

March 5, 2013

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

RE: University Station
Response to Stormwater Management Peer Review Comments (2/22/13)
Weston & Sampson Response

Ms. Commane,

Weston & Sampson has reviewed the aforementioned Comment Responses for the University Station development in Westwood, MA submitted by Tetra Tech on February 22, 2013. As mentioned in previous correspondence, 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.

Weston & Sampson is satisfied with the responses to Recharge Comments #1, #3, and #4 as well as Water Quality Comments #2 and #6. We look forward to the opportunity to review the revised stormwater management report referenced in the responses to Recharge Comments #5 and #6. Additional comments or discussion of Recharge Comments #2 as well as Water Quality Comments #1, #3, #4, and #5, are provided below.

Recharge:

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.

Weston & Sampson has reviewed the project proponent's response and associated documents including:

- *Infiltration Basin Watersheds Figure,*
- *Annual Stormwater Budget Spreadsheet*

Weston & Sampson appreciates the effort for the requested delineation of the watersheds and areas provided on the Infiltration Basin Watersheds Figure. The follow-up discussion however was fairly limited. Although an image of the spreadsheet that was used to calculate the water budget was provided, I was anticipating a narrative as a stand-alone document similar in nature to the Westwood Station discussion provided in the Environmental Impact Report. This is requested for not only the project as a whole but for each of the delineated watersheds shown on the figure provided. Additionally, it is unclear in the materials provided what the changes are from the 'existing condition' agreed upon in our last meeting. Please provide additional narrative and tables to detail the changes that have occurred to the water budget/recharge at the site since the pre-demolition conditions around 2006. This would include an estimation of Aquifer Recharge/water budget that was (i) occurring around 2006, (ii) what is occurring today, and (iii) what is anticipated to occur as a result of the project. It is expected that this information will help identify the relative benefits/impacts of the project relative to the water resources at the site.

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.

Please provide an estimation of the nitrogen loading as a result of the development. The project proponent has estimated that the nitrogen load will be reduced by approximately 50-60%, however that does not estimate the actual load that may infiltrate into the aquifer and be subsequently pumped into the public drinking water system by the DWWD water supply wells.

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.

Weston & Sampson has located the Zone II delineation study report for the White Lodge Wellfield completed by Anderson-Nichols in 1991. Relevant portions of this report will be scanned and sent to Vern Kokosa of Sanborn-Head such that time of travel calculations can be completed. Weston & Sampson would like to take this opportunity to indicate that there are two public water supply wells within the White Lodge Wellfield that are directly downgradient of groundwater infiltration basins and would expect that sentinel wells would be located downgradient of the infiltration galleries and upgradient of both water supply wells.

4. The Applicant should provide a table detailing the proposed sampling schedule and analytes to be tested for in the proposed sentinel wells.

The project proponent has indicated that a sampling plan will be developed once the time of travel calculations are complete. Weston & Sampson looks forward to reviewing this document.

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.

The project proponent has indicated that an updated blasting specification will be developed that prohibits the use of explosives that contain perchlorate. Weston & Sampson looks forward to reviewing this document.

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

Very truly yours,

WESTON & SAMPSON ENGINEERS, INC.

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

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