



# STATE OF CONNECTICUT

## DEPARTMENT OF PUBLIC HEALTH

May 26, 2010

Ms. Cynthia L. Cross  
Ledyard WPCA  
P.O. Box 310  
741 Colonel Ledyard Highway  
Ledyard, CT 06339-1511

ATTN:  
RICH  
JOHNSON

**PUBLIC WATER SYSTEM:** Avery Hill Water Association  
**CLASSIFICATION TYPE:** Community  
**TOWN:** Ledyard, CT  
**PWSID:** CT0720061 ,

### SUBJECT: SANITARY SURVEY REPORT

Dear Ms. Cross:

A sanitary survey was performed at Avery Hill Water Association on April 9, 2010 with John Gardner representing Ledyard WPCA and Mandy Smith representing CT DPH. The findings of this survey with associated recommended actions are as follows:

**System Description:** The Avery Hill Water Association water system is comprised of a single well, atmospheric and pressure storage and disinfection and pH adjustment treatment. A single 6-inch driven well is located in the above-grade pump house and produces water at a rate of approximately 40 gallons per minute (gpm). The raw water is injected with 12.5% sodium hypochlorite solution for disinfection purposes and a 50% sodium hydroxide solution for pH adjustment purposes and is sent to the 3,237-gallon steel atmospheric storage tank to achieve contact time. A chlorine residual of approximately 0.7 -- 0.8 mg/L is maintained in the system. Water is transferred to a 1,000-gallon steel hydropneumatic storage tank via twin booster pumps and sent out to the distribution system on demand.

#### **Groundwater Rule:**

Effective December 1, 2009, public water systems (PWS's) are required to comply with the provisions of the Groundwater Rule (GWR). The purpose of the GWR is to provide for increased protection against microbial pathogens (contamination) in public water systems that use groundwater sources.

The GWR employs a targeted risk-based strategy to address risks through an approach that includes **significant deficiencies** identified during periodic sanitary surveys. A **significant deficiency** includes, but is not limited to, a defect in design, operation, or maintenance, or a failure or malfunction of the source, treatment, storage, or distribution system that the Connecticut Department of Public Health determines to be causing, or has the potential for causing, the introduction of contamination into the drinking water delivered to consumers. The GWR requires corrective action, within a stipulated timetable, for any system with a **significant deficiency**.

If there are any **significant deficiencies** in this sanitary survey report the date of this report will act as the beginning of a 30 day consultation period that provides an opportunity for a PWS to discuss the **significant**

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deficiencies and any proposed corrective action with the Connecticut Department of Public Health. The 30 day consultation period will end with the required formal written response referenced later in this report.

This sanitary survey report shall serve as the official PWS notification of any significant deficiencies under the GWR. Any significant deficiencies must be corrected within the timetable provided below:

**Significant Deficiencies:**

There were no significant deficiencies identified at the time of the time of the sanitary survey.

**Regulatory Violations:**

Applicable Regulatory Section	Description of Violation	Recommended Corrective Action
RCSA 19-13-B51d(b)(3)	Avery Hill Water Association utilizes a 6" diameter, 17 foot deep naturally developed well (driven well) as the source of water supply for 47 mobile homes. At the time of the inspection, the well had a withdrawal rate of 41 gpm. A pond is adjacent to the pump house, which is less than 50 feet from the well and therefore, not meeting the minimum separating distance of at least 50 feet from any surface water body.	Avery Hill Water Association must submit to this office a plan of action to resolve this violation. Also, please see the following violation and recommended corrective action below.
RCSA Section 19-13-B102(j)(2)(D)	The criteria for classifying groundwater sources of supply as potentially under the direct influence of surface water for wells constructed above a confining layer is for wells within two hundred (200) feet of surface water or the annual high water mark. Well #1 has been identified in the past two sanitary survey reports dated 12/21/05 and 7/23/07 as being within two hundred (200) feet of surface water and a driven well constructed above a confining layer and the Avery Hill Water Association was required to commence a study to determine whether Well #1 is under the direct influence of surface each time that to date has not been received.	As stated in the response to the previous sanitary survey received from Ledyard WPCA on 11/18/08, an interconnection with the Gales Ferry System is planned at which time the Avery Hill Water Association well and storage tanks will be taken out of service. As an interim measure and pursuant to the RCSA Section 19-13-B102(e)(7)(H), daily measurements for turbidity are required at the entry point to the distribution system have been conducted at Avery Hill since August 2007, with no reading ever above 0.5 NTU. Additionally, the Avery Hill Water Association has maintained its current configuration of pH adjustment and disinfection treatment pursuant the RCSA Sections 19-13-B102(e)(7)(M) and 19-13-B102(e)(7)(N). Please respond with a written update regarding the status of the proposed interconnection timeline or commence a Groundwater Under the Influence of Surface Water study.

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**Regulatory Requirements:**

Applicable Regulatory Section	Description of Requirement	Recommended Action
RCSA 19-13-B102f(5)(C)	All finished water storage tanks, basins and clearwells shall be inspected at a minimum of once every ten years for sanitary conditions and structural integrity.	It is unknown the last time the tank has been inspected. Please be reminded that an inspection of the interior and exterior of the tank must be conducted once every ten years and the report be made available upon request.

**Conclusions & Recommendations:**

A formal response with a plan of action to address all of the items outlined in this report must be submitted to this office by **June 28, 2010**.

As a reminder, all necessary and required forms, reports, sampling schedules, regulations, fact sheets, etc. are available on the DPH Drinking Water Section website at <http://www.ct.gov/dph/publicdrinkingwater>.

If you have any questions regarding this matter please contact me at (860) 509-7333.

Sincerely,



Mandy B. Smith  
 Sanitary Engineer 2  
 Drinking Water Section



cc: Mr. Baker Salisbury, Director of Health, Ledge Light Health District  
 Mr. John R. Gardner, Certified Operator