

The following is submitted to the Carlisle ZBA on 11/17/14 by
Steve Davis, 206 Prospect St. tel. 369 1738. 2 pages

Steve Davis

Brem-116-11.17.2014

16 November 2014

Hi Steve:

NOV 17 2014

Thank you for your 15 November 2014 e-mail and attached documents. I have reviewed each of the documents and your e-mail and offer the following suggestions. My comments are in response to your requests for clarification about the professional geohydrological recommendations made by GeoHydroCycle, Inc. (ghc) and the Horsley Witten Group, both reliable sources of scientific and technical information related to potential problems associated with the planned siting of 19 single-family homes on 10 acres of land in Carlisle and the potential negative impact on groundwater supplies and wastewater disposal requirements of such intensive use of a small area of land by the Lifetime Green Homes Project.

The following comments are made to you personally which you can of course share with your neighbors and others. I am a geologist with general knowledge of glacial geology, obtaining groundwater from jointed bedrock, and dispersal of wastewater into aquifers. I do not have specific knowledge of the topography or geology of the site in Carlisle planned for development other than information from you, Horsley Witten, and ghc. For reference to the following comments, please refer to my previous e-mails to you dated 19 and 23 October 2014. The 19 October 2014 letter from GHC which, among other issues addressed, reviews the Horsley Witten Group report and recommendations on the geohydrologic setting of the 10-acre site; the ghc letter is spot on. I supported a 48-hour pump test and, most important, a dye analysis to provide empirical data of flow direction(s) and rate of flow of water through the thin glacier overburden, along the interface between unconsolidated glacial

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sediments and the bedrock, and in vertically fractured (jointed) bedrock.

In ghc's 14 November letter, for reasons that are unclear to me, not all of the excellent recommendations made in the ghc 19 October 2014 letter are included. I would strongly recommend that the 19 October 2014 ghc letter be used for guidance to the ZBA instead of the 14 November 2014 letter. A dye test is absolutely needed because of the geology and geohydrologic setting of the site; also needed is a 48-hour pumping test.

In conclusion, you, your neighbors, and the Horsley Witten Group need to determine why the recommendations in ghc's 19 October 2014 letter became so "watered down" in the ghc 14 November 2014 letter? What happened in the month between the 19 October and 14 November 2014 ghc letters to cause such a difference? It's almost as if two different individuals drafted the two letters! The ghc 19 October 2014 letter, with some modifications noted by Horsley Witten and me, is the document that would best serve you, your neighbors, and Carlisle (e.g., ZBA) in properly evaluating the suitability of the 10-acre site for development.

Regards,

Richie

Richard S. Williams, Jr., Ph.D.
Geologist