



SANTO ASSOCIATES

LAND SURVEYING AND ENGINEERING, P.C.



PRINCIPALS

ANDREW C. SCHAUFFERT, L.S.*

ELLIOTT FISHMAN, P.E.*

ALTON P. MACDONALD, JR., L.S.

* ALSO LICENSED IN VERMONT

February 13, 2024

Town of Charlton Planning Board
Town Hall
758 Charlton Road
Charlton, NY 12019

Attention: Rick Potts
Planning Board Chairman

Subject: Subdivision of Lands of Garry R. Heflin
2158 Cook Road
S.B.L. # 225.00-1-87

Mr. Potts;

I understand that the anticipated on-site water supply, or lack thereof, to serve the proposed four-lot subdivision has been raised during your Planning Board's approval process. Please accept this letter, which offers my assessment of that issue. As you know, these proposed lots lie wholly within the Agriculture (A) Zoning District of the Town of Charlton which has a two-acre minimum lot size. Thus, when the Town of Charlton local zoning law was last revised on September 14, 2015 the Town Board maintained that up to 20 individual homes could be built on the 41.825 acre Heflin parcel. As you are aware, Mr. Heflin's proposed 4-lot subdivision proposal will actually only create three new building lots with Mr. Heflin's existing home being the fourth.

Mr. Heflin has reported that the well currently serving his home on Subdivision Lot 1 yields 25 gallons per minute, which is certainly a substantial flow. In addition, as you know, wells have recently been drilled on two neighboring parcels (Tax Map SBL #'s 225.00-1-88.1 & 88.3) approximately 600 feet east of Cook Road. The owners of those parcels, Ms. Emerle and Mr. Heck, have reported their yields to be 6 gallons per minute (gpm) at a depth of 320 feet and 10 gpm at a depth of 190 feet, respectively. To supplement the site specific information, a review of available soil data was conducted to assess the likelihood of there being an ample water supply to service the three additional single-family homes that are anticipated. A custom Soil Resource Report was created through the United States Department of Agriculture (USDA) National Resources Conservation Service (NRCS) and is attached hereto (Attachment A). In this report the various soil groups which comprise the subject subdivision are mapped and detailed descriptions of each group are provided.

Next, the USDA NRCS Soil Resource Report for all of Saratoga County was consulted. The identified soil groups which comprise the subject subdivision were reviewed and the applicable soil descriptions are reproduced in Attachment B to this letter. Unlike the descriptions in the aforementioned report, this second report includes information specifically on land use and soil suitability.

For the Broadalbin Silt Loam Soil Group (Soil Classification BtB) we can see that areas with this soil type are listed as suitable for residential building sites. These soils are moderately well drained and overlay shale bedrock which typically feeds aquifers below. For the Broadalbin-Manlius-Nassau Soil Complex (Soil Classification BvB and BvC) we can see that areas with this soil type are suitable as residential building sites as well. These soils are well drained and also overlay shale bedrock.

CATSKILL OFFICE

340 MAIN STREET ♦ P.O. BOX 405
CATSKILL, NEW YORK 12414
PHONE: (518) 943-5140 ♦ FAX: (518) 943-5689

CLIFTON PARK OFFICE

1 BARNEY ROAD ♦ SUITE 109
CLIFTON PARK, NEW YORK 12065
PHONE: (518) 383-8001 ♦ FAX: (518) 383-6026

The Mosherville Silt Loam Soil Group (Soil Classification MvB) with a depth to the water table from 0.5 feet to 1.5 feet is not listed as being suitable for residential building. This is mainly because the lower lying areas where this soil exists appear to be where the mapped wetlands are and no proposed home sites are located within such wetlands. Also noted is the underlying shale bedrock beneath the lands identified as within the MvB Soil Group.

The Mosherville-Hornell Soil Complex (Soil Classification MxB) has a depth to the water table similar to the Mosherville Silt Loam Group. Again, the low lying areas with seasonally high groundwater appear to correspond to the mapped wetlands where no homes are proposed. Also noted again is the underlying shale bedrock. The Sun Silt Loam Soil Group (Soil Classification Sn) appears to generally correspond to the serpentine shape of the wetlands running through the subject project area. Such areas are not proposed as building sites. These areas generally have a substratum of fine sandy loam and cobbly loam over shale bedrock.

The three new residences expected to be built on the three vacant subdivision lots with four bedrooms assumed on each would be anticipated to require 1,320 gallons per day (gpd) using 110 gpd per bedroom per current New York State Department of Health guidelines. Such a water demand could be satisfied by a relatively low combined well yield (i.e., combining the output of the three new anticipated residential wells) of only 0.92 gallons per minute (gpm). Therefore, in conclusion and based on a review of both the available site specific data and the soil analysis noted above, I do not foresee any problems with adequate water supply to the three proposed house sites associated with the subject subdivision. Additionally, with such water demand over 41+ acres there is not likely to be any significant negative impact to existing neighboring wells.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Elliott Fishman', written over a horizontal line.

Elliott Fishman, P.E.
Director of Engineering
Santo Associates