



Town of Hanover
Department of Public Works
40 Pond Street
Hanover, Massachusetts 02339-1693
781-826-3189 Ph 781-826-8915 Fx

Victor J. Diniak
Director of Public Works

September 5, 2019

To: Justin DeBruin, Director of CDMI

From: Victor Diniak, Director of Public Works

Subject: Proposed Mall Water Usage

The DPW staff has reviewed the expected daily average and peak water flows provided by Kelley Engineering Group on August 12, 2019, for the proposed Hanover Crossing project. Mr. Kelley has indicated the proposed mixed use project has a design flow of 129,950 gallons per day (gpd) with an actual expected flow of 59,600 gallons per day. This is an expected increase of 24,327 gpd over the existing complex flow. The expected short duration peak flow is expected to increase from 525 gallons per minute (gpm) to 593 gpm. Mr. Kelley indicated the commercial component would use water from 10 am to 10 pm with peaks between 5 pm and 8 pm and the residential component would typically use water from 4 am to 12 am with peaks between 5:30 am and 8:30 am and 5:30 pm and 8:30 pm.

While the numbers provided are estimates based on standard methodologies (Hunter's Curve) as well as some reasonable assumptions made by the applicant which we do not dispute, we believe that while we may see an impact to our storage during the peak flows, we believe we have the water, storage, and pumping capacity to meet the expected demand, provided that the actual demand does not increase significantly over the numbers that have been provided. This, however, is a guarded conclusion as the Town continues to be at or very close to its permitted Water Management Act (WMA) number.

From 2010 thru 2018 the Town has been chronically above its permitted WMA amount of 1.39 million gallons per day (MGD). For the first time since 2010, we are currently slightly below our permitted withdrawal from January 1 thru August 31 of 2019. This is a result of relatively good raw water quality for the period in question which has allowed us to operate treatment plants somewhat efficiently, a relatively wet spring, reasonable compliance with water restrictions by residents, improved metering coupled with an increasing block water rate that penalizes high users and encourages water conservation, aggressive leak detection and repair of leaks, and frankly we believe a little bit of luck in discovering some leaks that had previously

gone undetected due to limitations of the leak detection process. History shows that slippage in any of these areas would have pushed our water withdrawals above our permitted and sustainable amounts. As such, while we believe we can likely supply water for the project, as the largest single water user in our system, the redeveloped mall and its proposed residential component have the ability to tip the scales, both positively and negatively, and subsequently impact our permit compliance in ways that an average homeowner would not. We need to make sure that any development is as efficient as possible and permitted in such a way as to continue the hard work that we have performed to bring the system back in compliance with the Water Management Act.

We continue to press the Planning Board to take seriously our requests outlined in Mr. Colangelo's letter to you on 7/29/2019 which was read into the record of the hearing on the proposed project. All of the items we requested in the water distribution and water availability sections of Mr. Colangelo's letter factor into our analysis as to whether we can supply the necessary resources for this project. Residents have made sacrifices through water restrictions, investment in infrastructure, the personal economic impacts of increased water bills, and changes to their habits in order to sustain a limited water supply for the future. We respect the investment businesses make in the community, but frankly as natural resources are not unlimited, businesses must also be held accountable to do their part to ensure the sustainability of resources for the future, regardless of the impact on their finances.

Thank you very much for your consideration of these issues.