

To the Town of Ledyard Inland Wetlands & Watercourses Commission
October 28, 2022

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Re: Application #IWWC22-18URA of Avery Brook Homes, LLC, 1641 Rte. 12, Gales Ferry, CT 06335 for URA activities associated with the siting of new single-family homes with associated grading and utilities on 9 of 36 lots in a proposed 8-30g Re-Subdivision located on 94,96,98 and 100 Stoddards Wharf Rd, Ledyard CT.

Groton Utilities has been made aware of this upcoming application to the IWWC and has previously reviewed the proposal with respect to plans and other materials submitted to the Planning and Zoning Commission. As there have been no noted changes to this proposal received by us to date, we continue to express our concerns with respect to the dense layout of homes, subsurface sewage disposal systems, wells and the private road passing through the subdivision without any design provision for drainage infrastructure or accommodation for stormwater renovation directly adjacent to a drinking water supply reservoir.

We are attaching a narrative and list of those concerns as presented to the Planning and Zoning Commission, Ledyard WPCA and ask that they be addressed in any upcoming proceedings. We have a duty to both local and regional consumers to protect the quality of our source waters; a clean and protected watershed is our first line of defense in this endeavor.

Please let us know if there are any questions or if any changes or updates to the proposal have been presented.

REVIEW COMMENTS FOR PROPOSED SUBDIVISION
AVERY BROOK HOMES LLC
STODDARDS WHARF ROAD
LEDYARD, CONNECTICUT

[Plans Dated July 7, 2022]

Groton Utilities has reviewed the latest plans for this proposed subdivision, taking into account that changes have been made since our preliminary comments. The number of lots has been reduced from 41 to 36, additional information has been provided on soil testing and a water study by an outside consultant has been added to the submittals.

(1) **Soils** – The data provided on the plans indicates a high degree of permeability for soils throughout the site, as evidenced by the test pit data and percolation rates for the site of each proposed lot. This points to a relatively rapid discharge and migration of effluent to the underlying water table and to areas immediately surrounding the subsurface sewage disposal system, resulting in significant nutrient loadings detrimental to a safe drinking water supply.

(2) **Water Supply** – A study has been presented by GEI Consultants examining the adequacy of water supply for the number of lots and the anticipated number of individuals expected to inhabit the area. It shows that there is an adequate supply of groundwater in the area for meeting the needs of the subdivision. It does, however, point out, that the amount of required water for supply cannot be met from onsite groundwater alone, but must rely on drawdown from properties adjacent to this site, including the Groton Utilities property which borders this subdivision on three sides. In addition, it is also important to note that the study addresses only adequacy of supply, but not the quality of existing groundwater, nor the potential impact of drawdown from multiple wells in close proximity to other lots and to the adjacent neighborhood. Nor does it address the potential issue of drawing water from a water table that has significant effluent dispersal from multiple subsurface sewage disposal systems in close proximity to each other.

(3) **Subsurface Sewage Disposal Systems** – The concentration of the proposed subsurface sewage disposal systems, although slightly less in number, still represents a dense layout with a hydraulic profile that includes effluent discharge from multiple systems combined along the same slope and outflow directions. All effluent is discharged toward Groton Utilities property from these systems, with wetlands and open water in close proximity to a drinking water supply reservoir. We ask that an in-depth study of the water table's hydraulics and the ability of the soils to treat or renovate the wastewaters prior to dispersal onto Groton Utilities property be provided. Though lots have been tested, designed and reviewed on an individual basis, it is critical to see this type of dense layout as a cumulative impact that must meet certain standards at the property line – particularly because that property line and

underlying groundwater and surrounding wetlands are directly linked to a drinking water supply that affects both adjacent towns and the Town of Ledyard.

(4) **Stormwater** – This issue has not been addressed with regard to the proposal. When viewed from a built out community, we see not only a significant density of housing, but a substantial increase of the area of impervious and landscaped cover leading to a high degree of stormwater surface runoff. This runoff from rainwater carries with it various substances from land within its watershed (i.e., the proposed subdivision) containing contaminants such as bacteria, parasites, viruses, and chemicals from lawn treatments and road and driveway surfaces, all harmful to human health.

A preliminary estimate indicates that the area of the road, driveways and houses represents 30% of the surface area of this proposed subdivision, not including landscaped areas. Combined with landscaped areas, we anticipate a significant amount of runoff directed not only toward downstream housing, but also immediately toward Groton Utilities property and the adjacent reservoir and wetland areas, without detention, renovation or treatment of any kind. As shown by currently available topographic information, stormwater runoff would be directed downslope through the development, over individual lots (between dense housing where structures are relatively close to each other) and over the interior road, directly toward adjacent wetlands. The runoff between houses would result in concentrated flow areas susceptible to erosive flows; resulting transport of sediment would then be directed to the adjacent property lines, wetlands and reservoir.

Rainfall, other than that resulting in direct runoff, will infiltrate into the ground and, based on percolation rates, make its way rapidly to the underlying water table which (as with surface runoff) is directed to the adjacent property and drinking water supply reservoir. Groundwater contributions to water supply are the least visible but important factors in the development and maintenance of a drinking water supply.

This again will be detrimental not only to the housing community, but also to our sources of drinking water supply. We urge that this issue be addressed and examined in detail through a definitive hydrogeologic and environmental impact study to ascertain flow directions, proper renovation of pollutants and future impact on water bodies, particularly with respect to nutrient loadings from both subsurface sewage disposal systems and the potential addition of fertilizers used for landscaping.

(5) **Land Clearing** – Due to the density of the proposed development, each lot will necessarily require near complete clearing of the entire subdivision site. Few, if any, natural areas would remain as a result of clearing and construction for the road on each lot, a house, driveway, well, septic tank, and leach field area for subsurface sewage disposal systems.

(6) **Heating and Cooling Systems** – While the type of fuel to be used for the purpose of heating and cooling has not been specified, should liquid fuels be used, we would be concerned with the type of storage to be used in order to avoid any potential spillage of such materials in close proximity to the adjacent and underlying water supply.

(7) **Future Maintenance** – Contingent upon such a dense development is future maintenance, particularly for the interior road and for the numerous sewage disposal systems, all of which are proprietary systems (Eljen Mantis 536-8 or Geomatrix GST 6236) that must be installed in the presence of authorized manufacturers' representatives. As currently proposed, there is no guarantee that such maintenance will be implemented and carried out.

(8) **Fire protection**- The proposed subdivision is all private, including roads that will pose an issue with getting emergency vehicles through it during snow storms. With not having public water, there may not be adequate fire protection for these 36 homes. With the proposed subdivision being in such close proximity to the open water area of the reservoir within this watershed, any foam used by the fire department with high levels of PFAs would go directly into the reservoir.

(9) **Surface & Groundwater Classifications** – We remind the Commission again, that current State DEEP mapping designates the groundwater beneath this proposed subdivision as GAAs. Class GAAs is a subclass of GAA for ground water which is tributary to a public water supply reservoir.

The adjacent surface water designation for the reservoir is AA. Class AA designated uses are existing or proposed drinking water supplies, habitat for fish and other aquatic life and wildlife, recreation, and water supply for industry and agriculture.

Considering the issues noted above, we feel that the applicant has not adequately addressed the safety, health and welfare of this proposal to the community and the drinking water supply of both the Town of Ledyard and the surrounding communities.