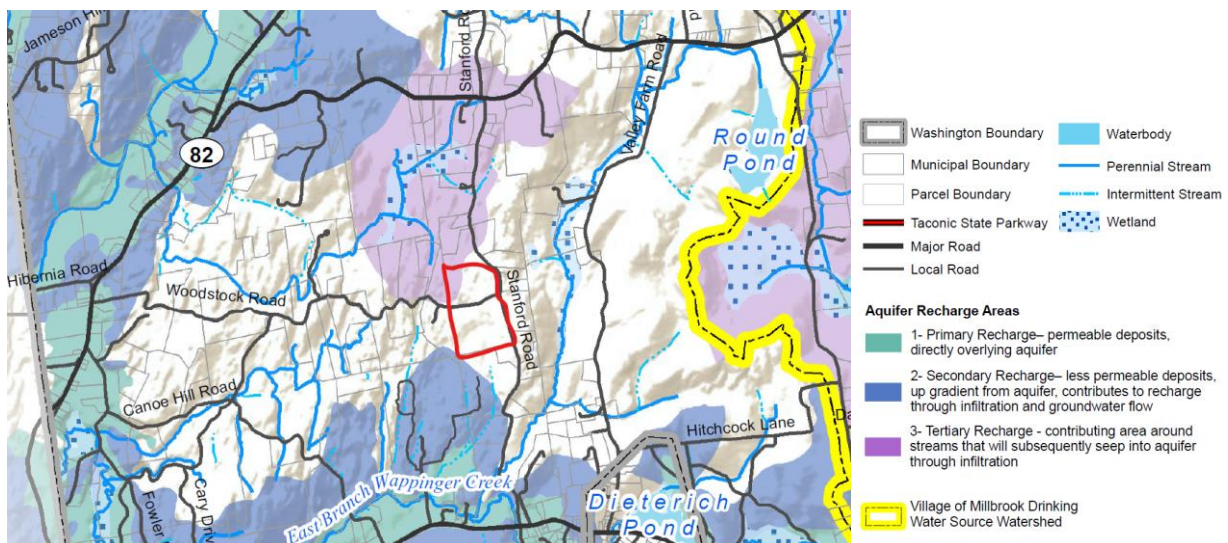


Memorandum

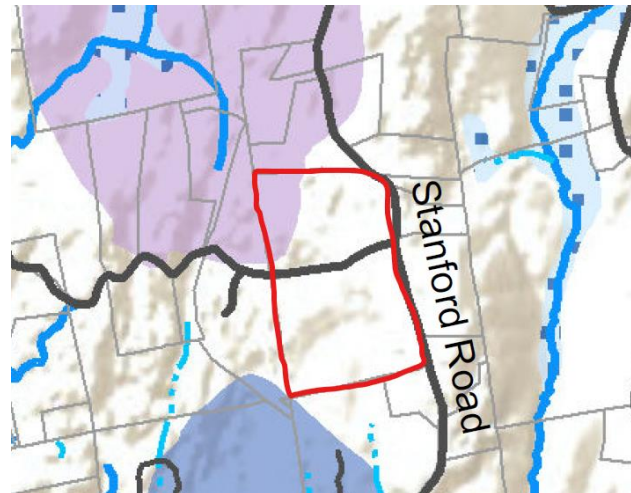
To: Town of Washington Planning Board
From: AKRF, Inc.
Date: January 13, 2025
Re: **Clear Subdivision (515 Woodstock Road) – NRI Map #8**
cc: Timothy Clear and Johna Lee Clear (Applicant / Property owner)
 Douglas E Larson – Larson Architecture Works PLLC (Applicant’s Architect)
 LRC Group (Applicant’s Planner / Engineer)
 Jennifer Van Tuyl – Cuddy + Feder LLP (Applicant’s Attorney)
 Joseph P. Eriole (Town Attorney)
 Jonathan Ialongo (Town Building Inspector)

In a letter from the Town of Washington Conservation Advisory Commission (CAC) to the Town Planning Board dated October 3, 2024, the CAC notes that a “significant portion of the Applicant’s property north of Woodstock Road is located within a tertiary aquifer recharge area, highlighting the need to avoid development in ways that would disrupt or contaminate drinking water.” A second letter to the Planning Board from the CAC, dated January 11, 2025, reiterating the mapping of the tertiary aquifer recharge area on a portion of the property, was sent in response to an inquiry made at the public hearing held on January 7, 2024. The map in question is Map #8 “Drinking Water Resources” from the Town’s 2023 Natural Resources Inventory (NRI), shown below.

Map 8 shows the northwestern extent of the Clear property in the tertiary recharge zone. The tertiary recharge map layer relates to proposed Parcel 1 (the northwest parcel) of the Applicant’s proposed subdivision.



NRI Map 8 - Drinking Water Resources (subject property in red)



NRI Map 8 - Drinking Water Resources (zoomed in – subject property in red)

The purpose of this memorandum is to provide the Planning Board with some additional background and assessment of this condition. Information contained within this memorandum was provided with assistance from a professional engineer and professional hydrogeologist employed at AKRF.

Under the classification of primary through tertiary aquifer recharge (in the Town's NRI and other available sources), primary is the most sensitive because the soil is so permeable that any infiltration will likely go directly to the underlying aquifer. The tertiary zone is the outermost recharge zone, and typically defined as a larger watershed area that due to topography and other factors drains into streams which eventually make their way into primary recharge areas. See common definitions below, which are found in various online sources.

Primary recharge areas exist where aquifer materials are exposed at the land surface and where surface water and runoff directly infiltrate the ground and recharge the aquifer.

Secondary recharge areas are zones adjacent to the aquifer where surface water and groundwater flow into primary recharge areas.

Tertiary recharge areas include the rest of the watershed and supply water to streams that flow into primary recharge areas and may or may not recharge the aquifer depending on water levels.

The presence of the tertiary recharge zone mapping on the site was acknowledged in the SEQRA Negative Declaration for the subdivision adopted by the Planning Board at the December 3, 2024 meeting. The following text is found on the bottom of page 3 of the Negative Declaration:

“While a portion of one of the new parcels lies on the outer edge of a tertiary aquifer recharge area, it is not within primary or secondary recharge areas or vulnerable aquifers identified in the Town's Natural Resource Inventory (NRI), Map 8 “Drinking Water Resources.” Groundwater withdrawal would remain within sustainable limits. The septic systems would be required to comply with Dutchess County Health Department permitting requirements prior to construction. Soil on the property is consistent with nearby areas and supports septic system densities exceeding the Town's requirements. Preliminary soil testing completed by the Applicant confirmed viable locations for septic systems on all three lots where future residential construction could occur, adhering to Dutchess County Department of Health guidelines and avoiding sensitive areas.”

AKRF assumes that the CAC's concern relates to a septic system for a single-family home on proposed Parcel 1, and the protection of groundwater. Based on how septic systems are permitted and designed, by the time the treated wastewater from this parcel reaches the primary recharge zone, if it ever does, it will have gone through many media over a considerable distance. The County Health Department permitting process for residential septic systems will take into account contaminant transport and protection of groundwater. The septic system must be designed by a professional engineer and there are also

construction configuration and setback requirements to confirm that recharge will be handled by the surrounding sediments and the natural biological breakdown will occur before contacting any sensitive receptor. The County will also require adequate separation between any proposed septic system and the water table.

As shown on Map 8, the secondary and primary recharge zones are a considerable distance away from the parcel (1 to 2 miles). Also, as was observed on the site walk, it was evident that the land within the Applicant's proposed building envelope for Parcel 1 slopes/drains in a south/southeasterly direction, not to the north/northwest. It should also be noted that there are homes and developed areas within that tertiary zone shown on the map throughout the Town. Residential septic systems also exist, and can be permitted/constructed within, a primary recharge area.

The Planning Board may request that the Applicant generate, for the record, an exhibit that overlays the tertiary aquifer recharge zone on to the proposed building envelope for Parcel 1, along with a response from the Applicant's engineer related to this issue.