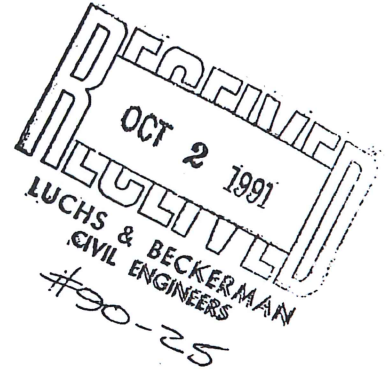




Ground Water, Inc.

OCT 07 91
GLASTONBURY

September 30, 1991



Mr. Anthony Cannariato
1311 Grand Avenue
San Marcos, California 92069

Re: Building Lot on Woodland Street
Glastonbury, Connecticut

Dear Tony:

I have completed my hydraulic and hydrologic analysis of your lot on Woodland Street in Glastonbury, Connecticut. This analysis was needed to determine the feasibility of installing a curtain drain and surface water swale to lower the water table in the area of a proposed septic system.

I have concluded that with proper design and installation, a curtain drain and swale can probably effectively lower the water table in the area of the proposed septic system. In order to prove this to the satisfaction of the Town of Glastonbury, so as to obtain their official approval of the lot for on-site sewage disposal, the curtain drain/swale should be installed as soon as possible and water levels should be monitored at least weekly through the spring high water table season.

My conclusions were reached based upon the following:

1. my visual observation of the site made on July 10, 1991, with Jim Dutton of Luchs and Beckerman;
2. a review of the site plans prepared by Luchs and Beckerman and soils data provided by Northeast Soils, Inc.;
3. a review of water budget data for the area by the U.S. Geological Survey;
4. calculations on the hydraulic effectiveness of a curtain drain up-slope of the proposed septic system area and water budget calculation of runoff into the system area.

In summary, my evaluation and calculations indicated that a 4 foot deep curtain drain could lower the water table within 25 to 30 feet or so of it.

A water budget analysis of the site, however, showed that a combined curtain drain and surface water swale could reduce water inflow to the proposed septic system area by almost 80%. The water budget analyses predicted water tables at or just below surface grade during the months March and April, under current

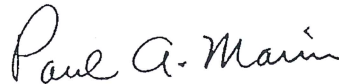
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conditions. With a curtain drain and surface water swale positioned as shown on the attached figure, the March/April water table was estimated at 36" below grade.

In conclusion, I recommend the installation of a curtain drain (down to the top of ledge) in the location shown on the attached figure and that this curtain drain be designed to also function as a surface water interceptor or swale. This drain/swale system should be installed as soon as possible and water table levels up and down-gradient of it should be monitored at least monthly, through the spring high water table period.

Tony, best of luck and thanks for the opportunity to be of assistance to you.

Yours truly,



Paul A. Marin, CGWP
Chief Hydrogeologist

PAM:gmw/91164L01

cc: Jim Dutton, Luchs and Beckerman