

January 12, 2013

Eileen Commane  
Executive Director  
Dedham – Westwood Water District  
50 Elm Street  
Dedham, MA 02026

RE: University Station  
Comments on University Station Stormwater Management Report

Ms. Commane,

Weston & Sampson has reviewed the aforementioned Stormwater Management Report for the University Station in Westwood, MA submitted to the Town of Westwood on November 30, 2012. The purpose of this review is to assess any potential changes to the yield (recharge) or water quality of the White Lodge Wellfield (Well #1, #2, #3A, #4A, #5) as a result of the proposed development. The following provides a list of questions and comments with respect to these major issues facing the Dedham-Westwood Water District

#### Recharge:

1. In order to accurately assess changes in recharge to the well field, it is necessary to look at changes in the existing conditions (2013) to the proposed conditions. The current comparison provided by the Applicant is using the former developed conditions which were the conditions approximately five years ago.
2. The drainage site plans provided do not allow for an assessment of changes in recharge to the aquifer. Please provide a map and associated table that details which areas (road and roof) are diverted to which sub-surface infiltration gallery and an analysis of the changes from existing (2013) conditions. A discussion of the overall site water balance should complement this map and table.
3. Please provide a discussion of which Low Impact Design (LID) alternatives were evaluated for this development and found to be infeasible.
4. Although, the source of the data is not referenced, the precipitation data used in the modeling effort appears to be from Technical Paper No. 40, Rainfall Frequency Atlas of the United States published in 1961. This paper has been the standard for many years; however updates to this dataset have been published by the Northeast Regional Climate Center (NRCC) and are available at the following website <http://precip.eas.cornell.edu/> for the area of interest. Weston & Sampson recommends the use of the NRCC dataset to be inclusive of the last 40 years of precipitation data as well as the effects of climate change in our precipitation record post 1970.
5. Provide all supporting input information and calculations for the SWMM model including ground covers, soil groups, hydraulic conductivity calculations, and time of concentrations.
6. Provide soil test and seasonal high groundwater elevation data for proposed infiltration system.

#### Water Quality:

1. Considering that the location of the stormwater infiltration is entirely within the Zone II of the well field, the Applicant should assess the impact on nitrogen loading and concentration in the aquifer.

2. The Applicant should address the use of de-icing chemicals on the development as well as a discussion of the stockpiling and disposal of snow or ice removed from streets located outside the Zone II that contain sodium chloride, chemically treated abrasives or other chemicals used for snow and ice removal.
3. The Applicant has agreed to installing and sampling monitoring (sentinel) wells in proximity to the pumping wells. Please provide estimates of time of travel such that the placement of the monitoring wells is of sufficient distance from the pumping well that the sampling time is less than the time of travel.
4. The Applicant should provide a table detailing the proposed sampling schedule and analytes to be tested for in the proposed sentinel wells.
5. In the last meeting, the Applicant indicated some bedrock would need to be blasted to install the stormwater piping. The DWWD is concerned about the use of explosives in the Zone II. Explosives containing perchlorate, a toxic chemical which is highly soluble and can travel significant distances in groundwater. The DWWD would recommend other means of removing bedrock and requests that that alternative be addressed.
6. Will there be long term financial support for BMP's relative to stormwater? Will there be an escrow account, a fee structure from renters, a designated entity or person(s) responsible? The DWWD requests that notifications of any changes in ownership should be made to the DWWD within 30-60 days of the change.

Until the Applicant can address these comments, specifically with respect to a more detailed water balance calculation, no further comments are warranted.

If you have any questions, please feel free to contact the undersigned or Bruce Adms at (978) 532-1900.

Very truly yours,

WESTON & SAMPSON ENGINEERS, INC.

Kevin MacKinnon, PG, PH-GW  
Technical Leader, Hydrogeology