class EA study with City Council approving all recommendations for these studies to maintain at minimum, and if possible, to improve environmental/ecological health of this system. Also, City Council's approved recommendations included the specific environmental/ecological targets with criteria for terrestrial, water resources systems and their major functions and features, as well as design criteria and requirements for storm/drainage and SWM quantity, quality control, erosion, and allowable peak flow discharges to the Digman Creek and its tributaries under the projected post developments conditions.

We are of the opinion that it is absolutely critical to ensure that environmental/ ecological conditions, and significant major functions and features not be adversely impacted by the proposed land development and servicing works for this Draft Plan of subdivision. Therefore, the final SWM report for the proposed servicing works needs to include and address the following:

- a) compliance with all applicable criteria and requirements of the Pincombe Drain Municipal Class EA and DCSSU for the proposed design of the storm/drainage and SWM servicing works for the subject should be demonstrated and all applicable criteria and requirements for the subject lands should be listed and incorporated in the SWM report;
- b) taking in considerations that the proposed SWM system components (soakaway pits) are designed to be located with in the wetland buffer area, which represents an encroachment to a Provincially Significant Wetland (PSW) buffer and it is located immediately adjacent to the subdivision land boundaries, the SWM report should incorporate and demonstrate all required justifications for the proposed SWM design, including updating the Hydrogeological report with support information related to hydrogeological and geotechnical conditions, water balance assessment (including a detailed assessment of water balance for the proposed subdivision lands and the PSWs) and the detailed record of groundwater quality and quantity monitoring information for the existing conditions to establish the base line conditions, prior to finalizing the proposed design. Also, this SWM design report needs to include and develop the

required details and cost considerations for the compensation and mitigation plan and measures and all these estimated costs;

c) a water quantity and quality and monitoring program needs to be developed and be included in the report. This water quantity and quality and monitoring program needs to include the water quality (basic chemistry and ecological monitoring-BioMAP) under pre development conditions for a minimum 1 year monitoring to assess dry and wet weather conditions (2 monitoring periods for each of the identified conditions - we note that the preliminary groundwater report only had two weeks of water level information) and a minimum of 3 years under the post development conditions to establish the baseline conditions and to measure any potential adverse impacts on the PSW and/or the potential failing of the proposed SWM system/LID.

d) the estimated water balance under the post development conditions should not exceed 90-80% of the pre development run off flows conditions and to minimize potential adverse impact on PSW. Equally, the evaluation should demonstrate that the development will protect water inflows to the PSW. (In short, the report should demonstrate that the water balance and water quality of the PSW will not be adversely impacted by the site development, including construction related impacts.) We note that the Hydrogeological report for the subject lands shows that run off increase under the post development conditions represents a 49% increase over baseline conditions and must be treated, therefore, the SWM report should address these issues in the design of the SWM quality/quantity control system for this subdivision.

e) The life expectancy, ownership, and the level of the risk of the proposed SWM system LID components - the proposed soakaway pits and bioretention facility - potentially failing (and what the impact on the system from failure would be) should be addressed and identified in details in this report, prior to finalizing and accepting the proposed design of this SWM system.

Based on the information presented in the Hydrogeological report, the subject lands are located within the shallow aquifer (groundwater app. 0.25m to 3 m from the ground service), the ground water gradient is generally directed to the Dingman Creek and/or the Dingman tributaries, and the soil conditions are variable. Although there is a presence of the small sand layer; however, the thickness of this layer as well as the permeability suggests to be variable and could be in some areas to be mixed with some till, all these formations looks are sitting on on some layers of clay and till formations. It suggests that these soil and groundwater conditions may not able to support a long life expectancy and performance of the proposed LID systems.

Sent from my iPhone