

Belle Meade Subsurface Drainage Policy

The City of Belle Meade has experienced an increase in the number of new homes with basements that have resulted in the need for subsurface drainage systems. The City has received requests to tie these systems into City owned and operated stormwater management system infrastructure. Section 8 of the City's Stormwater Ordinance 2006-3 lists several, allowed non-stormwater discharges which include foundation or footing drains. The City desires to allow foundation or footing drains to tie into the City's storm sewer system where deemed appropriate by the City; however, in some cases, the contribution from the subsurface source could place a significant burden on the City's storm sewer system. The City has observed lots in which excavation has appeared to allow a previously confined aquifer to flow freely as an artesian spring. Given this phenomena experienced in the City, this policy seeks to define the City's stance on future projects of this nature.

It is generally assumed that foundation drainage pumps will likely discharge after the peak runoff from a storm. This assumption is based on two primary factors: 1) the subsurface water consists of stormwater that infiltrated the ground at the site, and/or 2) the subsurface water consists of groundwater that may have originated from infiltration into the ground beyond the site. Generally speaking, stormwater will run off of a site before the full contribution of subsurface water is realized from infiltration. This assumption can and should be verified by observation during construction.

If a subsurface drainage pump is proposed, the pump rate goal should be to discharge subsurface water over a three day or less period of time since the average inter-event period between rain events is about three days in the City. The pump for the foundation drainage will only be allowed to pump groundwater from a rising water table and no surface discharges such as roof downspouts will be directed to the pump.

The land disturbance permit application shall include a provision for the applicant's engineer or landscape architect to evaluate the need for a subsurface drainage system and its ultimate discharge from the site after construction has commenced and information is available about the subsurface drainage (e.g. the basement excavation has been completed and dewatering rates and durations from a temporary pump are available). The integration of the stormwater management system and subsurface drainage system will be evaluated by the applicant's design professional, and the drainage calculations will be revised as deemed necessary by the applicant's design professional. A modified plan will be submitted to the City for review and approval prior to commencing with the construction of a permanent subsurface drainage system. In some cases, the applicant may be required to either improve the City's existing stormwater management infrastructure at his or her cost or propose a practice on the subject lot that will attenuate the subsurface drainage system's contribution to the City's existing stormwater management infrastructure.