EEPAC originally provided comments at the October 2017 EEPAC meeting and additional comments at the November EEPAC meeting. Please see the following:

Theme 1 - Impact on Dingman Creek

Overall, we are still concerned with the project's potential impact on Dingman Creek. None of the reports have addressed base and peak flow to the Hampton-Scott Drain under major and minor storm events. As we had previously stated, the 2005 Dingman Creek Subwatershed Study Update ("DCSSU") makes specific recommendations for sub watershed management within the Dingman Creek watershed, and until such time as the DCSSU is superseded, its recommendations should be followed. Our chief concern is that the changes to the stormwater management strategy for the Parker SWMF are being viewed in isolation, without considering the more localized impact on the Hampton-Scott Drain and, ultimately, its broader impact on Dingman Creek.

Recommendation 1:

We reiterate our previous recommendations, notably Nos. 2, 3, and 4 from our comments presented at the December 2017 meeting. The crux of these recommendations are:

a. prepare a water balance assessment for the site to establish baseline water conditions. The Water Balance assessment (dated December 2017) does not provide an assessment of the current flow regime into the Hampton-Scott Drain from Significant Woodland being preserved, not that of groundwater into the Drain.
b. Evaluate base flow and peak flow conditions from the Significant Woodland to the Hampton Scott drain. The Water Balance does not provide an evaluation of the Significant Woodland's retention/detention capabilities during a Major Storm event, nor does it provide a base flow assessment to the Hampton Scott Drain during Major and Minor Storm events.

Theme 2 - Water flow to the Woodland

With specific reference to the overall water balance within the Woodland, the Water balance report cites the goal of not more than a 10% reduction in water water reporting to the Woodland. The Water balance Assessment calculated the Woodlot size as being 17.7 Ha with an additional 19.0 Ha of "buffer zone" in the "Post-Development Ultimate Scenario" that is composed of 40% to 45% impervious areas; essentially, the report implies the "buffer zone" would be private property and the necessary flow to the Woodland would only be achieved using water flows "directed to the woodlot via directly connected "buffer" zones in rear yards, via indirectly connected LID measures, or via a piped diversion system to offset the infiltration deficit." Previous reports had referenced a 14.6 Ha buffer around the Woodland; our assumption was that this buffer would have not been private property under the Post-Development scenarios (either interim or ultimate). Our concerns with this revised approach are:

- Flow to the Woodlot in the interim and ultimate scenarios is dependent on maintenance of LID measures on private property, the efficacy and long term maintenance of which is uncertain.
- Flow to the Woodlot is also dependent on a series of assumptions around the ultimate site design. To the extent that the site design gets modified, the amount of water reporting to the Woodland could be further reduced.
- How the water is relayed to the Woodlot could also have an impact on the Woodlot's retention/detention ability. For instance, piping water into the Woodlot, while maintaining the overall volume, may not necessarily be retained during a storm event the same way interflow and surface flow into the Woodlot would be.

Recommendation 2:

- The buffer zone around the Woodland should be excluded from overall development (i.e. remain public access lands). Excluding the land from overall development should eliminate the creation of impervious areas within the buffer zone and thus help to maintain water reporting to the Woodland.

- The size of the buffer zone should be evaluated such that there is a not more than 10% reduction in water reporting to the Woodland.
- The specific LID measures should be evaluated within the context of their impact on the Woodland's ability to retain/detain water during a storm event.

Theme 3 - Dewatering during Construction

The Hydrogeological Assessment highlights the need for dewatering during construction of the Trunk Sanitary and Stormwater sewers (typical scenario of 426 L/min, worst-case scenario of 1,070 L/min) and for the SMWF (typical scenario of 106 L/min, worst-case scenario of 385 L/min). The report mentions that the dewatering may have an impact on water levels in the "creek", which is presumably the Hampton-Scott drain, and recommends redirecting discharge to the channel to maintain surface water levels (Section 6.1.2). The report also highlights that groundwater pumped during the proposed dewatering will likely require some form of treatment for to lower Total Suspended Solids and lower the associated metals concentration prior to discharge to the local storm sewer system (Section 8.0). Lastly, the report recommends that a staff gauge be established as a visual reference in the watercourse (agin, we assume the report is referencing the Hampton-Scott drain) to assess whether water levels are being impacted by the dewatering, and if so, the discharge may be redirected in consultation with the UTRCA. Given that the construction period is relatively short (21 days for each of the Trunk Sanitary and Stormwater sewers and the SWMF), there may be insufficient time to contact the UTRCA and develop a plan to maintain water levels in the Hampton-Scott drain.

Recommendation 3:

Establish a plan ahead of time to prepare for the contingency of having to re-direct water to the Hampton-Scott drain to maintain water levels during construction. This plan should include, inter alia, water quality testing consistent with the recommendations of the DCSSU to ensure discharged water does not adversely impact Dingman Creek.