

AMORY ENGINEERS, P.C.

WATER WORKS • WATER RESOURCES • CIVIL WORKS

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April 3, 2009

Mr. Raul Tejada
CT Department of Public Health
410 Capitol Avenue, MS #51 WAT
Hartford, CT 06134

Subject: Extension of Service to Aljen Heights Area of Town of Ledyard

Dear Mr. Tejada:

As a follow up on our telephone conversations, we offer the following additional information for consideration with regard to extension of water service to the Aljen Heights area of Ledyard.

The area currently includes on-site private wells for the entire proposed service area except the 50-lot Avery Hill Trailer Park, which is served by a community well. Lots in the Aljen Heights area are generally quarter-acre (10,000 – 15,000 square feet). Except as noted, each lot includes on-site water (private well) and on-site septic disposal.

The Ledyard Water Pollution Control Authority has performed a file review of data, available from the Ledge Light Health District, regarding well construction and water quality testing. We note the following items as they relate to private water supplies in the area.

Physical Characteristics of On-site Wells

- There are approximately 410 properties that will be served by the extension, including the 50-lot Avery Hill Trailer Park.
- The wells have been installed from the early 1970's to date.
- Many (about 50 percent of the total 140 wells that were reviewed) are bedrock wells, up to 700 feet deep. The wells have a wide range of yield, although most are on the order of 3 to 5 gpm. However, there were a number of wells with yields as low as 0.5 gpm. Based on available driller's logs, the bedrock wells are cased from ground surface to bedrock and then drilled into bedrock, of varying competency, receiving recharge through cracks and fissures.
- On-site septic systems are generally at least 75 feet from wells.
- A number of the bedrock wells were replacement wells for shallow dug wells which reportedly went dry during the drought of the early 1980s. As noted above, the lots within the project area are small with limited potential for future replacement wells.
- A number of dug wells were noted to be inundated by floodwaters resulting in individual bacteria contamination events.

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Water Quality Characteristics of On-site Wells

Review of limited available water quality data indicates water quality concerns. High nitrate levels (5-15 mg/l) were noted in twenty wells. Occasional total coliform (including fecal) and other bacteria have been noted, although repeat sampling after well chlorination seems to resolve the problem, at least for a while. Marginal water quality, including excessive iron, manganese, sodium, chloride and hardness along with low pH, has resulted in use of in-home treatment systems.

As noted in our March 6 correspondence, the current well serving Avery Hill Trailer Park has been noted had number of sanitary survey violations (see DPH letter dated October 22, 2008). Additionally, during the summer/fall of 2005, the community well went dry and WPCA trucked water in to supply the park. The proposed project will this well to be abandoned. Replacement supply to Aljen Heights will be from the Gales Ferry service area, currently supplied by Groton Utilities (see Ledyard WPCA response to Sanitary Survey Report dated November 17, 2008).

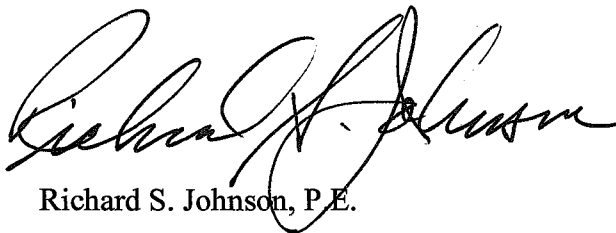
The Ledyard Department of Public Works has determined that the majority of roads within the project area are in "fair to poor" condition. As an added benefit of the proposed project, the Town is considering roadway and drainage repair work within the project area (if funding can be obtained).

We trust this adequately clarifies the benefits of this proposed project. Please call if you have any question.

Very truly yours,

AMORY ENGINEERS, P.C.

By:



Richard S. Johnson, P.E.

RSJ:vs

enc.

cc: Ledyard Water Pollution Control Authority
Stephen Steadman
Mayor Frederick Allen