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May 27, 2010

Mr. Cameron Walden
Supervising Sanitary Engineer
CT Department of Public Health
410 Capitol Avenue, MS #51 WAT
Hartford, CT 06134

RE: SRF Application Aljen Heights Watermain Extension
Town of Ledyard

Dear Mr. Walden:

As a follow up on your conversation with Mr. Gregory Tiefert, Ledyard WPCA Director regarding the Town of Ledyard's SRF application, the Town of Ledyard respectfully requests reconsideration of additional ranking point assignment to the Town of Ledyard's Aljen Heights water main project. In particular we note the following material facts/attributes of this water main project for your consideration:

- 1.) Item Z. Interconnection / Public Water System Absorbed – 15 points

The proposed project will absorb the Avery Trailer Park system (PWS ID CT0720061) into the Gales Ferry water system (PWS IDCT0727051).

The current supply source for Avery Hill Trailer Park (47 trailer units) has been noted to have a number of sanitary survey violations, i.e. letter from DPH (October 22, 2008 – RCSA 19-13-1351d(b)(3) and (j)(a)). Additionally, during the summer/fall of 2005, the community well went dry and WPCA trucked water in to supply the trailer park.

Attachment A is the System Consolidation Project Worksheet; which details the problems and solutions offered by consolidating the Avery Hill Trailer Park (AHTP) water system with the Gales Ferry water system. The Avery Hill Trailer Park system was privately owned by the AHTP Homeowner's Association. In 2003 the WPCA assumed ownership of the Avery Trailer Park water system. Since that time they have entirely replaced all water distribution piping.

- 2.) Item S. Source Deficit or Insufficient Margin of Safety – 40 points
and / or
- 3.) Item T System Capacity Benefits – 20 points

The proposed project will replace the current supply source. The existing well supply will be abandoned. The Trailer Park as well as the Aljen Heights area will be supplied from the Gales Ferry service area currently served by Groton Utilities (see Ledyard WPCA response to Sanitary Survey Report dated November 17, 2008).

Attachment B includes file notes, time sheets and invoices documenting the WPCA response when the community well went dry in summer/fall 2005.

The current average daily water use for the Gales Ferry water system is approximately 124,000 gpd; historically over the last three years water purchased from Groton Utilities for the Gales Ferry area has been:

Year	Total Annual Consumption (mil. gal.)	Average Daily Demand (gpd)
2007	48,912,019	134,005
2008	44,578,406	121,799
2009	42,410,478	116,193
Average	45,300,301	123,997

The current average daily water use for the Avery Hill Trailer Park water system is approximately 8,125 gpd (50 trailers x 2 people/trailer x 65 gpcd x 1.25 safety factor); projected use for the 280 lots to be served by Phases 1 and 2 is approximately 91,000 gpd (280 lots x 4 people/lot x 65 gpcd x 1.25 safety factor). The resultant total daily demand for the current Gales Ferry system and those trailers/lots to be served by the system is 223,000 gpd.

The existing Gales Ferry water system usage is 124,000 gpd. The projected water use for Phases 1 and 2 (assuming 100 % connection of all lots within proposed service area) and the Avery Trailer Park is 99,125 gpd. The combined total (223,000 gpd) is less than the 250,000 gpd Diversion Permit that Ledyard has for the Gales Ferry system. There is currently sufficient supply capacity to supply the Aljen Heights project under the existing permit.

The WPCA will be renewing the Gales Ferry Diversion Permit in the future, at that time evaluation of actual water use and percent connections versus permitted volume, including safety factor, will occur.

- 4.) Item CC. Source / Distribution Violations – 10 points and / or
- 5.) Item EE. Source Protection Improvements – 10 points

The current supply source for Avery Hill Trailer Park has been noted to have a number of sanitary survey violations, i.e. letter from DPH (October 22, 2008 – RCSA 19-13-1351d(b)(3) and (j)(a)). ***By connecting to the GF system and abandoning this supply well the sanitary survey violations are corrected.***

Attachment C is a Well Supply Map that illustrates Avery Hill Trailer Park Well's proximity to potential health hazards. It should be noted that in addition to the two septic systems in the vicinity, there is also the potential that three other residences have septic system components within the well supply influence zone. As-Built records on those systems are not available. ***Representatives of Ledge Light Health District (LLHD) are***

currently performing site inspections of the immediate area surrounding the well. (See correspondence from LLHD- Attachment D). Furthermore, state code (Section 19-13-B51d) requires that no well shall be located within 50 feet of the high water mark of any surface water body. ***The high water mark during flood stage is within 24 feet of the well. (See Attachment C)***

- 6.) Item R. Main Extension to Existing Private Wells with Public Health Code Violations – 20 points

The area currently includes on-site private wells for the entire proposed service area except the 47-lot Avery Hill Trailer Park, which is served by a community well. Lot size in the Aljen Heights area is generally 10,000 – 15,000 square feet (quarter-acre lots). Each lot includes on-site water (private well) and on-site septic disposal.

Based on file review attached as Attachment E are the water quality analyses for the private wells with nitrate levels at or above the 5.0 mg/l action level. These lots are shown on Attachment F. The WPCA and Ledge Light Health District will be meeting shortly to schedule additional testing to evaluate Nitrate levels further in areas adjacent to previously failed/replaced septic systems and to determine a course of action to require those homes with historic Nitrate levels above the Action Level to connect to the water main extension.

Based on file review of data available from the Ledge Light Health District, on-site septic systems have had to be replaced on approximately 22.5% (63 of the 280 potential services) of the properties within Phase 1 and 2.

- 7.) Item BB. Proactive Infrastructure – 5 points each (maximum of 25 points)
 - Main Replacement / Improvement
 - Main Extension for Interconnection

The project scope includes approximately 24,100 l.f. of 8- and 12-in. watermain in Avery Hill Road adjacent side streets within the Aljen Heights area of Ledyard. (See Attachment G).

Phase 1: 6,600 l.f. of 12-in. and 2,600 l.f. of 8-in. watermain in Avery Hill Road – Avery Hill Trailer Park to Ledyard/Preston town line including Tucker’s Run and Windward Lane, together with pressure reducing station and relocation of Gallup Hill Booster Pumping Station, including pump modifications and hydropneumatic tank.

Phase 2: 6,150 l.f. of 12-in. and 8,750 l.f. of 8-in. watermain in Aljen Heights including Michael Lane, Royal Oaks Drive, Arrowhead Drive, Aljen Avenue, Sunset Avenue, Hillcrest Avenue, Willow Lane, Louis Avenue, Barn Road, Laurel Avenue, Green Point Street, Johnny Court, Jean B Court and White Birch Court.

Phase 1 of the project includes a watermain stub at the Ledyard / Preston Town line. It would provide potential for future regionalization to facilitate 1) connecting the

Mr. Walden
May 27, 2010
Page 4

Ledyard system to the Preston/ Norwich system at Route 12, 2) supply water to the historic area of Preston, and 3) supply whatever development that may be sited at the former Norwich State Hospital. See Attachments H - Main Extension for Interconnection (plan) and I- Support Letter from Town of Preston.

In an effort to indicate all local approvals are in place - the original application included local inland wetlands approval for Phase J (dated January 29, 2010). Phase 2 was approved at the same meeting as Phase 1; *the Ledyard's Inland Wetlands and Waterway Commission have issued a clarifying approval letter (Attachment J)*

The Town of Ledyard respectfully requests reconsideration of the point assignment to this project. In particular we note the following for consideration:

<u>Item</u>	<u>Potential Points</u>
Interconnection / Public Water System Absorbed	15
Source Deficit or Insufficient Margin of Safety	40
System Capacity Benefits	20
Source / Distribution Violations	10
Source Protection Improvements	10
Main Extension to Existing Private Wells with Public Health Code Violations	20
Proactive Infrastructure: Main Replacement / Improvement	5
Extension for Interconnection	<u>5</u>
TOTAL	125

We trust this adequately supports reconsideration of the point assignment and 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:rsj
enc.
cc: Gregory Teifert
Ledyard Water Pollution Control Authority

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