

February 17, 2021

Ryan Tetreault  
Supervising Environmental Analyst  
Private Well Program  
Environmental Health Section  
Connecticut Department of Public Health  
(Via email)

Ref: Old Lyme Wastewater Management Project –  
Private well protection measures

Dear Mr. Tetreault,

We are writing in regards to the above-referenced matter and appreciate your continued interest and availability to discuss this project. While this project is intended to address an environmental pollution problem associated with substandard septic systems in a densely developed area, it is also our responsibility to ensure that adequate and sustainable long term measures are properly built into this project to protect remaining private wells. While it is not within our regulatory purview to mandate private wells abandonments, we worked with the project consultant, Fuss & O'Neill, Inc., ("F&O"), to develop protective measures for remaining wells in the project area.

Following our video call from December 22, 2020, we wanted to reiterate the most relevant aspects of the protective measures to be implemented in the project area. Fusible C-900 pipe is intended primarily for use in high pressure water or wastewater applications. For gravity applications, the use of fusible C-900 pipe presents constructability challenges due to an increased difficulty in maintaining minimum constant slopes, and also due to the fact that no compatible fittings are available to create fused pipe assemblies needed for house lateral connections. Despite these challenges, Fuss & O'Neill, Inc., ("F&O") investigated and recommended an approach that was summarized during the December video call that maximizes the use of fused C-900 PVC pipe coupled with other protective measures in areas where the use of this type of pipe is not feasible.

With this in mind, we will oversee the implementation of protective measures following the guidance provided in the June 29, 2020 recommendations from your Department, some of which have been refined and shared with you via the December 22, 2020 video call. These measures are:

- 1) Separation distances between existing well heads and proposed sanitary sewer lines have been maximized to the maximum extent possible.
- 2) Abandonment of private wells located within 75 feet and most importantly, located within 25-feet, from the proposed sanitary sewer lines will be incentivized to the maximum extent possible within Old Lyme Shores and Old Colony Beach Club Associations. As you know, well abandonments are not a viable alternative everywhere within Miami Beach Association as commercial water service is not available everywhere within this community.

- 3) No sanitary sewer manholes will be located within 25-foot well protection areas.
- 4) Sanitary sewer pipes used in this project will be pressure-tested based on the most current applicable standards to confirm water tightness.
- 5) No sewer service laterals will be located within 25-foot well protection areas.
- 6) Fusible C900 PVC pipe will be used for sewers within the 25 foot radius. As another protective measure, the sewer carrier pipe will be within a C900 PVC casing pipe which will also be fused. There will be no joints and no service connections within the 25 foot well protection radius.
- 7) C900 PVC bell and spigot pipe will be used within the 75-foot radius. There will be a solid sleeve transitional coupling used between the C900 PVC fused pipe leaving the 25 foot radius and the C900 (bell and spigot) pipe where service connections will be installed within the 75 foot protective radius. Service connections will be connected to the bell and spigot pipe with compression gaskets because fusible pipe fittings are not made and therefore are unavailable. Compression gasket fittings for mainline pipe, tee/wye service connections and the service connection pipe and bends will be encased at each joint with low pressure flowable fill that is excavatable. A similar procedure would be used when the C900 service pipe was to be extended past the property line/street right of way; the C900 bell and spigot pipe with any bends or joints would be encased at each joint with flowable fill.
- 8) As mentioned above, no sewer manholes will be installed within 25 foot radii areas. A reduced number of manholes will need to remain within 75-foot radii areas mainly due to their location at street intersections and to serve nearby properties. These manholes will be designed to use pressure rated water tight section joints with an additional 12 inch wide external sealing band to further prevent infiltration and exfiltration. Flexible sleeves will serve as water tight pipe connectors. A Crystalline Waterproofing Concrete additive will be incorporated to further minimize water migration.
- 9) Regarding the force main pipe on Portland Avenue in Sound View, the C-900 PVC Carrier and Casing Pipe will be used fused with link seals to cover the ends where they terminate when leaving the 25 foot radius. In the 75 foot radius, the C900 PVC pipe will be fused. Outside the protective radius, the pipe will be C900 PVC bell and spigot pipe with compression gaskets.
- 10) The project will include strict control measures related to the use of suitable backfill material for trench restoration work, as well as related to the staging of construction materials and equipment. No such materials or equipment will be allowed to be staged within any well protection areas.
- 11) For those wells that remain in the project area, we will convey to the Beach Associations and F&O the need to develop a water sampling program to document a water quality condition baseline.
- 12) Finally, it is also possible that some property owners may wish to retain their wells for outdoor and irrigation use only. Should that be the case, the Associations in coordination with the Water Utility and Ledge light Health District will ensure that adequate protocols, including installation of a backflow preventer, are put in place to protect the commercial water system from possible cross contamination.

The private well protection radii criteria described in this letter will also be implemented within the Miami Beach Association ("MBA") and Sound View Beach community. F&O continues to evaluate protective measures for community wells in MBA which we are aware will require coordination with DPH's community well program. Once a solution is identified regarding this specific issue, we will be reaching out to this program to coordinate a meeting.

The shared infrastructure piece of this project (i.e., pump station and force main pipe) is expected to be bid this coming spring. This is being done facilitate the restoration of Route 156 which is scheduled to be repaved by CT-DOT this year. The contracts for the gravity sewers within each of the Associations are expected to be bid later this year. We will continue to keep you apprised on the status of these projects as they approach the bid phase.

We look forward to continuing this collaboration with you and Ledge Light Health District as this project moves forward. I respectfully request that you to contact Carlos Esguerra of my staff before March 12, 2021 at [Carlos.Esguerra@ct.gov](mailto:Carlos.Esguerra@ct.gov) if you have any remaining questions on the protective measures described herein. Thank you.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jennifer L. Perry".

Jennifer L. Perry, P.E.

Director

Water Planning and Management Division  
Bureau of Water Protection and Land Reuse

**cc (via email):**

Graham Stevens, DEEP  
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