

January 20, 2017



**WLS D Response to Torrington Water Company's (Pullman & Comley) Letter of 11/21/16
Proposed Regional Sewer Connection Project
Woodridge Lake Sewer District**

Following are WLS D's responses to each of the comments presented in the TWC letter of November 21, 2016. A copy of the Pullman & Comley letter, with items numbered to match our responses, is included in Appendix A.

- A. TWC Claim (Page 1): WLS D's preferred route would have the force main transporting raw sewage at a flow rate of up to 540,000 gallons per day.

WLS D Rebuttal: The proposed Project is not directly crossing, nor impacting, any lands owned or controlled by TWC, as it is entirely within the existing ConnDOT ROW that already traverses a small section of the TWC watershed. The proposed WLS D Project will convey an average daily flow of 110,000 gallons per day and not "daily flows up to 540,000 gpd". In fact, to convey the WLS D average daily flow of 110,000 gallons, the proposed pumping system will be operating less than 4 hours per day. To reiterate, the terms average annual flow, peak hourly flow and proposed pumping rate each have different definitions that apply to design elements of the proposed Project.

- B. TWC Claim (Page 1): WLS D's pipeline is less than 470 feet from the Allen Dam Reservoir.

WLS D Rebuttal: The proposed Project is not directly crossing, nor impacting, any lands owned or controlled by TWC, as it is entirely within the existing ConnDOT ROW that already traverses a small section of the TWC watershed. According to TWC's watershed mapping, the contours of the land at the point referenced by this claim are such that the area in which the pipeline is proposed is not tributary to the Allen Dam Reservoir. This means that in the highly unlikely event of a force main break in this area, water will not flow toward the Allen Dam Reservoir, but rather away from the Allen Dam Reservoir. That is why this area has not been incorporated into the TWC watershed. The proposed pipeline, at its closest hydraulic point in the watershed area, is approximately 9,200 feet (almost two miles) from Allen Dam Reservoir.

- C. TWC Claim (Page 2): Allen Dam Reservoir is an essential part of TWC's water supply.

WLS D Rebuttal: The proposed Project is not directly crossing, nor impacting, any lands owned or controlled by TWC, as it is entirely within the existing ConnDOT ROW that already traverses a small section of the TWC watershed. However, the nature of the Allen Dam Reservoir is contradicted by TWC's own Water Supply Plan, which includes daily production data (gpd) for the feeds of the Reuben Hart Reservoir and the Allen Dam Reservoir. The data clearly indicates that between 2004 and 2008, the average percentage of drinking water delivered to customers drawn from the Allen Dam Reservoir feed was only one-half of one percent of the total water delivered over those five years. During 2008, the Allen Dam Reservoir feed had declined to only one-quarter of one percent of the total water delivered. In the Plan, TWC stated that the Company foresees using Allen Dam only in an emergency situation or during a drought. Refer to Appendix B, which includes the TWC Water Supply Plan of February 25, 2009, revised in February 2013 and approved on June 7, 2013 (Chapter IV, Page 21). Also, the EPA Survey of July 1, 1991, included as Appendix C, states that Whist Pond and Allen Dam are maintained as active sources, although they have not been used regularly since 1982 (Page 2). This is not to



say that the Allen Dam Reservoir does not play a role within the TWC watershed, but rather to highlight the historic role of the Allen Dam Reservoir.

- D. TWC Claim (Page 2): The proposed force main would cross eight different storm drain or culvert crossings and a force main break or significant leak could impact this important water source.

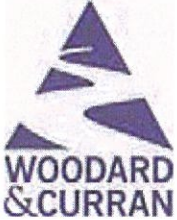
WLS D Rebuttal: The proposed Project is not directly crossing, nor impacting, any lands owned or controlled by TWC, as it is entirely within the existing ConnDOT ROW that already traverses a small section of the TWC watershed. We have completed a physical survey, performed by a State licensed surveyor, as well as soil borings throughout the entire ConnDOT ROW route of the proposed pipeline. There is only one crossing, at Station 122+40, adjacent to an area designated by TWC as sensitive (Class 1) land. At this crossing, within the Route 4 ROW, we have incorporated additional design measures to prevent any leakage in the highly unlikely event of a pipe break and none of the proposed construction will occur on TWC land or outside of the existing ConnDOT ROW. We are proposing redundant pipes at this crossing (primary and back-up), each enclosed in a sleeve pipe for spill containment. All of the carrier and sleeve pipes are to be constructed of HDPE fusion-welded materials, minimizing opportunities for leakage at this location, the closest point for water and stormwater to travel from the proposed Project to the Allen Dam Reservoir. This culvert conveys flow from the wetland area south of Route 4 towards Allen Dam Reservoir through an intermittent stream.

The remaining culvert crossings along Route 4, none of which are located on TWC land, only carry stormwater, and appear to be dry during most conditions. They vary in size from 12-inch to 24-inch and all proposed pipeline work will be within the existing ConnDOT ROW and below these crossings, leaving the existing crossings undisturbed. Since all of these remaining culvert crossings are further than 9,200 linear feet (almost two miles) from the Allen Dam Reservoir, in the highly unlikely event of a force main failure, it would take as long as weeks if not months for any wastewater to reach the sensitive area of the TWC watershed or to travel to the Allen Dam Reservoir.

- E. TWC Claim (Page 2): TWC's safe yield would be reduced by approximately 27% if the Allen Dam Reservoir were put out of operation for any extended period of time.

WLS D Rebuttal: The proposed Project is not directly crossing, nor impacting, any lands owned or controlled by TWC, as it is entirely within the existing ConnDOT ROW that already traverses a small section of the TWC watershed. Moreover, elimination of the Allen Dam Reservoir as a water source will not happen as a result of this proposed Project. However, basic operational improvements unrelated to the proposed Project could provide additional opportunities for safe yield for TWC and should be considered. For example, water from Whist Reservoir (Elevation of approximately 1,190 feet) is delivered to the Allen Dam Reservoir (Elevation of approximately 787 feet) by a pipeline, and then pumped to the filtration plant (Elevation of approximately 819 feet). Refer to the schematic in Appendix D. Based on the elevation changes, the pipe from the Whist Reservoir could be redirected directly to the filtration plant, or directly to the Crystal Lake pump station, rather than into the Allen Dam Reservoir, shortcutting the current pollution sources in the Allen Dam watershed. This would improve the safe yield calculations as prepared by Tighe & Bond, Inc., of November 16, 2016 (Appendix E) and eliminate any safe yield concerns. In all cases, the minimum factor of safety of 1.15, as required by DPH, is maintained.

- F. TWC Claim (Page 3): TWC claims to have an aggressive proactive strategy to protect its watershed from polluters.



WLSD Rebuttal: The proposed Project is not directly crossing, nor impacting, any lands owned or controlled by TWC, as it is entirely within the existing ConnDOT ROW that already traverses a small section of the TWC watershed. Moreover, TWC's actions are not consistent with the Land Sales and Acquisition or the Other Improvements and Long-Term Goals on Page 43 of their Water Supply Plan, as approved on June 7, 2013. In fact, DPH suggested improvements in their Source Water Protection (Page 8) of the Water Supply Plan, submitted on February 25, 2009. These suggestions have not been followed by TWC. See attached labeled TWC Water Supply Plan, Chapter IX, Page 43 (Appendix F). Our review of the Allen Dam watershed illustrates only passive preventive actions, and that minimal corrective actions, if any, were initiated by TWC in this watershed. A property review of the lots within the Allen Dam watershed is based on the GIS mapping we received from the TWC, via Tighe & Bond (October 26, 2016) to Lenard Engineering. The GIS mapping was merged with available Torrington and Goshen parcel mapping (Appendix G). The property data was obtained from available Assessors' data to identify the current owners, property sizes, dates of transfers, building permits, and a cross reference to the TWC inspection reports from their Water Supply Plan, as submitted in February 25, 2009 (attached summary labeled Allen Dam Watershed Property Summary, Appendix H).

- G. TWC Claim (Page 3): TWC claimed that they are inspecting all the home septic systems within the watershed and have identified 29 such locations in their Water Supply Plan located in the Allen Dam watershed.

WLSD Rebuttal: Our review identified an additional 13 septic systems within TWC watershed as of October 31, 2007, as documented in the Water Supply Plan, which should have been included in TWC's inspection program. In addition, there are five properties with large animals which were not included in their summary, and are not currently included within their inspection program.

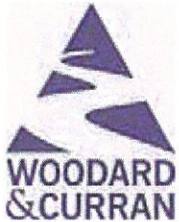
- H. TWC Claim (Page 3): TWC claims that since 1998 they have been investing funds to purchase properties within the Allen Dam watershed.

WLSD Rebuttal: In the past 18 years, 80.3 acres have been acquired within the 1,907 acre watershed, or 4% of the available acreage. Within the Water Supply Plan, Chapter IX (Page 43), they state they will review, and if feasible, buy any piece of land within its watershed which is for sale as part of their watershed protection program. However, contrary to their own plan, there have been an additional 21 land sales, consisting of 418 acres transferred through sales, that the TWC did not purchase since 1998.

- I. TWC Claim (Page 3): TWC claims that since the EPA report of 1991, there has been very little growth of new residences (See attached EPA Survey of July 1, 1991 in Appendix C).

WLSD Rebuttal: There has been an increase of six new homes of the 29 being tracked, an increase of 20%, which represents a substantial increase in growth within the TWC watershed. Additionally, there were 30 homes for sale that could have been purchased to eliminate septic systems discharging to the watershed.

- J. TWC Comment (Page 3): TWC cites the 2003 DPH Source Water Protection Assessment of the their watersheds, indicating that more than 60% of the watersheds are owned by the public water system, as an indication of the strength of TWC's source water protection program.



WLSD Rebuttal: The proposed Project is not directly crossing, nor impacting, any lands owned or controlled by TWC, as it is entirely within the existing ConnDOT ROW that already traverses a small section of the TWC watershed. TWC's ownership of 568 acres of the 1,907 acres (30%) of the Allen Dam watershed, suggests a much lower percentage. Further, the surface water coliform levels in Allen Dam Reservoir, between March 2003 and November 2008, were 2,369 CFU/100 ml. This concentration is over four times the level of Ruben Hart for the same measurement period (see Water Supply Plan, Appendix IV-6, in Appendix I). Furthermore, the raw water quality in Allen Dam is less favorable than the Ruben Hart.

The American Water Works Association's ANSI/AWWA G300-14 Source Water Protection Standard describes in Section 4 the minimum requirements for a source water protection program. The keys to the program are establishing goals, an action plan, and implementation and evaluation. TWC has done virtually nothing related to the Allen Dam source water protection program action plan. We have been unable to find a stated goal, specific projects for land use control, contaminate source management, outreach programs, riparian buffers or agricultural best management practices proposed to improve the water quality within the Allen Dam watershed.

The proposed Project is not directly crossing, nor impacting, any lands owned or controlled by TWC, as it is entirely within the existing ConnDOT ROW that already traverses a small section of the TWC watershed. WLSD is proposing a highly engineered force main through a section of Route 4 that traverses a small section of the TWC watershed. Our team has agreed to all but one (monitoring wells) condition of TWC's requested engineering measures, as proposed by TWC's consultant, Tata & Howard, per their letter of August 16, 2016.

- K. TWC Claim (Page 4): TWC implies that there is a possibility that the Town of Goshen sewer service area will be increased to include Tyler Lake, Dog Pond and the center of Goshen.

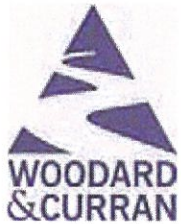
WLSD Rebuttal: There is no possibility that the Town of Goshen sewer service area will be increased as described. The Town of Goshen rejected this concept. This decision has been memorialized and re-affirmed, as recently as 2016 by the Goshen WPCA, via their longstanding sewer avoidance policy for the entire Town, with the exception of WLSD's sewer service area. This determination has been supported by the Torrington Area Health District as well.

- L. TWC Claim (Page 5): TWC utilizes infiltration and inflow (I/I) data developed by WLSD's engineering consultants to infer that the I/I which occurs in the district's gravity line demonstrates that the district is not maintaining its collection system.

WLSD Rebuttal: Actual flow data suggests that the gravity sewers in the WLSD collection system, relative to unit I/I flow contributions, are operating better than published thresholds (Technical Report No. 16 by New England Interstate Water Pollution Control Association) for brand new sewers. Refer to the attachment in Appendix J. This TWC statement illustrates a lack of understanding of sewer system operations.

- M. TWC Claim (Page 5): TWC claims that a past sewer overflow in WLSD's sewer system, as mentioned in Note 17 and Exhibit 9, were due to poor operations.

WLSD Rebuttal: This historic spill was actually caused by a homeowner not capping the clean-out on their private sewer lateral, and not within the gravity line in the street. This event was rectified immediately, and is unrelated to the proposed Project.



- N. TWC Claim (Page 5): The Notice of Violation (NOV) mentioned in Note 18, Exhibit 10, was issued on May 9, 2009 for not having a Class III Operator supervising the WPCF.

WLSD Rebuttal: The Class III Operator started on September 20, 2009, representing a duration of only four months, not the seven years claimed by TWC. See the attachment labeled NOV W RMU 09-007, Executed Compliance Statement, of August 25, 2016 in Appendix K). The NOV was officially closed on October 22, 2015 by DEEP. This event is unrelated to the proposed force main.

- O. TWC Claim (Page 5): The letter acknowledges that an improvement was made to the crossing at the culvert and then goes on to infer that the Torrington WPCA may not be committed to safe operation of the proposed system.

WLSD Rebuttal: It is unprofessional to infer that the City of Torrington cannot, and will not, properly operate and maintain the proposed wastewater system. See the diagram of the proposed improvements, which is attached as an exhibit labeled Culvert Graphics (Appendix L).

- P. TWC Claim (Page 6): TWC reported a break at Sinkhole Bridge, which took six months to be repaired.

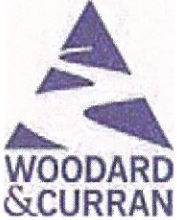
WLSD Rebuttal: It is our understanding that on December 10, 2014, there was a break in a 16-inch HDPE sewer pipe resulting from improper backfilling with large rocks, causing undue stress on the pipe. The pipe was isolated, bypassed and drained on the day of the break. The site was excavated on December 15, 2016, and a fusion of the HDPE pipe was attempted by a licensed contractor but the fusion was not successful. The pipe was kept out of service until the spring when it was determined that welding would not be successful because of the mismatch of the HDPE piping. As a result, a mechanical clamp was utilized to join the piping. The repair was pressure tested, passed and has been in service without further incident since May 14, 2015. The site was restored on June 5, 2015. This event is unrelated to the proposed force main, and the proposed Project includes backfill measures that meet the stringent requirements of ConnDOT for work in State Highways.

- Q. TWC Claim (Page 6): There were reported sewer problems on East Main Street.

WLSD Rebuttal: It is our understanding that this was not a pipe break but rather a sanitary sewer overflow (SSO) caused by a sewer pipe capacity problem caused by expansive buildout of the upper East Main Street area. The flow generated by the buildout was not properly anticipated. The situation was exacerbated by inflow during heavy rain events causing sewerage to back up at the manholes on East Main Street. The problem took several years to correct by replacing old 8 inch and 10 inch clay pipes with new 20 inch ductile iron piping. This event was related to clay pipe more than 50 years old, and is unrelated to the proposed solution. The proposed Project includes modern "tight pipe" with sealed gaskets and additional protective measures.

- R. TWC Claim (Page 6): There was another break reported on January 23, 1996.

WLSD Rebuttal: This was an old 20-inch clay pipe, which failed after more than 50 years of service. The cause could not be determined, but was likely due to excessive age and outdated pipe materials. The clay pipe was replaced by a ductile iron pipe. This event is unrelated to the proposed force main. The proposed Project includes modern "tight pipe" with sealed gaskets and additional protective measures.



- S. TWC Claim (Page 6): The TWC raises questions regarding the licensure and knowledge of the Torrington WPCA operations staff.

WLSD Rebuttal: The City of Torrington WPCA currently has a staff of 14 full time employees, with a combined 250+ years of Wastewater Treatment and Collection Systems operations experience. All operators are licensed in either treatment and/or collection system operations and management. The Torrington WPCF is operated and monitored 24 hours per day by an advanced SCADA system which is compatible to the system planned by the WLSD and currently used within the WLSD collection system. The Torrington WPCA has been selected to provide regional processing by State authorities over the last dozen years, which speaks for their good standing with DEEP and State regulators.

- T. TWC Claim (Page 6): TWC's Engineering Consultant, Tata & Howard, acknowledged WLSD's additional protections for areas in the ConnDOT ROW adjacent to sensitive watershed land, and also indicated in a letter to TWC, dated August 16, 2016 (Page 7), that leaks in the ConnDOT ROW adjacent to the Class 2 and unclassified watershed land "generally would travel very slowly --- rough travel time to Allen Reservoir -- in the range of 6 months to a year -- therefore not readily noticed in Allen Reservoir."

WLSD Rebuttal: Our team has agreed to all but one (monitoring wells) of TWC's requested engineering measures, as proposed by TWC's consultant, Tata & Howard, per their letter of August 16, 2016. Moreover, their own expert acknowledges that even if a leak were to occur, it would take a very long time to reach the Allen Dam Reservoir, thereby allowing ample time to manage and prevent any wastewater from reaching the Reservoir.

- U. TWC Claim (Page 6): TWC pointed out concerns raised by the Torrington WPCA regarding the proposed pipeline.

WLSD Rebuttal: The Torrington WPCA contracted their independent engineering firm, Wright Pierce, to conduct a study to evaluate TWC issues, which are documented in a report dated April 26, 2016, and which is attached as an exhibit labeled Wright-Pierce Engineering Report Forced Main Vs Gravity 04.26.16 (Appendix M). Those earlier questions have been addressed to the satisfaction of the City of Torrington and its consultant.

- V. TWC Claim (Page 7): The TWC letter makes numerous references to weak points in the proposed solution.

WLSD Rebuttal: The TWC responses have not presented professional engineering facts nor technical data to support their representations that the proposed force main presents a risk to the environment and/or public health.

- W. TWC Claim (Page 7): TWC makes references to numerous reported sanitary sewer overflows (SSOs).

WLSD Rebuttal: Reference to such events are totally unrelated to this proposed Project. Moreover, TWC fails to note that only a small percentage of the reported SSOs resulted from breaks in sewer lines. It references the numerous spills, but neglects to identify the root cause and therefore makes drawing a meaningful informed conclusion impossible. This is unrefined data from which no conclusions can be drawn regarding comparability to WLSD/s proposed force main. The two Torrington incidents cited above were caused by poor construction



practices and very old clay pipe failures. These events include issues associated with pipelines over 50 years old, including clay pipes, and provide absolutely no comparison to the proposed force main. The proposed Project includes modern "tight pipe" with sealed gaskets and additional protective measures.

- X. TWC Claim (Page 8): TWC claims that the proposed Project was not approved by DEEP.

WLSD Rebuttal: The proposed project was approved by the DEEP. Please see the DEEP letter from Betsy Wingfield of November 18, 2016, which is attached as an exhibit labeled BW Letter to DPH dated 11.18.16 (Appendix N).

- Y. TWC Claim (Page 8): The location of the TWC watershed, according to TWC, was kept secret for security reasons.

WLSD Rebuttal: TWC stated in their letter of December 6, 2016 to Commissioner Pino: "It does not require the water company to file the map. TWC provided its Water Supply Plan, including watershed maps, to Torrington and Goshen officials as well as regional planning officials, but did not record the map for security safety reasons." It should be noted that the Water Supply Plan that we located in the Torrington files was difficult to find. As of August 5, 2016, there was no Water Supply Plan or mapping available within the Goshen municipal offices. Upon finding the Water Supply Plan, we requested from TWC a GIS layer of their watershed boundaries and only received a hand marked topo map and were told that a GIS layer was not available. It was not until January 5, 2017 that we received the boundaries of the Allen Dam watershed from Lenard Engineering via Tighe & Bond, TWC's consultant, on October 26, 2016.

- Z. TWC Claim (Page 11): TWC makes claims about the Weed Road options available to Torrington's staff, regarding the incremental cost of alternative options and the costs of these options to the WLSD taxpayers.

WLSD Rebuttal: The proposed Project is being undertaken to comply with the Clean Water Act and Orders from DEEP. The current pollution problem that we are addressing will not be resolved without the proposed solution. In order to be consistent with the Clean Water Act, we are required to evaluate and implement the most cost-effective solution. The route proposed, is the most cost effective solution.

Based on updated projected cost of \$18,889,000 for the alternative Weed Road route and the current funding levels from the USDA, the actual anticipated additional cost (above the current Project) would be \$3,277,000. The Weed Road alternative route would increase WLSD taxpayers' costs by 34% above their current level, or five times that of the State's 2013 average sewer rate per household.

Developing a different route would significantly delay the schedule, including unknown project or permitting conditions resulting in delay. As a result, WLSD could lose its funding commitment with USDA Rural Development. Moreover, the existing treatment system is very old, and while operating adequately now, the risk of failure increases with any delay. Absent USDA's grant and loan commitments, the Project would cost residents and additional 20% beyond the above 34% increase.

PN: 214383.00

APPENDIX A

**PULLMAN
& COMLEY^{LLC}**
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November 21, 2016

Honorable Raul Pino, MD, MPH
Commissioner – Connecticut Department of Public Health
410 Capitol Avenue
Hartford, CT 06134

Re: Woodridge Lake Sewer District's Proposed Regional Sewer Connection Project
Torrington Water Company Response to Request for Additional Information

Dear Commissioner Pino:

Pursuant to the Department of Public Health's ("DPH" or the "Department") November 2, 2016 order instituting an investigation to determine whether the Woodridge Lake Sewer District's ("WLSD") proposed regional force sewer main ("Proposed Project") may cause the pollution or threatened pollution of a source of public drinking water supply, the Torrington Water Company ("TWC" or "Torrington Water") hereby files the following:¹

As a preliminary matter, Torrington Water recognizes that WLSD has an on-site sewage problem and is under a long-standing Department of Energy and Environmental Protection ("DEEP") consent order to address that problem. To resolve that problem, WLSD has proposed to transport its sewage to the Torrington Pollution Control Authority ("WPCA") facility in Torrington through a force main. TWC does not oppose WLSD's proposed solution in concept. Torrington Water is, however, very concerned that the WLSD's preferred route would have the force main, transporting raw sewage at a flow rate of up to 540,000 gpd,² through TWC's Allen Dam Reservoir watershed area and within approximately 470 feet of the reservoir, when safer viable alternative routes are available.

¹ Torrington Water Company has made a good faith effort to respond as fully as possible to the Department's request for additional information. In light of the limited time permitted by the Department's November 2 letter, in combination with the fact that WLSD did not respond to the bulk of TWC's September 22, 2016 FOIA request until Friday evening November 11, 2016, Torrington Water requests the right to supplement this filing as appropriate.

² Woodridge Lake Sewer District (WLSD) Regional Sewer Extension Project, Phases 1 and 2 Environmental Report, Woodard & Curran, Issued on December 26, 2015, Updated on February 10, 2016, ("Woodard & Curran Report") at p. 4.

Allen Dam Reservoir is an essential part of the Torrington Water Company's water supply. That reservoir, which is fed by the Company's Whist Pond Reservoir³ and by streams running through the Company's watershed area, is an active and essential part of the Company's water supply. The current drought emphasizes the need for this essential water source. Indeed, the Allen Dam Reservoir is being used today to supply water to the citizens in the Torrington area.

The proposed force main would cross eight different storm drain or culvert crossings within the Allen Dam Reservoir watershed area.⁴ A break or significant leak in WLSD's force main could impact this important water source. Because Connecticut does not allow waste receiving water sources to be used for potable water supply, if sewage was observed to enter the reservoir, TWC would notify the DPH and would shut down any withdrawals from the source. As noted above, without Allen Reservoir on line, Whist Reservoir also cannot be used as a source.⁵ The indefinite closure of Allen Dam and Whist Pond Reservoirs would mean that those reservoirs couldn't be used for drinking, bathing or for fire protection.

Based on a November 16, 2016 analysis by Tighe & Bond, Inc.,⁶ TWC's safe yield would be reduced by approximately 27% if the Allen Dam Reservoir were put out of operation for any extended period of time. A reduction in safe yield of this magnitude would seriously reduce the TWC's margin of safety of supply over demand. DPH recommends that public water suppliers maintain a margin of safety of 1.15 of supply over demand. If TWC's safe yield was reduced by 27% due to the loss of the Allen Dam Reservoir, the TWC margin of safety for meeting maximum month demands would be reduced to less than 1.0. On an average daily demand basis, the current margin of safety would be reduced below 1.15. TWC anticipates increases in demands in the next several years, and TWC would expect its average day margin of safety following the loss of the Allen Dam Reservoir to be reduced to less than 1.0 by the year 2027. Consequently, the loss of the critical Allen Dam Reservoir and Whist Pond Reservoir could jeopardize the ability of the TWC to serve its customers and meet its public water supply mission.

The Torrington Water Company has long subscribed to the proposition that avoiding the introduction of potential sources of contamination is the first and most proactive strategy available to protect public health. TWC uses a multi-barrier approach in ensuring its drinking water is of the highest quality for its customers. Source water protection is the first barrier in the Multiple Barrier Approach. From source to tap, there are numerous points to capture and safeguard clean water. The most fundamental approach begins at the source—the lakes, rivers, streams, reservoirs, and ground water that provide drinking water. By preserving the land that drains to these sources, the vast majority of contaminants are prevented from entering drinking water in the first place. This is a critical component of source protection. The American Water

³ Water from the Whist Reservoir is released to the downstream Allen Reservoir through a pipeline. Water is then pumped from the Allen Reservoir to the Filtration Plant for treatment and distribution to customers.

⁴ The proposed pipeline is designed to cross eight different storm drain or culvert crossings within the watershed area (Station 103+65, 105+21, 106+88, 109+42, 113+37, 122+40, 138+42, 143+12). Tata & Howard Report, August 16, 2016 at p. 2.

⁵ See Tata & Howard Report, at p. 5.

⁶ Exhibit 1 hereto.

Works Association in its ANSI/AWWA G300-14 Source Water Protection Standard⁷ concurs that a multiple-barrier approach is the best way to ensure that drinking water is protected now and in the future.

In 1911, the Company began an aggressive program of watershed land acquisition. Toward that end TWC has applied its resources, both administrative and financial, to aggregating ownership of its watershed land to minimize the presence of sewage on the watershed of its reservoirs. The land acquisition program has resulted in TWC having one of the cleanest, if not the cleanest watershed in Connecticut.

The Company believes that protecting the source is the single most important measure it can employ to protect the health of its customers. The permanent preservation of land around surface water sources (land that buffers streams, rivers, and lakes) is the most important mechanism to protect the drinking water supply. It's an extremely effective tool that can protect public health, prevent increased treatment costs, ensure consumer confidence, and maintain real estate values in areas where water supplies are protected.

In 1991 the EPA conducted a survey of all public water utility surface water watersheds to establish and assign degrees and measures of risk of accidental contamination potential. The risk assessment assigned to the Torrington Water Company at that time was very low.⁸ Watershed conditions today are not materially different than they were when the EPA study was performed. There has been very little growth of new residences and increased environmental and public awareness of the importance of keeping watershed land protected has helped improve the level of watershed protection.

In 2003, DPH conducted a Source Water Assessment of TWC's watershed. The Department recognized TWC for its land acquisition efforts to protect its pristine water sources. Notably, DPH found that "[m]ore than 60% of the watershed area is *owned* by the public water system" and "more than 60% of the land in the watershed area exists as *preserved open space*" were significant "strengths" of TWC's source protection program.⁹ While the Department rated the risk of source water contamination as low, the Assessment Report found that the lack of local regulations and zoning initiatives for the protection of public drinking water sources were "potential risk factors."¹⁰ As a result, DPH recommended steps to bolster source protection including: "Establish local watershed protection regulations to protect public drinking water sources" and "develop or enhance local government plans and policies that favor the protection of public drinking water sources". Significantly, Waste Storage, Handling and Solid Waste Facilities are classified by DPH as Significant Potential Contaminant sources.

Torrington Water submits that the transportation of pressurized raw human sewage at rates of up to 540,000 gpd constitutes a potential source of pollution that threatens a source of

⁷ ANSI/AWWA G300-14 Source Water Protection Standard, Exhibit 2 hereto

⁸ EPA Survey, Exhibit 3 hereto.

⁹ DPH Source Water Assessment Report, issued May 2003, Exhibit 3 hereto [Emphasis added]. To date, the watershed land acquisition program has resulted in the Company acquiring 71% of the watershed land tributary to the Company's existing reservoirs.

¹⁰ Id.

public drinking water supply. Moreover, the lack of local regulations and zoning initiatives for the protection of public drinking water sources, potential risk factors identified by DPH in its report, have contributed to the need for the current DPH investigation. Specifically, over opposition to the proposed route of the force main raised by Torrington Water and some local citizens, the Goshen and Torrington Inland Wetlands Commissions (“IWC”) have approved the proposed route. A review of the permits issued by the IWCs¹¹ shows that they focused on the construction of the pipes and essentially ignored the long term impacts of the forced main on the watershed area and the reservoirs fed from the watershed. In fact, an official of the Torrington IWC is quoted as saying that “protection of the watershed is not under the purview of the Inlands and Wetlands Commission – rather, that body’s only focus is the potential impact of a project on wetlands and/or watercourses.”¹²

As DPH knows, WLSO has proposed to route a force sewer main directly through Torrington Water Company’s Allen Dam Reservoir watershed area. Every stream and watercourse in that watershed finds its way into the Allen Dam Reservoir. Therefore, any significant leak or break in the force main would likely contaminate the reservoir with untreated human sewage. That would threaten the water supply to 40,000 people in the Torrington area. WLSO admits that it totally ignored the watershed area in its environmental assessment.¹³ Moreover, when it finally considered the watershed area, it focused solely on construction of the main and ignored the risk to the water supply over the decades that the force main would be in operation.

It is important to recognize that the issue at hand is very different from the typical situation posed by sewer lines on watershed lands. In the usual situation, consideration is given to installing sewers on non-utility owned watershed land to collect sewage generated there and remove it from the watershed. That is for the sake of protecting the water supply. The question at hand is the opposite. WLSO is proposing to import onto a pristine public water supply watershed the raw sewage generated by up to approximately 890 homes (691 existing homes plus 200 future homes) located in a different basin.¹⁴ In addition, WLSO indicates that there is some possibility of even more sewage being transported through the main from “Tyler Lake, Dog Pond and the center of Goshen about 200 homes” should there be a change in DEEP policy.¹⁵ This is directly contrary to the goal of avoiding the introduction of potential sources of contamination as the first and most proactive strategy available to protect public health but rather a reckless, dangerous and pointless challenge to all we know about protecting public health.

Typically, failures in gravity pipelines in our region result in infiltration into the collection system as is presently the case at Woodridge Lake. In fact, the existing WLSO

¹¹ See City of Torrington IWC Permit Exhibit 5 hereto.

¹² “No application for Woodridge Lake sewer pipeline yet; Cook calls for hearing, Carbone says not yet appropriate” The Register Citizen, October 27, 2016, Exhibit 6 hereto.

¹³ See letter from Donald P. Iannicelli and David R. Prickett, WLSO’s engineering consultants, to Patricia Bisacky, Drinking Water Section, Source Assessment and Protection Unit, Connecticut Department of Public Health, dated July 30, 2016, wherein WLSO admits that: “Until recently, we were unaware that a portion of the proposed force main ... traversed a section of the TWC Watershed.” Exhibit 7 hereto.

¹⁴ Email from Jim Mersfelder (WLSO) to T. Donoghue, Town of Litchfield, July 30, 2016, (“we still have about 200 homes in the district that are not built”), Exhibit 8 hereto.

¹⁵ Id.

collection system has significant inflow/infiltration problems, even though it is relatively new – having been installed in 1972. WLSD’s consultant, Woodard & Curran, found that 40,000 gallons, or almost 40%, out of the current average daily flow rate of 105,000 gallons, is due to inflow/infiltration from joint leaks, penetrations at manholes, and cracks and breaks.¹⁶ By contrast, failures in pressure pipelines such as sewer force mains result in pipeline contents being discharged into the surroundings. In the case of the Allen Dam Reservoir watershed area, such discharges would lead directly into the watershed area which leads into the water supply. The real underlying concern is the creation of a potential for biological or chemical components found in raw sewage to find their way into the drinking water supply for Torrington, Litchfield, and parts of New Hartford, Harwinton and Burlington.

This raises concerns about how good a job WLSD has done in maintaining its existing relatively young system. As noted above, for years the WLSD system was plagued with high inflow/infiltration problems. TWC is also aware of a spill on the WLSD system. The spill was due to WLSD’s failure to follow normal and customary operating procedures at their existing sanitary sewer pump station which resulted in a sewage spill that forced closure of the lake to swimming and fishing.¹⁷ Apparently, WLSD has also been lacking in its DEEP compliance and recordkeeping inasmuch as it was subject to a Notice of Violation (“NOV”) for failing to have properly licensed operators on duty, and while WLSD claims that it became compliant, it failed to notify DEEP for seven years.¹⁸ We all need to be asking; will the new plastic force main, with all of its joints, air release valves and cleanout manholes, be maintained any better? This is especially critical when one considers that the force main is expected to transport an annual average of 125,000 gallons of raw sewage per day for a system that has actually experienced a peak daily flow in excess of 400,000 gallons per day.¹⁹ Yet WLSD has given little or no consideration to the operation of the main under pressure over many years, or the potential degradation of the main over the decades, or the potential for leaks and breaks, as it goes through an area supplying water to 40,000 people.

In a partial concession to the risk posed by the force main, WLSD modified its proposal to sleeve a roughly 200 foot section of the force main in the vicinity of one of the culverts containing a stream that feeds the reservoir.²⁰ According to WLSD, the sleeved section would contain monitoring devices that, in the event of a leak, would shut off the pumps pumping the raw sewage into the force main and notify WLSD’s staff to investigate and repair the leak or break. The problem is, and what is not said in the letter, is that WLSD will not be operating the sleeved section of the main. Rather, according to WLSD’s testimony at the Torrington Inland Wetlands and Watercourses Commission (“IWC”) hearing on August 16, 2016, the section of the force main that runs through Torrington (including the Allen Dam Reservoir watershed area) will be operated and maintained by the City of Torrington, and not WLSD. Therefore, WLSD cannot

¹⁶ “Based on our observations, the average annual sanitary flow is approximately 65,000 gpd, and the remaining average annual I/I is 40,000 gpd. Our calculations show that the average I/I from month to month ranged from near zero in low-groundwater summer months to nearly 160,000 gpd in March of 2011.” Woodard & Curran Report at p. 5.

¹⁷ WLSD Sewage Spill, Exhibit 9 hereto.

¹⁸ WLSD NOV, Exhibit 10 hereto.

¹⁹ Woodard & Curran Report at p. 5. TWC notes that these numbers are based on the current 691 homes and does not account for the anticipated 200 additional houses, which could significantly increase the peak day flow.

²⁰ Woodard & Curran July 30, 2016 Letter to Patricia Bisacky, Exhibit 7 hereto.

support its representation that the sleeved section will be monitored and promptly repaired in the event of a break or leak.²¹

In fact, we don't know anything about Torrington's capabilities. What we do know is that Torrington has had a few main breaks. While TWC hasn't been able to get much detail on the break at Sinkhole Bridge, the Company does know that the City of Torrington had a force main failure that lasted upwards of six months from the time it occurred until repairs were completed.²² East Main Street in Torrington also experienced sewer problems that went on for a decade or more. When there was a significant rainfall the manhole covers on East Main Street would be forced open and raw sewage, including its components, would issue out onto the pavement surface.²³

Will the Torrington operators be licensed and knowledgeable about operating and maintaining a force sewer main? Will they be tied into the WLSD SCADA system? Will they react to alarms? Are they on call 24 hours/day? What is their operations and maintenance plan for the line? How often will they inspect it? How often will they inspect and clean the air release valves? This is all new to TWC, and these questions need to be answered.

In addition, as the Torrington Water Company's expert witnesses pointed out in their report, and at the Torrington IWC hearing, WLSD's proposal to sleeve a 200 foot section in the vicinity of one culvert does nothing to detect and protect against a break or significant leak anywhere in the remaining 4,300 feet of main that traverses seven other culverts and storm drains in the watershed area.²⁴

The fact is that force mains fail.²⁵ According to WLSD, the Torrington WPCA expressed concerns that a similar proposed "pipeline would operate at varying pressure and limited operating time leading to problems of stagnation, blockages, odor and very high head requirements for the pump."²⁶ The Torrington WPCA was also concerned that the "force main pipeline would be extremely long and require special high maintenance. Odor concerns were a significant issue."²⁷ The sewer force main will be subject to significant pressure fluctuations

²¹ In fact, while WLSD's proposal to sleeve the pipe in the vicinity of one of the culverts was integral to the Torrington IWC's approval of the permit application, the permit omits any mention of WLSD's commitment to sleeve the pipe and monitor it for leaks or breaks. See, Torrington Water Company's Request for Clarification, Exhibit 11 hereto.

²² See Emergency Call Before You Dig Reports dated 12/11/2014 and 12/15/2014 responding to Torrington WPCA requests in connection with excavation and repair of sewer main. Exhibit 12 hereto. Note that repairs took six months to complete.

²³ The sewer broke in November 1995 and sporadically "bubbled" from a manhole cover until at least the end of January of 1996. The Hartford Courant noted that "the sewer system along East Main Street collapsed following years of neglect" (See Exhibit 13 hereto.).

²⁴ Tata & Howard Report, August 16, 2016.

²⁵ Unfortunately, sewer main break reporting is sporadic and data collection is haphazard. Breaks and leaks are self-reported and many go unreported. For example, TWC is aware of two sewer main breaks in Torrington, but to the best of its knowledge neither were reported to DEEP. Information retrieval is even more tenuous – for example, DEEP collects spill reports on paper and these are entered into the computer periodically by interns on an as-available basis.

²⁶ The History behind Woodridge Lake and the Woodridge Lake Sewer district, Exhibit 14 hereto, also at <http://www.wlsgoshen.org/Topics/Topic.cfm?TopicName=History>.

²⁷ *Id.*

each time a pump starts and stops at the pump station. In addition, the force main will likely experience pressure surges, abnormal transient high and low pressure waves, when in operation due to valve closure, power failure shutting pumps off quickly, and other issues. The pressure fluctuations and pressure surges can contribute to material and joint fatigue and are recognized as contributors to PVC pipe failures.

In addition to the potential for pipe breaks, pressure valves and cleanouts fail and stick in open positions that could allow thousands of gallons of raw sewage to escape into and pollute water sources. The proposed pipeline within the TWC watershed area will include two air release valve manholes (Station 116+01 and Station 147+50), and two cleanout manholes (Station 125+62 and Station 135+00).²⁸ As pointed out by Torrington Water Company's experts, even if the pipe itself may be able to withstand certain pressures, the pipe joints, structural connections and valves (e.g., air release valves and clean out manholes) are weak points and are more susceptible to maintenance errors and breaks.²⁹ The main will deteriorate once in service. The pipe will be stressed as a result of external loads (e.g., soil, frost, traffic) and internal loads (pressure). Additionally, the pipe will be subject to fatigue from repeat pump cycles alternately pulling and then relaxing the pipe. The action of stress and fatigue may cause failures in the pipe walls, bells or at the rubber gasket pipe joints.³⁰ Moreover, a leak, break, or stuck valve would likely release quantities of sewage and could lead to sewage spills entering the Allen Dam Reservoir resulting in possible algal blooms due to high nutrients, low dissolved oxygen, and the introduction of pathogens into the water supply which would force the reservoir to close.

According to a report to the US Congress, 2.7 billion gallons of raw sewage spilled between 2001 and 2003.³¹ Closer to home, and more recently, DEEP reports that there were a number of breaks in Connecticut. A break in August 2014 released an estimated 4,125 gallons of sewage into Norwalk Harbor. In January 2015, a broken force main spilled an estimated 5,400 gallons, and in April 2015 a break in a force main released an estimated 9,000 gallons of sewage to a wetlands in Plainfield. A much larger incident occurred in July 2016, when an estimated 7.5 million gallons of sewage were released into Fort Hill Brook in Groton. In addition, DEEP reports that there were 26 sewage spills in 2015 and 16 incidents as of this summer.³² The South Central Connecticut Regional Water Authority documented 29 separate sanitary sewer overflow events within its public water supply watersheds since the year 2000. Several of the releases entered the Lake Whitney Reservoir. One large sanitary sewer leak in particular occurring on March 30, 2003 released up to 300,000 gallons into the Mill River entering the Lake Whitney Reservoir. The RWA was not notified of the release until April 3. Fortunately, Lake Whitney was not in operation at the time. In addition to leaks and breaks occasioned by normal operation, RWA has experienced breaks caused by construction in the area. On one occasion during construction of a bridge, a pressurized six inch force sewer main was mismarked and was

²⁸ Tata & Howard Report, August 16, 2016 at p. 2.

²⁹ TWC has asked for information on the clean out manholes and pressure valves, but so far has not seen a response to its request.

³⁰ *Id.* at 6.

³¹ Exhibit 15 hereto.

³² Exhibit 16 hereto. [Please note the Excel Spreadsheet was sent by email and was difficult to print. Copies will be emailed upon request.]

ruptured.³³ As noted above, the City of Torrington has had two sewage spills that TWC is aware of.

WLSD has been heard to claim that DEEP has approved the proposed force main. That is not the case. Rather, DEEP did not approve the project. Instead, DEEP concurred with the findings of WLSD's facilities plan which is an extension to the Torrington wastewater treatment plant. DEEP did not approve the project because DEEP (Clean Water Fund) is not the funding mechanism. WLSD chose USDA Rural Development funds so USDA Rural Development will be reviewing the plans and specifications. Thus, according to DEEP, "the 'approval' you believe they received only concurred with the findings of the facilities plan and was not an approval to construct - the final authority for that will rest with USDA Rural Development who is the funding agency for this project."³⁴

Moreover, despite a requirement that WLSD identify "Environmentally Sensitive or Significant Areas for Further Evaluation During Project Development Including ... Watercourses ... Water Supply Watershed Lands, Aquifer Protection Areas, and Coastal Zones..." in its Facilities Plan,³⁵ WLSD failed to even mention that its proposed project would cross the Company's watershed land. Moreover, WLSD's Environmental Report also fails to account for the fact that the proposed force main will traverse this environmentally sensitive watershed area. Accordingly, TWC believes that DEEP was not aware of this critical omission when it concurred with the findings of WLSD's facilities plan. The Company believes that USDA Rural Development was similarly blindsided to the fact that the chosen route threatens Torrington's water supply.

DPH has submitted letters to the Goshen and Torrington IWCs that recognizes the risk to Torrington's water supply:

The selected route of the proposed new wastewater transmission system traverses through 4,600 feet of the public water supply watershed of Allen Dam, an active distribution reservoir that is the source of public drinking water for the Torrington Water Company ... which supplies public drinking water to the residents, institutions and businesses within the City of Torrington.

After investigation of alternative solutions to resolve the Consent Order, the WLSD selected a regional wastewater management alternative designed to convey an *average annual flow rate of 125,000 gallons of raw sewage per day with a peak hourly flow rate equivalent to 540,000 gallons of raw sewage per day*. The Woodridge Lake Sewer District Regional Extension Project Phases 1 and 2 Environmental Report Issued on December 26, 2015 and Updated on February 10, 2016 used to select the *preferred alternative did not identify the public water supply watershed area. The Report*

³³ Letter from RWA regarding Sewer Spills, Exhibit 17 hereto.

³⁴ See e-mail from Ann A. Straut, Sanitary Engineer 3, Municipal Water Pollution Control Planning & Standards Division Bureau of Water Protection and Land Reuse, to Susan Suhanovsky dated June 15, 2016 at 1:52 PM attached as Exhibit 18.

³⁵ Woodridge Lake Sewer District (WLSD) Regional Sewer Connection Project Facilities Plan Summary Report dated May 9, 2016, at page 21 of 22.

evaluated two other routes for the regional wastewater transmission system. Neither is located within an active public drinking water supply source water area.

The DPH is concerned that because the public water supply watershed was not delineated during the decision making process, the preferred alternative was selected without consideration of the potential public health impact to the source of public drinking water supply for the 40,000 customers of the TWC.

The DPH acknowledges that there are areas in the state where sewer collection infrastructure is located within public drinking water supply source water areas. The DPH receives the bypass notifications when this infrastructure fails. Therefore, the *DPH is concerned with the introduction of this sewer into the public drinking water supply watershed. Public drinking water supply watershed areas should be avoided whenever possible due to the potential for contamination from leaking sewers* and land uses associated with growth that could be induced by the introduction of sewage infrastructure.³⁶

Accordingly, the DPH letter recommends that the alternative route be reconsidered. Specifically, the Department states:

The DPH supports the policies articulated in the Conservation and Development Policies: The Plan for Connecticut 2013-2018 for protecting and ensuring the integrity of environmental assets critical for public health by utilizing a multiple barrier approach to ensure the availability of safe and adequate public water supplies. This approach starts with protecting drinking water supplies at the source. Therefore, the DPH offers the following comments for [the IWC's] consideration:

- Avoiding the introduction of potential sources of contamination is the first and most proactive strategy available to protect public health.
- The Environmental Report's feasible and prudent alternatives that do not impact a public drinking water supply source water area should be reconsidered.
- The public drinking water supply watershed area should be delineated on project maps and made available to all of those who are involved in the decision making process for this proposal.
- The [Inland Wetlands] Commission should be aware that the Connecticut DPH neither develops nor publishes standards for municipal sewer piping. The Connecticut Public Health Code only addresses piping associated with on-site subsurface sewage disposal systems.
- Induced growth may impact the inland wetlands and watercourses that are tributary to the public drinking water supply. The Torrington IWC should request that induced growth controls are attached to the funding for this proposal as treatment plant capacity for this proposal was purchased with state funding.

³⁶ Letter from Lori Mathieu, Public Health Section Chief, Drinking Water Section, Connecticut Department of Public Health to Jay Bate, Jr., Chairman, Inland Wetland Commission, City of Torrington dated August 15, 2016. [Emphasis added.]

- The DPH requests that the WLSD be required to conduct a detailed environmental and public health review of the all the alternatives for locating sewer lines, including those outside of the public water supply watershed. The review should include the impacts of future development that may be induced by the introduction of sewer infrastructure.

... In accordance with CGS § 25-32f, the commissioner reserves the right to appeal municipal decisions that may affect a public water supply.”

The stated goal of Connecticut’s water resources policy is to: To preserve and protect water supply watershed lands and prevent degradation of surface water and groundwaters; ... [and to] to prevent contamination of water supply sources ...”³⁷ As part of its broad authority to protect Connecticut’s drinking water,³⁸ DPH has the authority to correct immediate threats to public water supplies pursuant to Connecticut General Statutes § 25-32g.³⁹ Torrington Water Company submits that if the force sewer main is constructed as proposed, it will pose a threat to Torrington’s water supply. Allowing the force main to be built through the watershed area and then waiting for it to leak or break when a viable alternative route exists that would eliminate this very real risk, presents a risk that Connecticut General Statutes § 25-32g is designed to eliminate.

There are a number of feasible and prudent alternate pipeline routes which, if utilized, would eliminate the potential contamination and shutdown of the Allen Dam Reservoir. Torrington Water Company suggested an alternative route in July 2016. The suggested route runs along Weed Road, avoids the Allen Dam watershed area, and is only about 2,000 feet longer than the proposed Project. WLSD says that it considered and rejected this alternative route that would avoid TWC’s water shed area. In a memo discussing alternate routes WLSD states that the City of Torrington does not support the Weed Road alternative route because it doubles the piping in Torrington that needs to be maintained by the City, which would result in increased long term maintenance costs for the City “with no benefit to them.”⁴⁰

Torrington Water fails to see why the City of Torrington could not require a maintenance clause in its contract with WLSD which would require WLSD to pay the maintenance costs of

³⁷ Connecticut General Statutes § 22a-380

³⁸ Sec. 25-32g. Department of Public Health jurisdiction over and duties concerning water supplies, water companies and operators of water treatment plants and water distribution systems. (a) The Department of Public Health shall have jurisdiction over all matters concerning the purity and adequacy of any water supply source used by any municipality, public institution or water company for obtaining water, the safety of any distributing plant and system for public health purposes, the adequacy of methods used to assure water purity, and such other matters relating to the construction and operation of such distributing plant and system as may affect public health.

³⁹ See also, CGS Sec. 25-43. Bathing in and pollution of reservoirs. Aircraft on reservoirs. Penalties. (a) Any person who ... causes or allows any pollutant or harmful substance to enter any such public water supply reservoir, whether distribution or storage, or any of its tributaries, or commits any nuisance in any public water supply reservoir or its watershed, shall be fined not more than five hundred dollars. For the purposes of this section, “storage reservoir” means an artificial impoundment of substantial amounts of water, used or designed for the storage of a public water supply and the release thereof to a distribution reservoir, and “distribution reservoir” means a reservoir from which water is directly released into pipes or pipelines leading to treatment or purification facilities or connected directly with distribution mains of a public water system. ...

⁴⁰ Exhibit 19 hereto.

WLSD's sewer main. This would hold the City harmless from incremental costs associated with the force main and protect the water supply for its residents.

Moreover, the Weed Road alternative has a lower high point over which the sewage must be pumped and delivers the sewage to Torrington's delivery point at Goshen Road and Lovers Lane. Protection of the Torrington Water Supply by protecting its watershed would not cause undue harm to Woodridge Lake interests. In fact, it stands to reason that the lower high point will result in lower energy consumption for pumping.

WLSD's presentation, which is rife with generalized, unsupported claims on the incremental cost of the alternate route, is inadequate to reject the alternate route, particularly when its favored proposal presents a very real risk to 40,000 of Connecticut's citizens.

Based on WLSD's own documents, the cost of an alternate route along Weed Road would cost less than 17% more than the proposed route.⁴¹ As shown on Exhibit 20 hereto, this translates into an incremental cost of only \$3.19 per month for a \$750,000 house in Woodridge Lake. The owner of a \$1,000,000 house in Woodridge Lake would pay a mere \$4.25 more per month.

It is critical to act now. If the raw sewage force main is constructed as presently planned, it is highly unlikely that it would ever be shut down or replaced by a pipeline following a different route. The force main as currently proposed constitutes an immediate threat to the health of residents of Torrington, Litchfield, New Hartford, Harwinton and Burlington.

Accordingly, the Torrington Water Company respectfully requests that the Commissioner order WLSD to utilize the feasible and prudent alternative route that avoids the watershed area and avoids adversely impacting Torrington Water Company's public drinking water supply source water area.

Respectfully submitted,
Torrington Water Company

Frederic Lee Klein

by: Frederic Lee Klein
its Attorney

⁴¹ Id.

cc: Yvonne T. Addo, MBA, Deputy Commissioner
Lori Mathieu, Public Health Section Chief, Drinking Water Section
Jim Mersfelder, WLSD
Chris Smith, Shipman & Goodwin
Hon. Elinor Carbone, Mayor, City of Torrington
David LeVasseur, Office of Policy and Management
Connecticut Water Planning Council
Torrington Area Health District
Frank Petrulli, USDA

VERIFICATION

I, Susan M. Suhanovsky, President of The Torrington Water Company, and acting on its behalf with respect to the matters described in this Verified Pleading, have personal knowledge of the factual matters stated therein. I declare under the pains and penalty of perjury that the facts set forth in this Verified Pleading are true and correct to the best of my information, knowledge, and belief.

Dated at Torrington, Connecticut this ____ day of _____, 2016.

Susan M. Suhanovsky

Personally appeared Susan M. Suhanovsky, known to me to be President of The Torrington Water Company, the signer and sealer of the foregoing instrument, and being duly sworn, deposes and says that she has read the foregoing Verified Pleading and that the allegations and statements contained therein are true and correct to the best of her knowledge and belief this ____ day of _____, 2016.

Notary Public

My Commission expires _____

SEAL

CERTIFICATE OF SERVICE

I hereby certify that this day I have caused the aforementioned BRIEF OF THE TORRINGTON WATER COMPANY to be sent by first class mail, postage prepaid to the following this 21st day of November, 2016.

Christopher J. Smith Shipman & Goodwin One Constitution Plaza Hartford, CT 06103-1919	Raymond Turri - President Jim Mersfelder - VP & Treasurer Woodridge Lake Sewer District 113 Brush Hill Road P.O. Box 258 Goshen, Connecticut 06756
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Frederic Lee Klein

Frederic Lee Klein
Pullman & Comley LLC
90 State House Square
Hartford, Connecticut 06103
860.424.4354

APPENDIX B



Torrington Water Company

P.O. BOX 867 - TORRINGTON, CONNECTICUT 06790 - (860) 489-4149

THE

TORRINGTON

WATER

COMPANY

WATER SUPPLY PLAN

FEBRUARY 25, 2009

REVISED FEB 2013

APPROVED
JUNE 7, 2013

all active agricultural uses, and to record chemicals commonly used. The Company has responded to this recommendation, and has now identified significant farm lands where insecticides or other chemicals may be used. These lands have been marked with an "A" on the Watershed Map to indicate agricultural uses. This change will ensure continued monitoring of the agricultural activities in the event of personnel changes, etc.

The small surface water area and volume of the Allen Dam Reservoir, approximately 2 acres and 3.5 million gallons, respectively, results in a low detention time and poor dilution capacity. As noted, there exist about 40 potentially contaminating properties on this watershed. These conditions should raise a cautionary alarm in the use of this supply source, particularly during and right after even a normal rainfall-runoff occurrence. The Company is aware of this situation and historically operates this source accordingly. Before the construction of the Filtration Plant, Allen Dam had not contributed water into the system since 1982. The construction of the Filtration Plant at an elevation 21 feet higher than the former West Torrington Tank (the primary hydraulic gradient of the system), coupled with the conversion of a 10" line from the Reuben Hart Reservoir to a distribution main, had decreased the transmission capacity from the Reuben Hart Reservoir. This resulted in Allen Dam and Crystal Lake Pumping Station being used on a more regular but still infrequent basis. In 2007, the Company completed a multi-year project to install a parallel transmission line from Reuben Hart Reservoir to its Filtration Plant. This restored the transmission capacity for getting raw water from Reuben Hart Reservoir and provided a redundant method of transmitting water in the event of a break in either main. Having a parallel transmission line lessens the Company's vulnerability. As a result, the Company foresees using Allen Dam only in an emergency situation or during a drought.

In 1980, the EPA conducted a survey of all the public water utility surface water watersheds to establish and assign degrees and measures of risk of accidental contamination potential. As shown in Appendix IV-4, the risk assessment assigned to the Torrington Water Company at that time was (favorably) very low. This was due largely to the fact that the Company owns virtually its entire watershed. Consequently there are few paved roads, no railroads, no petroleum or gas pipelines, no industrial or commercial facilities, no highway garages, and no direct consumer oriented agricultural activities (orchards, truck farms, etc.) on the watershed. It should be noted that watershed conditions today are not materially different than they were in at the time of the EPA survey in 1980; i.e., there has not been any noticeable growth of new premises nor any added activity of any consequence that could raise (worsen) the risk level. Increased environmental awareness of the public has actually improved the level of watershed protection.

Other watershed survey concerns noted here for improvement include:

- additionally locating or noting on the sketch where the premises' oil storage tank is and/or other similar type potential polluting facilities (e.g. exposed drains from the cellar, etc.);
- indicate on the sketch the date of the septic tank installation; the number of occupants; an estimated time of runoff to the receiving reservoir, etc., if available;
- affixing a north arrow on the sketches of the watershed premises to assure prompt location by other, or future involved, staff and public health officials.

APPENDIX C

Exhibit 3

EPA Survey



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION I

J.F. KENNEDY FEDERAL BUILDING, BOSTON, MASSACHUSETTS 02203-2211

RECEIVED

July 1, 1991

JUL 03 1991

Richard Calhoun
President
Torrington Water Company
110 Prospect Street
Box 867
Torrington, CT 06790

TORRINGTON WATER CO.

Dear Richard:

On May 15 and 16, 1991 a sanitary survey of the Torrington Water Company was conducted by the U.S. Environmental Protection Agency (U.S. EPA), and the Torrington Water Company (TWC). The survey was done by W. Mark Soeery (U.S. EPA), J. Kevin Reilly (U.S. EPA), Richard Calhoun (TWC President), and Steve Cerruto (TWC, Operations Manager). The State of Connecticut Department of Health Services represented by Mike Hage participated in the inspection on May 15th.

The Torrington Water Company is classified as an Interstate Water Carrier by the United States Food and Drug Administration (U.S. FDA). During the course of the inspection, we were informed that this is no longer a valid classification and the U.S. FDA will be notified. This survey was conducted as a part of a routine sanitary survey program to support the Safe Drinking Water Act. It conformed to the definition given in the SDWA regulations 40 CFR §141.2(f). "Sanitary survey means an onsite review of the water source, facilities, equipment, operations, and maintenance of a public water system for the purpose of evaluating the adequacy of such source, facilities, equipment, operations, and maintenance for producing and distributing safe drinking water."

RECOMMENDATIONS

1. Water Sources and Watersheds

The Torrington Water Company is primarily a surface water system. The system's main reservoir is the Reuben Hart Reservoir with a capacity of 750 million gallons. This is fed by the North Pond (capacity: 760 million gallons) which acts as a storage facility. The watershed for these reservoirs is about 3500 acres, of which the water company owns 3000 acres. Only four houses exist in the watershed.



Whist Pond and Allen Dam are the other surface supply sources. Whist Pond has a 210 million gallon capacity and feeds into Allen Dam which has a 3.5 million gallon capacity. The watershed area is 3500 acres of which the water company owns 2000 acres. There are 40 houses and a dairy farm on the watershed land. Whist Pond and Allen Dam are maintained as active sources although they have not been used regularly since 1982. The sources are used when the Crystal Lake Treatment Facility is test run every week.

Another water source is a 35 gallon per minute drilled, rock well, 280 feet deep. This well is one of three which were acquired in a takeover proceeding of the Doolittle Heights subdivision water system. The other two wells have been taken out of service. TWC plans on removing the Edgewood Road well from service as soon as it becomes a maintenance problem.

North Pond and Reuben Hart are the primary sources for TWC. The watershed area is well posted, an excellent practice which should be continued. The watershed is patrolled by a combination of a watershed manager, conservation officers of the Department of Environmental Protection and the State Police. Boaters and fisherman are found on one of the reservoirs approximately once a week. Diligent patrolling of the watershed should continue to insure the future quality of TWC's water supply.

Whist Pond was constructed in 1900. It is used for times of low supply, drought, or emergencies, but is maintained as an active source. TWC just recently cleared trees from one dike at the pond and is planning to clear the other dike next year. This is an advisable practice which will help maintain the integrity of the dikes and TWC is commended for their efforts. It is also recommended that the pipe outlet right of way be maintained and kept clear of large trees. TWC staff informed us that they inspect and clear right of ways every two years. This is a practice which we encourage you to continue. In general, Whist Pond is in excellent condition and the effort TWC puts into keeping the reservoir well maintained is obvious.

Allen Dam appeared to be similarly well maintained and was well secured from trespassers. These excellent practices should continue.

North Pond was also in excellent condition. There are some trees which need to be removed at the west end of the dike, otherwise the reservoir is, again, very well maintained. Some limited fishing by a special license is allowed on North Pond, but it is well controlled. The reservoir is very isolated, and appears to be very secure from potential problems.

Reuben Hart Reservoir is the same story as the other reservoirs. The dike and spillway are in excellent condition. The dike is clear of brush and trees and the spillway was free of debris. The spillway has been inspected by the Army Corps of Engineers within the last two years. There are six intake structures at 7 ft, 14 ft, and 21 ft of depth. Three are located on the front of the gate house and three are located at the side of the gate house. The screens on the gate house are cleaned 2 to 3 times a summer. TWC should continue this practice as it is an excellent one. The gate house has some wearing below the water line. TWC staff informed us they hope to renovate the gate house in the very near future and we encourage them to do so. The interior of the gate house itself was very clean and in excellent condition.

TREATMENT FACILITIES

TWC currently does not filter any of its surface water supplies. At this time, they have filter plant design plans at the 25% stage and are arranging financing. They hope to begin construction at the end of this year. The design would be for a conventional filtration system flowing by gravity. TWC is to be highly commended for starting the design process and staying one step ahead of the Surface Water Treatment Regulation.

TWC does treat their water with chlorine, phosphate, and fluoride. The main treatment facility is the Hart Brook Treatment Plant which treats water from the Reuben Hart Reservoir. This facility has gas chlorination, phosphate, fluoridation, and a hypochlorinator. Gaseous chlorine is used for about 16 hours per day while the plant is pumping. When the pumps are off, any water moving through the plant is treated using a hypochlorinator. A chlorine residual of 3 ppm to trace are maintained throughout the distribution system.

The gas chlorination is contained in its own room, an excellent practice which we recommend be continued in the new filter plant. Empty and full chlorine tanks were segregated and chained. In the future, TWC should limit the number of chlorine tanks restrained by one chain to six cylinders. Also, TWC should indicate which tanks are full and which are empty to aid personnel in the event of an emergency. Chlorine tanks in use, or in reserve, sit on floor level scales. Floor level scales make changing chlorine cylinders safer and are preferred over scales which protrude. The automatic switching allows a continuous feed of chlorine if a pump breaks or chlorine runs out in the cylinder feeding the gas. The two groups of cylinders should be labeled to indicate which group is in use and which group is in reserve. Also, changing chlorine cylinders should always be a two-man operation. Currently, only one person changes the chlorine cylinders. Finally, an attempt to put the chlorine detector closer to the floor would be wise, due to chlorine's density, relative to air, which causes chlorine gas to sink.

TWC keeps a face mask, a pair of gloves, and an apron for employee use at the Hart Brook Treatment Plant, as well as a working eye wash and shower. TWC is commended for having and maintaining these safety features and are encouraged to continue these practices in the future. A back-up generator provides emergency power for the plant and is run once a week. The plant was very well maintained and very clean.

Crystal Lake Treatment Facility treats water coming from the Allen Dam. It is a similar setup to the Hart Brook Treatment Facility with phosphate, fluoride and chlorine all added to the water. The plant is run for 15 minutes a week to keep it operational. The station can produce 3.5 million gallons per day (MGD) using the main pump or 0.75 MGD using the back-up pump. The station is equipped with a gasoline powered back-up generator in case of power outage. The station is alarmed with signals all going back to a central location.

Chlorine gas is used as disinfectant here, with the same comments and recommendations applying to this facility as applied at Hart Brook Treatment Plant. The facility has a Scott Air-Pak which is inspected annually and was 3/4 full at the time of the inspection. The chlorine rooms were clean, tidy, and contained only those things which related to the use of chlorine. The fluoride tank was left empty and would be supplied if the plant had to come on-line for any significant amount of time. This is a very wise practice because hydrofluorosilicic acid is highly corrosive.

The treatment facilities under TWC supervision are well maintained and have a great deal of back-up capacity. The work that is put into these facilities is obvious and should be commended.

DISTRIBUTION SYSTEM

TWC's distribution system consists of approximately 10,000 ft of transite pipe, 25% galvanized iron or brass pipe, and the remaining cast and ductile iron. There are six storage tanks and four pump stations. The tanks are:

	<u>Name</u>	<u>Capacity</u>	<u>Year Built</u>	<u>Base Elevation</u>
1.	W. Torrington Tank	1.25 MG	1954	797
2.	Torrington Tank	1.0 MG	1963	1032
3.	W. Pearle Road Tank	1.8 MG	1985	1232
4.	Morningside Tank	0.25 MG	1974	1010
5.	Litchfield St. Tank	1.3 MG	1990	805
6.	Highland Ave. Tank	0.8 MG	1987	1135

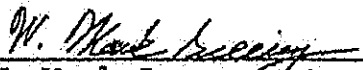
TWC plans on replacing the West Torrington Tank. In general, the tanks and pump stations were all in excellent shape and very well maintained.

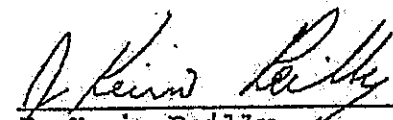
The TWC only has an 8% unaccounted for water in their system. The system is 100% metered with approximately 7500 services. There is no formal valve maintenance program, but most of the valves are worked with their flushing program. The system is flushed twice a year. The TWC should note which valves are not used in the flushing program and try to get to them annually. No lead service lines are thought to exist in the distribution system. All hydrants in the distribution system are inspected every two years.

There is a cross-connection control program. Facilities such as metal plating industries are inspected annually. Lower priority sites, such as residences with abandoned wells, are inspected every five years.

We would be happy to discuss any of these items with you and your staff. We appreciate the time you took and the forthright answers to our questions. If you have any questions or comments, feel free to call us at (617) 565-3604.

Sincerely,


W. Mark Sceery
Environmental Engineer
Water Supply Section
Ground Water Management &
Water Supply Branch


J. Kevin Reilly
Operations Specialist
Water Supply Section
Ground Water Management &
Water Supply Branch

cc: Mike Hage, CT DOHS
US FDA

APPENDIX D

WHIST POND
CAP. 120 MG
EL. 1190

ALLEN DAM
CAP. 3.5 MG
EL. 787

CRYSTAL LAKE
PUMP STATION

FILTRATION
PLANT
EL. 819

SOAPSTONE
HILL TANK
CAP. 0.5 MG
EL. 1390

SALE TO LITCHFIELD
DIVISION OF AQUARION
WATER COMPANY AT PUMP
STATION ROAD

WEST SIDE SUPER HIGH SERVICE ZONE
HGL 1390

GREENBRIAR
PUMP STATION

HIGHLAND
AVENUE TANK
CAP. 0.8 MG
EL. 1135

WEST SIDE HIGH SERVICE ZONE
HGL 1135

SQUIRE HILL
SERVICE ZONE
HGL 1035

SQUIRE HILL
PUMP STATION

WEST SIDE HIGH
PUMP STATION

WEST TORRINGTON I
TANK
CAP. 2.0 MG
EL. 805

LOW SERVIC
HGL 80

NOTE: CAPACITIES OF RESERVOIRS REPRESENT ACTIVE STORAGE

APPENDIX E

Torrington Water System Safe Yield

TO: Steven Cerruto
FROM: Peter Galant, P.E.
DATE: November 16, 2016

Per your request, Tighe & Bond evaluated the Impact to Torrington Water Company's (TWC's) reservoir system safe yield if Allen Dam Reservoir and Whist Pond were unavailable.

The reservoir system safe yield from TWC's latest Water Supply Plan was calculated in the 1990's to be 5.32 mgd. In 2015 Tighe & Bond updated the analysis and incorporated updated bathymetric, stream gage and operating data resulting in an increased safe yield of 5.78 mgd.

The reservoir analysis was re-run under current conditions without Allen Dam Reservoir and Whist Pond, and the system safe yield was reduced to 4.24 mgd. Removing Whist Pond and Allen Dam from the system therefore reduces safe yield by approximately 1.54 mgd.

Based on TWC's 2020 projected average day demand of 3.0 mgd the loss of Allen Dam Reservoir and Whist Pond would reduce the system's average day margin of safety from approximately 1.9 to 1.4.

Note that these analyses do not consider the reduction in safe yield anticipated due to pending reservoir release requirements.

APPENDIX F



Torrington Water Company

P.O. BOX 867 - TORRINGTON, CONNECTICUT 06790 - (860) 489-4149

THE
TORRINGTON
WATER
COMPANY
WATER SUPPLY PLAN

FEBRUARY 25, 2009
REVISED FEB 2013

APPROVED
JUNE 7, 2013

4. DPH Recreational Use Permit for Watershed Land in Goshen

The Company will work with the Town of Goshen to determine whether recreational use of water company-owned land in Goshen will be permitted in the future. If parties agree that recreational use such as hiking is desired, then the Company will submit an application for a Water Company Land Recreational Use Permit to the DPH.

F. LAND SALES AND ACQUISITION

The Company has not sold land in the recent past and has no plans to sell land in the near future. However, the Company owns approximately 5,400 acres of forestland related to its watershed area. The Company does review any piece of land that is on its watershed which is for sale. If feasible the Company will buy land on its watershed as part of its ongoing watershed protection program. This program is in both the twenty year and fifty year planning periods.

OTHER IMPROVEMENTS AND LONG TERM GOALS

In spite of the excellent operation described above and the aggressive short-term improvement schedule, there are areas of the Company's activities where improvement is in order. These include administrative and operational (non-structural) improvements along with the construction (structural) projects and improvements. They are summarized below.

1. Administrative and operational (Capital items):

- Update the Company's Water Supply Plan as required;
- The Company is increasingly reliant on modern data processing equipment. This type of equipment is continually evolving and improving which leads to relatively short service life. The Company will be looking at replacing computer equipment on five to seven year cycles.

2. Structural:

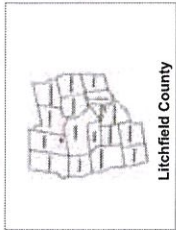
- Continue replacement or reinforcement of 4" diameter mains;
- Continue the elimination of dead end mains;
- Complete repairs to the Crystal Lake spillway, as ordered by the DEP as soon as permits are issued;
- Continue the program of replacing old privately owned service lines with Company owned lines;
- Build a new storage tank to increase storage for the East Side High Service Zone;
- Build a new storage tank to increase storage for the West Side High Service Zone;

3. Financial:

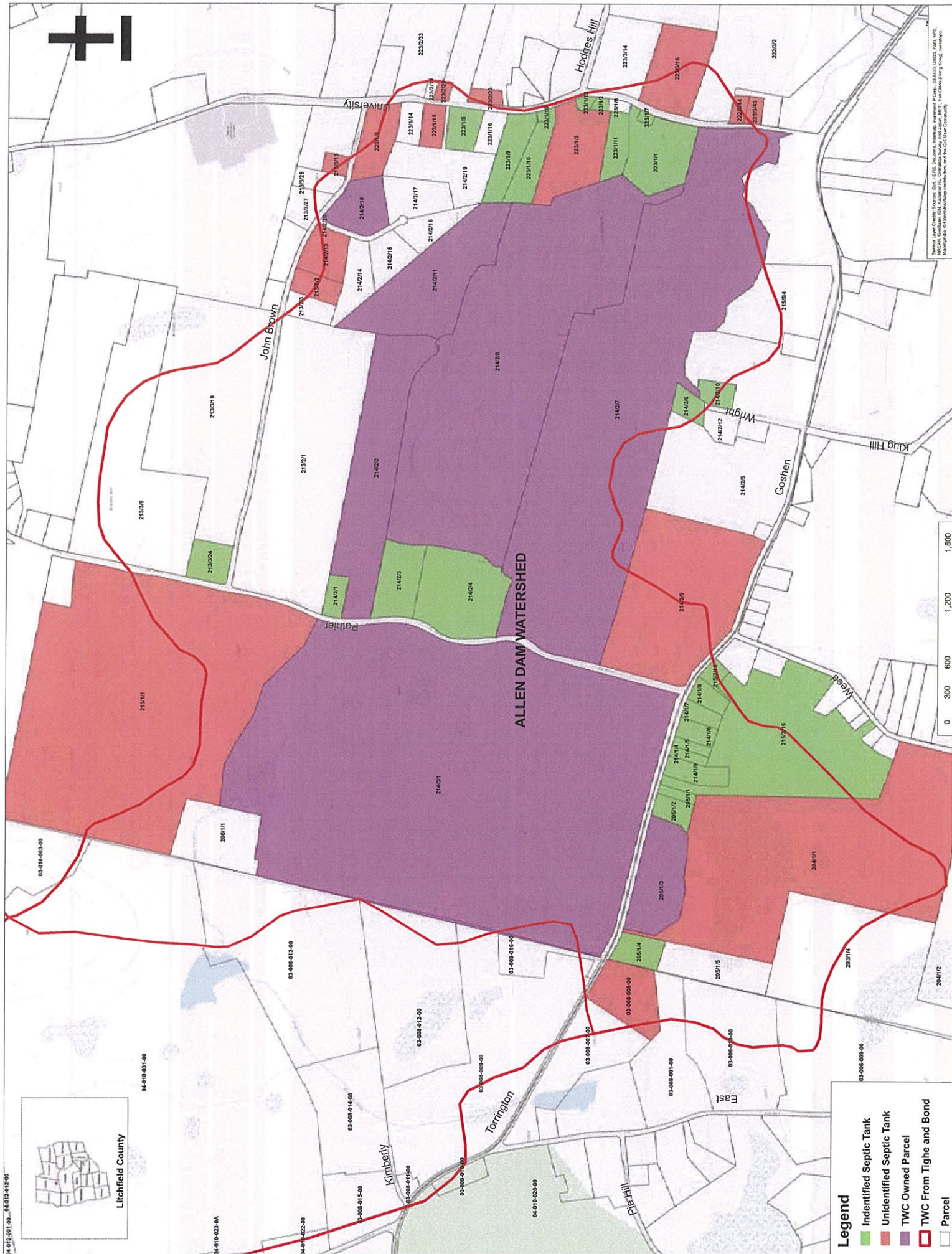
- Continue to file for rate relief in a timely manner in order to preserve the Company's financial position and access to the capital markets;

Comment #/ Regulatory Reference	Description of Issue	Suggested Corrective Action	Response
P17 25-22(d)-3(a)(14) Source Water Protection	a) An evaluation of source water protection measures must be provided.	a) The most current dam survey/inspection reports issued by DEP as well as a copy of any studies conducted to investigate the integrity of the dams and/or planned dam repairs must be provided. The establishment and revision of the Town's aquifer and watershed protection regulations, updating and strengthening the open space land acquisition program, and the development of watershed protection overlay zones must be incorporated into either the short- or long-term improvement schedules.	Dam inspection reports are typically not required in a water supply plan and therefore are not provided. A description of the Company's dam inspection program has been provided (see <u>Insert 1</u>). Appendix II-1 has also been revised to include the date of the most recent dam inspections. See <u>Insert 1</u> .
			Since TWC has no active groundwater sources, aquifer protection does not apply.
			Torrington has watershed protection regs. TWCs will notify Goshen and Norfolk.
			No change needed.
	b) The identification of potential and historic sources of pollution which may affect the Torrington Water Company's sources of supply must be discussed and identified on a map.	b) The identification, location, type and proximity of potential and historic sources of pollution that may affect the sources of supply must be provided in tabular form or on a map with an index. The sources of supply of the Torrington Water Company must also be provided on the map as a reference.	
	c) A brief description of the watershed inspection program must be provided.	c) The number of surveys conducted annually on the watershed and violations incurred, etc. need to be discussed in the plan. Further discussion is also requested regarding the issuance of recreational permits from the DPH including the specific authorized uses and restrictions imposed upon recreational activities at the Torrington Water Company Reservoirs.	The Company will work the Town of Goshen to determine whether a Water Company lands Recreational Use Permit will be applied for or if recreational use on watershed lands should be prohibited. This is discussed in <u>Insert 1</u> .

APPENDIX G



Litchfield County



Legend

- Identified Septic Tank
- Unidentified Septic Tank
- TWC Owned Parcel
- TWC From Tighe and Bond
- Parcel

APPENDIX H

Allen Dam Watershed Review

TWC

Polluter

MBL #	Id	Acres	Septic	Year Built	Animals	Last Transfer	Owner	Address
03-006-009-00		103.0	0	0	1	2009	GOSHEN CC LLC	133 EAST STREET SOUTH
03-006-010-00		22.2	0	0	1	2010	GOSHEN CC LLC	EAST STREET SOUTH
03-008-001-00		15.8	0	0	1	2010	GOSHEN CC LLC	EAST STREET SOUTH
03-008-008-00		8.8	0	1988	1	2007	MCCARTY LAURA D	430 GOSHEN RD
206/1/1	41	11.3	0	0	1	1994	ACTION WILDLIFE FOUNDATION	0 GOSHEN RD
205/1/1	22	0.9	1	1970		2009	ZAK, JESSICA	1535 GOSHEN RD
205/1/2	21	2.2	1	1950		2001	FEDERICO, CHERYL	1551 GOSHEN RD
205/1/4	42	3.3	1	1950		2014	PASTRE, MARK & THERESA A SURV	1769 GOSHEN RD
205/1/5		8.2	0	0		2010	GOSHEN CC LLC	0 GOSHEN RD
204/1/1	0	192.7	1	1900		2009	GOSHEN CC LLC	0 GOSHEN RD
203/1/4		99.5	0	0		0	NO INFO	538 WEED RD
212/2/1		111.5	0	0		1964	NORTHWESTERN CT GIRL SCOUT COUNCIL INC	0 WEED RD
213/3/10		50.7	0	0		2002	TORRINGTON HISTORICAL SOCIETY INC	0 JOHN BROWN RD
213/3/9		43.7	0	0		1997	KANDEFER, DANIE H JR. & MARYANN	0 POTHIER RD
213/1/1	0	117.2	1	1912		1967	CARROLL, WILLIAM J & CHARLOTTE P	879 POTHIER RD
213/3/13	0	1.1	1	1961		1993	BUTTS, NANCY L	90 JOHN BROWN RD
213/3/24	12	3.7	1	1985		2013	BRENNAN SHAWN T & THERESA L SURV	750 POTHIER RD
213/2/1		73.3	0	0		2002	TORRINGTON HISTORICAL SOCIETY INC	0 JOHN BROWN RD
213/3/28		2.2	0	0		2006	DEBERARDINIS JOSEPH C & CONYEA WILLIAM	0 JOHN BROWN RD
213/3/27		3.0	0	0		2006	DEBERARDINIS JOSEPH C & CONYEA WILLIAM	0 JOHN BROWN RD
213/2/3		3.2	0	0		2015	PECTEAU, JOSEPH R & STEFANIE L SURV	0 JOHN BROWN RD
213/2/2	0	2.7	1	1965		2004	PRINCE, RICHARD J & ISAUARA SURV	265 JOHN BROWN RD
214/1/4	23	0.9	1	1960		2006	WESOLOWSKI, SHIRLEY J	1483 GOSHEN RD
214/1/5	24	0.9	1	1987		2002	HORNER, JOHN R & SHARLENE A SURV	1469 GOSHEN RD
214/1/6	25	1.8	1	1950		2011	MORIN JOSHUA P & CASSANDRA A SURV	1457 GOSHEN RD
214/2/6	30	2.2	1	1940			WRIGHT JAMES & CAROL E SURV	149 WRIGHT RD
214/2/10	31	2.0	1	1900			WRIGHT JAMES & CAROL E SURV	104 WRIGHT RD

TWC Polluter	MBL #	Last Transfer					Owner	Address
		Id	Acreage	Septic	Year Built	Animals		
	214/2/1	13	1.9	1	1950		KUNZIG ROGER F & LILLIAN	526 POTHIER RD
	214/1/9	51	3.9	1	2003		BRIGGS RAHIL	1489 GOSHEN RD
	214/1/7	26	1.6	1	1951		SCHWIRZ JEFFREY L	1431 GOSHEN RD
	214/1/8	27	1.9	1	1954		NORTH DOUGLAS L	1391 GOSHEN RD
	214/2/9	0	43.7	1	2014		COMMERFORD P TIMOTHY & MARGARET SURV	0 GOSHEN RD
	214/2/5		27.9	0	0		JOBERT JILL S ET AL	
	214/2/4	16 & 15	17.1	2	1965, 1877		ROYALS GLENN D & VALERIE R	386 POTHIER RD
	214/2/3	14	7.3	1	1960		STOLICNY JOAN ET AL	432 POTHIER RD
	214/2/13	0	4.8	1	2012		ANTHES WILLIAM RICHARD	0 JOHN BROWN RD
	214/2/16		4.0	0	0		THOMASTON COMMERCIAL HOLDING SERVICES INC	0 RESERVE WAY
	214/2/17		5.7	0	0		THOMASTON COMMERCIAL HOLDING SERVICES INC	0 RESERVE WAY
	214/2/15		4.0	0	0		THOMASTON COMMERCIAL HOLDING SERVICES INC	0 RESERVE WAY
	214/2/14		4.8	0	0		ANTHES WILLIAM RICHARD	0 RESERVE WAY
	214/2/19		10.0	0	0		HERITAGE LAND PRESERVATION TRUST INC	0 GOSHEN RD
	215/5/4		15.5	0	0		HERITAGE LAND PRESERVATION TRUST INC	0 GOSHEN RD
	215/2/15	28	1.2	1	1959		GIANNI GARY & GEORGIA SUSAN SURV	1355 GOSHEN RD
	215/2/14	29	2.8	1	1955		WESOLOWSKI ROBERT & ALISON	1309 GOSHEN RD
	215/2/16	52	41.7	1	2004		ZORDAN ALAN & JENNIFER	228 WEED RD
	223/1/6	0	5.8	1	1985	1	PETROVITZ RAYMOND & PAMELA L SURV	71 JOHN BROWN RD
	223/1/14		2.2	0	0		ANTHES WILLIAM RICHARD	0 UNIVERSITY DR
	223/1/15	0	2.3		2011		FILIPPINI, THOMAS & LAURIE	557 UNIVERSITY DR
	223/1/5	7	3.2	1	1800	1	BOMBARDIERI ROBERT	505 UNIVERSITY DR
	223/1/16	0	2.3	0	0		ANTHES WILLIAM RICHARD	0 UNIVERSITY DR
	223/3/16	0	6.1	1	2000		KIESELBACH PETER & CINDY SURV	272 UNIVERSITY DR
	223/1/3	0	10.8	1	1989		HAUCK JOHN J	377 UNIVERSITY DR
	223/1/1	17	10.4	1	1973		CORTESI PAUL & MARY MARGARET	269 UNIVERSITY DR
	223/1/8		0.8	0	0		BELMONTE SUSAN D	311 UNIVERSITY DR
	222/3/2		68.7	0	0		HERITAGE LAND PRESERVATION TRUST INC	0 UNIVERSITY DR
	223/2/20	0	0.7	1	1950		POWERS STEVEN J & SAMANTHA SURV	540 UNIVERSITY DR

TWC

Polluter

MBL #	Id	Acreage	Septic	Year Built	Animals	Last Transfer	Owner	Address
223/2/19		0.5		0		2005	DEMING CLAYTON F JR	0 UNIVERSITY DR
223/1/9	6	5.4	1	1985		2015	FRAZIER DAVID GOPEN LINDABETH COTTES	429 UNIVERSITY DR
223/1/12	1	0.5	1	1920		2015	BELMONTE SUSAN D	357 UNIVERSITY DR
223/1/2	20	0.5	1	1942		2015	BELMONTE SUSAN D	333 UNIVERSITY DR
223/1/7	19	0.4	1	1940		1978	BELCHER JOHN	271 UNIVERSITY DR
223/1/10	4	5.1	1	1988		2011	BLAKE KIM D	393 UNIVERSITY DR
223/1/10	5	0.3	1	1956			REALE ADELE	413 UNIVERSITY DR
223/1/11	18	3.4	1	1973		1985	CORTESI PAUL & MARY MARGARET	0 UNIVERSITY DR
214/2/20		1.2	0	0		2013	THE RESERVE AT MT PLEASANT & ANTHES WILLIAM O RESERVE WAY	
222/3/1	0	1.7	1	1900		2008	GABELMANN DAVID C & SURV	60 UNIVERSITY DR
222/3/43	0	0.9	1	1990		1992	VERSTEEG JOSEPH H & PAULA L	86 UNIVERSITY DR
222/3/44	0	1.0	1	2002		2002	WILLIS WAYNE & ANNA R SURV	100 UNIVERSITY DR
205/1/3	0	13.2	0	0		0	TORRINGTON WATER COMPANY	
214/2/7	0	132.0	0	0		1913	TORRINGTON WATER COMPANY	
214/2/8	0	111.0	0	1968		1968	TORRINGTON WATER COMPANY	
214/2/11	0	22.4	0	1998		1998	TORRINGTON WATER COMPANY	
214/2/2	0	35.0	0	2014		2014	TORRINGTON WATER COMPANY	
214/2/18	0	6.3	0	2010		2010	TORRINGTON WATER COMPANY	
214/3/1	0	248.0	0	0		0	TORRINGTON WATER COMPANY	

APPENDIX I

THE TORRINGTON WATER COMPANY
RAW WATER QUALITY

	Reuben Hart				Allen Dam			
	Color	pH	Turbidity	Coliform	Color	pH	Turbidity	Coliform
03/03	17	6.9	0.69	4	15	7.5	0.55	120
5/03	15	7.23	0.83	56	15	7.63	0.58	250
8/03	20	7.36	0.64	170	30	7.45	1.20	970
11/03	30	7.09	0.93	620	20	7.58	0.54	4800
2/04	25	6.93	0.95	24	10	7.56	1.96	280
5/04	15	7.31	0.65	1300	15	7.74	2.10	9000
8/04	0	7.58	0.5	1900	15	7.44	1.42	18000
11/04	40	7.06	1.28	80	10	7.46	0.65	380
02/05	20	6.68	0.71	82	10	7.27	0.98	140
05/05	25	6.88	1.10	120	20	7.65	2.10	3700
08/05	20	7.4	0.52	1400	10	8.01	0.75	4100
11/05	40	7.02	1.81	190	20	7.52	0.72	480
02/06	15	6.82	1.27	200	0	7.43	0.61	350
05/06	10	7.09	1.51	30	5	7.48	0.39	100
08/06	20	7.42	0.82	1300	40	7.38	3.79	3600
11/06	20	7.17	1.33	110	5	7.51	0.38	680
02/07	15	7.0	0.86	7	5	7.58	0.75	320
05/07	25	7.03	3.63	140	10	7.73	0.48	1100
08/07	10	6.9	0.62	150	30	6.88	3.21	2500
11/07	40	7.2	1.53	60	10	7.74	0.88	1,100
02/08	30	7.22	1.11	86	30	7.59	1.49	1400
5/08	30	7.16	1.39	140	25	7.64	0.52	300
8/08	10	7.36	0.72	5500	20	7.51	2.17	2400
11/08	30	7.98	2.12	210	10	8.1	0.7	780
Average	21.75	7.16	1.15	578.29	15.83	7.56	1.21	2368.75

APPENDIX J

WLSD Collection System

Operating Like New

Gravity systems are susceptible to low amounts of Inflows and Infiltration ("I/I") to enter the system via pipe connections, manhole covers and lateral connections. The current waste water design standard, issued by New England Interstate Water Pollution Control Commission (NEIWPCC), TR-16, for new collection systems allows 500 gallons per day (gpd) of I&I inflow per day per inch of pipe diameter per day per mile of gravity sewer pipe.

The Woodridge Lake Sewer District has 16.2 miles of gravity sewer pipes, which was constructed in 1974, 42 years ago. Applying the current design standard to our system would allow for 64,800 gpd of I/I for a new collection system.

The District has spent over \$1.4 million dollars to upgrade infrastructure:

- All 8 pump stations have a state of the art Supervisory Control and Data Acquisition (SCADA) system to monitor our flows and pumps
- Sealing 200 manholes
- Sealing 12,000 feet of pipe
- Repairing two deep-cut deficiencies in the main sewer line

All of this improved the effectiveness of our collection system.

This chart below shows the number of days WLSD's I/I exceeded the design standard. The project began in 2013 and the progressive reduction can be seen year over year.

	2013	2014	2015	2016
Days Exceeded Standard	91	76	53	7
Average I/I Flow gpd	48,553	41,271	27,986	25,830
Average Total Flow gpd	111,553	104,271	90,986	88,830

Since the completion of these upgrades and repairs in August of 2015, WLSD's I&I flows have been under the new system design standard 97% of the days.

The collection system has been repaired and upgraded and now performs as a new system.

APPENDIX K

COMPLIANCE STATEMENT

This Compliance Statement shall be signed by: (1) You (if an individual - the individual signs); (if a corporation or partnership - by a responsible corporate officer/general partner or a duly authorized representative of such person, as those terms are defined in section 22a-430-3(b)(2) of the Regulations of Connecticut State Agencies); or (if a municipality - chief elected official or principal executive officer) and (2) if different, by the individual responsible for actually preparing such statement, each of whom shall read and sign the certification regarding false statements on the Compliance Statement.

Within fifteen days of the date you become aware of a change in any information in the Compliance Statement, or that any information was inaccurate or misleading or that any relevant information was omitted, submit the correct or omitted information to the DEEP and EPA staff contacts identified in the Notice of Violation.

Notice of Violation Date: May 6, 2009
Facility name: Woodridge Lake Sewer District
Facility address: 113 Brush Hill Road
P.O. Box 258
Goshen, CT 06756
Attention: Raymond Turri,
President NOV WRMU 09-007

In accordance with the directions in the above - referenced Notice of Violation, I certify that the noted violations *and additional comments have been corrected in the following manner:

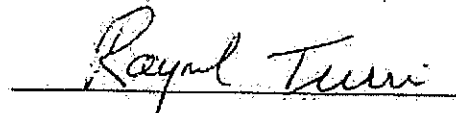
Attach sheet(s) as needed
(Enclose supporting documentation demonstrating compliance)

Certification of Accuracy

I certify that the information in this Compliance Statement and any attachments thereto are true, accurate and complete, and I understand that any false statement may be punishable as a criminal offense under Connecticut General Statutes sections 22a-6 and 53a-157.

August 25, 2016

860 605 5758



Raymond Turri, President

113 Brush Hill Road
Goshen, CT 06756

WOODRIDGE LAKE SEWER DISTRICT

113 Brush Hill Road
Goshen, CT 06756

Re: NOV/WR/MU#09-007

Subsequent to receiving the Notice of Violation our goal was to employ a certificated class III person to operate the facility. Upon completion of potential employee interviews, Charles J Ekstrom III was hired as Superintendent Class IV certified with 40 years of experience to operate the WLSD plant. His employment began on September 20, 2009. Charles made a decision to hire and mentor new operators which are listed below:

Jason Patrick: Date of hire October 27, 2009 no experience. Completed Chief operator certified class III. He was recently hired by the City of Waterbury WPCA as a shift supervisor.

Mark Therault: Date of hire April 26, 2010 certified class II operator, qualifies for the class III exam.

Charles Fennimore: Date of hire January 21, 2015 eligible for the class I certification exam in January 2017

Joseph Palumbo: Date of hire March 28, 2016 eligible for the class I exam, no certificate until first year of employment complete.

As of this date Charles J Ekstrom remains in charge as our plant Superintendent.

RT

APPENDIX L

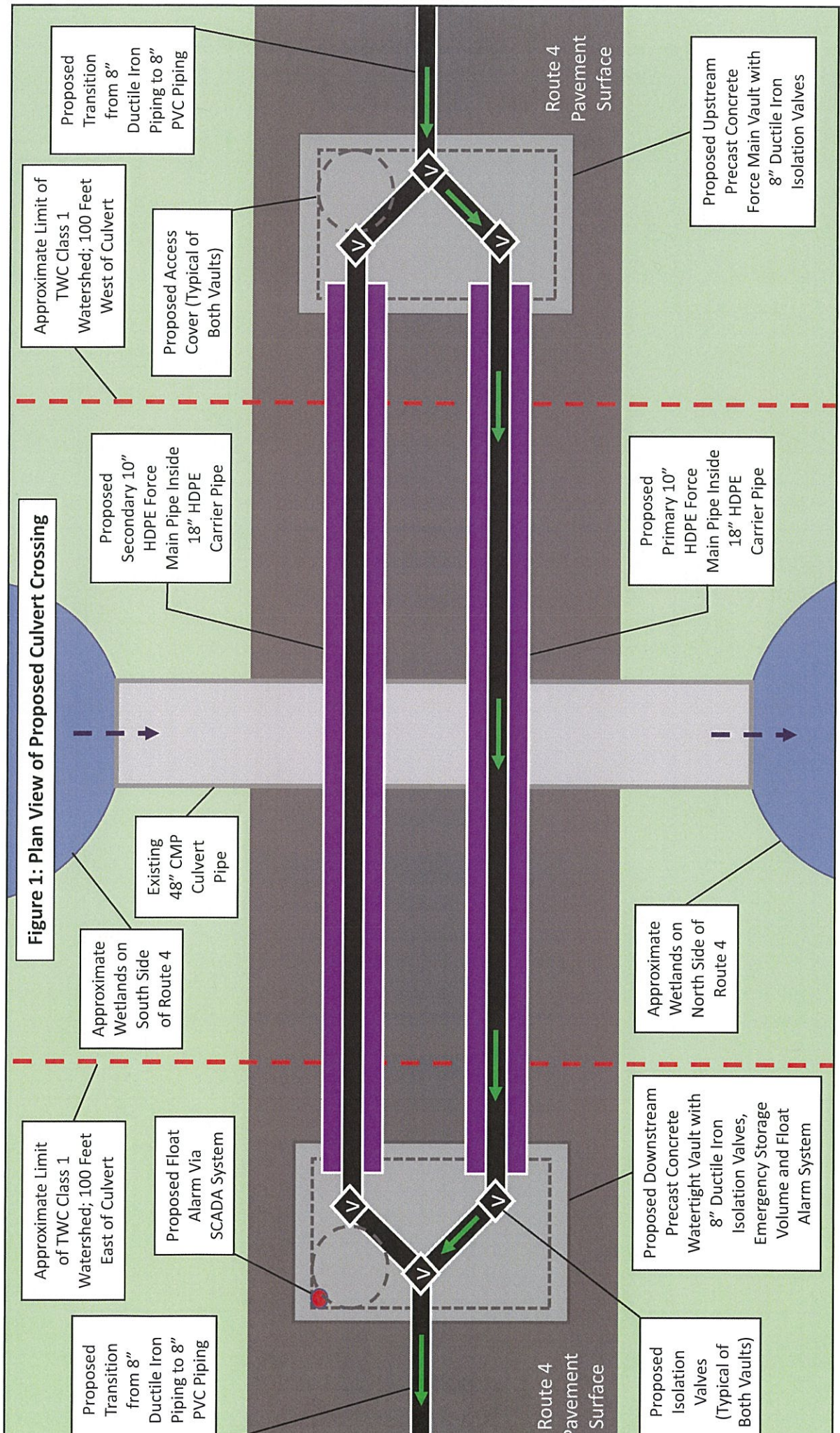


Figure 1: Plan View of Proposed Culvert Crossing

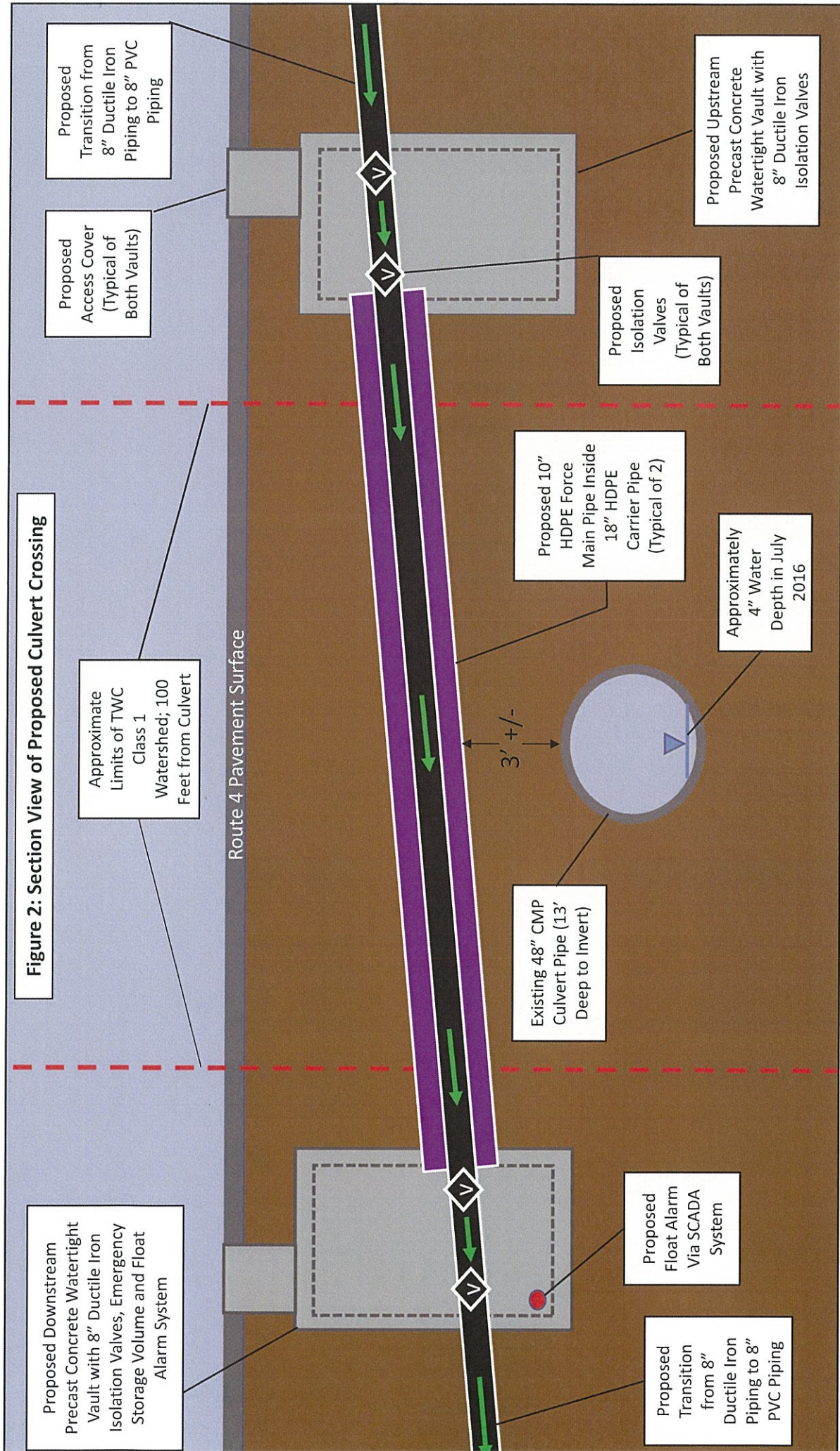
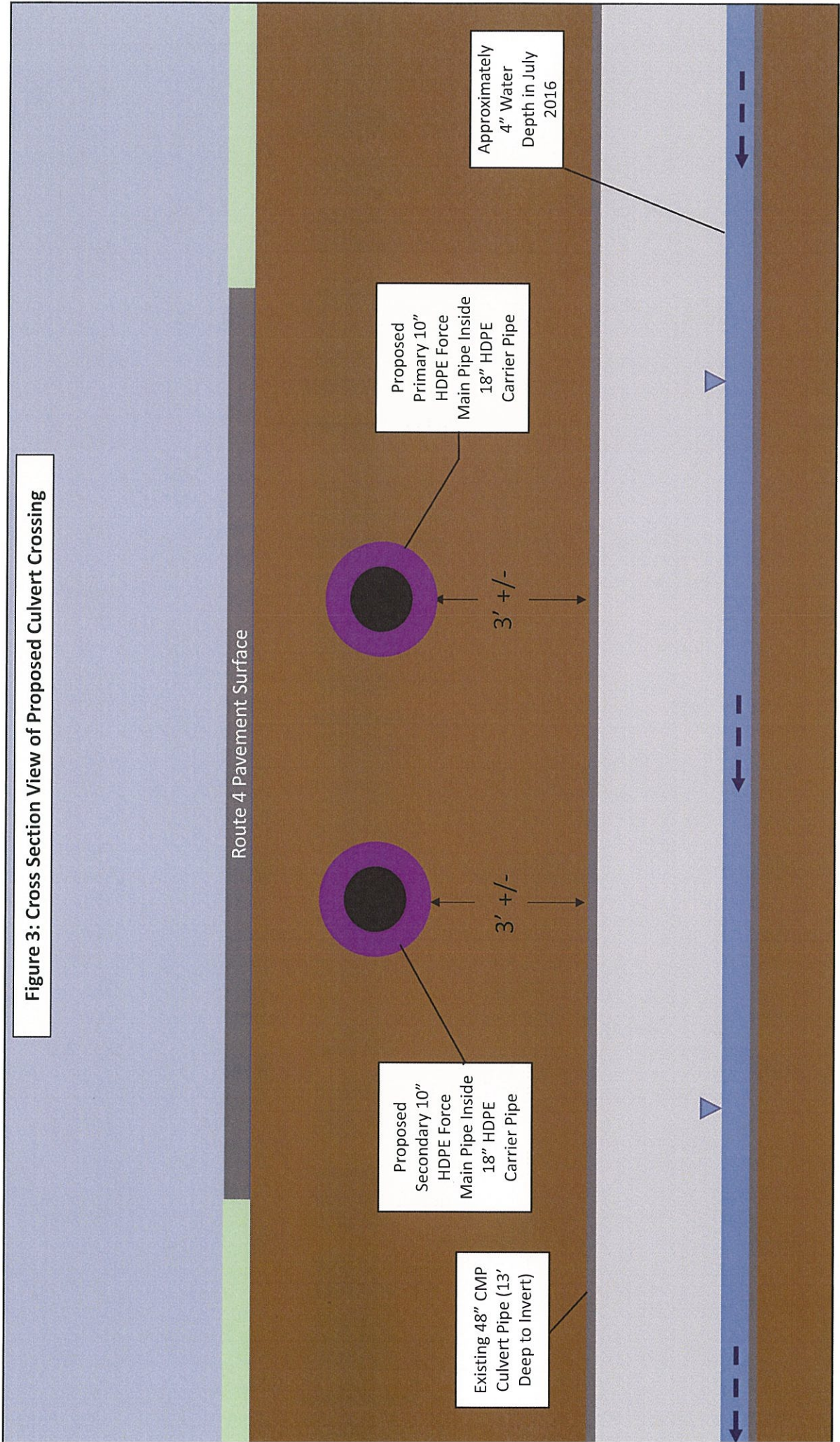


Figure 2: Section View of Proposed Culvert Crossing

Figure 3: Cross Section View of Proposed Culvert Crossing



APPENDIX M

TO:	Ray Drew	DATE:	April 26, 2016
FROM:	Christine Kurtz Rick Cruanes	PROJECT NO.:	13164E
SUBJECT:	Evaluation of Force Main vs. Gravity		

Reference the Memo dated February 24, 2016: Summary of key observations regarding the preliminary design concepts for the potential future discharge of wastewater from the WLSD in Goshen into the City of Torrington sewers.

3. Gravity vs. Force Main

Gravity:

- A. Regarding culvert crossings, it appears to be in areas with sufficient pipe slope to allow a gravity sewer to pass under the culverts with drop manholes if necessary, and then quickly shallow up downstream. This would be confirmed during final design efforts and not considered a major concern at this time.

Fore Main:

- B. The elevation difference between the beginning and end of the main indicates that the force main will essentially act as a gravity pipe. A majority of the force main will drain to Torrington once the pumps are turned off; approximately 85% of the pipe will be empty. However, the profile of the force main indicates that there are two low points in the profile, these two low points should be further investigated to determine if they can be reduced or eliminated. Wastewater will remain in the two low points when the pumps are turned off.
- C. If the force main route is chosen it should end at the point the existing gravity sewer starts just west of Lovers Lane. The existing gravity sewer should be replaced from the point of force main connection to the interconnection with the West Interceptor; the new sewer should be increased to accommodate both Torrington and WLSD flow. The calculations used to determine the correct size should be provided.
- D. The potential for air entrapment needs to be addressed. The proper type, size and locations of valve(s) need to be designed into the system. It is unclear of the valve type to be provided; these could include air release valves, air/vacuum valves, or combination valves.

General:

- E. No matter which alternative is chosen, it would not be good engineering practice to install the force main over the existing gravity sewer. The force main should be in its own trench which would increase the cost of the force main alternative slightly.

Installation of a force main to the point of connection to the West Interceptor is not recommended, this would require long term maintenance and future replacement of two pipe systems. As previously stated the force main if allowed should terminate at the point the existing gravity sewer begins. This would eliminate potential unknown conflicts with existing utilities.

- F. The installation in the City of Torrington shall meet Torrington construction standards for pipe, trench, bedding, pavement, etc.
- G. When comparing such alternatives, consideration should be given to which piping system is easier and least costly to maintain for Torrington.

4. Odor Control

Gravity or Force Main: Odor control measures are warranted to address potential odors being released when the pumps start and reactivate the wastewater at the two low spots. The slope of the pipe may help re-oxygenate the wastewater and mitigate odors in the steep sloped areas. Also, the effect of H₂S at these locations should also be considered.

The use of Bioxide for odor control measure appears to be relevant for this project and could help with the effect of H₂S on the infrastructure. This type of chemical system requires 1 to 2 hours of retention time in the force main. Based on the information provided, the low spots that will contain wastewater will exceed this retention time. As part of the installation requirements of this system the City would require (at a minimum) annual testing and calibration performed by an independent party. Appropriate measures along the route should be incorporated to allow for H₂S monitoring and sampling.

The Inter-Municipal Agreement should include language with regard to requiring odor control measures to be installed and maintained; with the ability for Torrington to assess penalties if complaints arise and WLSD does not take measure to address the situation(s).

5. Capital Cost Comparison

Gravity: Note that minor cost savings with the gravity alternative can be achieved by shallowing the depth, eliminating some manholes, and directional drilling in the deep cut areas. However, depth and directional drilling savings cannot be quantified without looking at the geotechnical study and further evaluation.

Force Main: With regard to the cost evaluation and the cost burden being on WLSD, it is unclear if the cost of both pumping stations is included in the cost comparison. If the cost of the pumping stations is not included in the comparison, the savings represented by constructing a force main may not be accurate.

The cost comparison should be re-done once all design points are agreed to.

Memo: Mr. Raymond Drew
April 26, 2016
Page 3

Conclusion:

The majority of the force main discharge from the WLSD pumping system within Torrington will function like a gravity pipe; approximately 85% of the force main will drain when the pumps stop running. A significant capital investment is needed to construct a gravity pipe (i.e. because of the deeper construction) within Torrington. It is reported that the gravity will cost over \$1M more than the force main.

Both discharge types are technically feasible. Odor control can be a concern where the wastewater discharges to gravity. The profile indicates there will be more than one location to mitigate potential odors; this can be achieved with a properly designed and maintained odor control system.

Taking the above into consideration, the force main discharge appears to be the most cost effective means for transporting WLSD wastewater to the City of Torrington wastewater collection system for treatment.

APPENDIX N

November 18, 2016

Lori Mathieu, Public Health Section Chief
CT Department of Public Health
Drinking Water Section
410 Capitol Avenue
MS#51-WAT
PO Box 340308
Hartford, CT 06134-0308

RE: Woodridge Lake Sewer District's Proposed Regional Sewer Connection Project

Dear Ms. Mathieu:

Inadequate treatment and dispersal of sewage from the residential community of Woodridge Lake has been a long standing threat to water quality in Connecticut. In 1989 the Department of Energy and Environmental Protection ("DEEP") entered into a consent order requiring, among other things, Woodridge Lake Sewer District ("WLSD") to investigate the hydraulic capacity of the ridge and furrow dispersal system. After a series of engineering reports that DEEP found inadequate, a comprehensive report in 1995 demonstrated to the DEEP that the WLSD infiltration site located off Brush Hill Road in Goshen was not a viable long term wastewater dispersal option for the treated wastewater from the community. The ridge and furrow dispersal site lacks sufficient hydraulic capacity for current and future peak wastewater flows. When the hydraulic capacity of the dispersal system is exceeded it creates overland flow and a point source discharge to surface waters of the West Branch Bantam River, which is classified as Class AA waters.

To address the above issue, WLSD hired Woodard and Curran to perform wastewater facilities planning. The report completed by Woodard & Curran concluded that the transmission of WLSD wastewater along Route 63 and Route 4 to Torrington's collection system for subsequent wastewater treatment and disposal is the most practical solution to the existing community pollution problem. DEEP concurred with this assessment.

What makes this community pollution problem unique is the size of the taxing district and its location. The community wastewater service area is located within the Shepaug Reservoir Class AA watershed. The current disposal system is located in an adjacent Class AA watershed (Class AA watersheds are existing or potential drinking water supply areas). There are no nearby subsurface treatment options available. In addition, the fiscal burden for any solution will be shouldered by less than 900 property owners. The chosen solution must not only be viable, but also economically practical for WLSD. The recommended route is the most cost-effective solution.

Since DEEP is not the funding agency, an Environmental Impact Evaluation (EIE) is not required at the state level. This project is receiving 100% USDA – Rural Development funding. As a result, the environmental review is addressed through the National Environmental Policy Act (NEPA) process.

In considering the potential environmental impacts of the proposed routes, DEEP offers the following information. The Highland Avenue Alternative was considered less viable due to where it would tie into the existing Torrington wastewater system, the extra cost to implement the system, the hardship to the town of Torrington to have those flows come into the sewer system in a less than desirable location, and the increased possibility of odor issues due to the topography. This route is completely outside the Allen Dam Reservoir Watershed however, it is within a Class AA watershed area and passes by several small public water systems.

The proposed Route 4 Alternative, and the Weed Road Alternative, both pose the same de minimis level of risk to the Allen Dam Reservoir Watershed. Disregarding all other factors, the Route 4 Alternative is a more direct route that traverses below the Allen Dam Reservoir through the Allen Dam Reservoir Watershed. It would connect to Torrington sewers already located in the Allen Dam Reservoir Watershed south of Crystal Lake. All proposed pipes in Torrington will be within existing roadway right-of-way of the CT Department of Transportation (DOT) and transferred to the City of Torrington Water Pollution Control Authority (WPCA) for operation and maintenance. This route has no direct impact to any wetland or water courses along the route within Torrington. The transmission system is specifically designed as a force main so that no changes in zoning nor any expansion of the existing sewer service areas can occur in either town.

The two pump stations utilized to convey the sewage along Route 63 and Route 4 will be situated in Goshen, outside of the Allen Dam Watershed. The force main will then traverse across the town line to Torrington and connect to an existing 24" interceptor. The force main will be double-walled and have transducers to detect leakage which can immediately stop the flow of sewage through the line. DEEP recognizes WSLD's efforts to make this pipe as tight as possible and concurs with having it in a road right-of-way rather than going cross-country.

DEEP has also reviewed the Torrington Water Company Water Supply Plan dated February 25, 2009. In the Plan it was noted that the Allen Dam Reservoir has a "low detention time and poor dilution capacity." The plan also noted that "there exist about 40 potentially contaminating properties on this watershed." The Water Supply Plan goes on to state that the Company operates the reservoir on an "infrequent basis" based on fire use, severe drought and rainfall occurrences. Further on in the plan, it states that the reservoir is considered an "emergency source" even though it is listed as an active source.

Based on the infrequent use of the reservoir and the minimal possibility of a sewer main break, it appears the potential threat to this reservoir is minimal. DEEP must also weigh other considerations, such as: ability to construct the project, cost impact both for construction and Operation and Maintenance, availability of funding and the preferences of the Torrington Water Pollution Control Authority for this particular route. This project is being funded through USDA Rural Development and also includes replacement of thousands of feet of existing old pipe in Torrington at NO COST to Torrington. It is also the most cost effective solution. Should that funding be lost, the project would revert to pursuing state funding at a higher cost to state tax payers. In addition, please keep in mind that were this project to be funded with state monies, WSLD would be obligated to construct the most cost-effective solution to remediate the existing

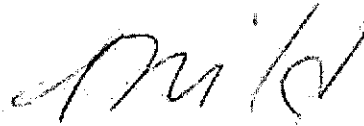
community pollution problem in accordance with the cost-effectiveness requirement of the federal Clean Water Act.

On balance, DEEP believes the high level of protection of the water sources along the route through pipe location and design and the commitment from both WLSD WPCA and the Torrington WPCA to work together for the best solution for both communities makes the Route 4 the best option. The City of Torrington has a vested interest to protect the water supply not just for the privately owned Torrington Water Company but for the citizens of Torrington. The route chosen provides the necessary balance to resolve a long standing community pollution problem and improve water quality while providing appropriate protection of watersheds. DEEP commends the Torrington WPCA for its inter-municipal cooperation that is essential for solving this on-going community pollution problem.

The proposed project results in advancements in water quality and presents a de minimis threat to the watershed. On balance this is a solution that meets ambient water goals while protecting public water supplies.

If you have any addition questions or need additional information, please contact Denise Ruzicka of my staff at (860) 424-3853 or by email at denise.ruzicka@ct.gov.

Sincerely,



Betsey Wingfield
Bureau Chief
Bureau of Water Protection and Land Reuse

cc: Johan Strandson, USDA-RD (via e-mail)
Ray Turri, President, WLSD (via e-mail)
Oswald Inglese, DEEP (via e-mail)