



Woodridge Lake  
Sewer District  
(WLSD)

Regional Sewer  
Connection Project

Project Update  
Report

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## PROJECT UPDATE REPORT

### PROPOSED REGIONAL SEWER CONNECTION PROJECT WOODRIDGE LAKE SEWER DISTRICT (GOSHEN, CT) NOVEMBER 21, 2016

#### 1. BACKGROUND

##### A. INTRODUCTION

This Project Update Report (PUR) summarizes supplemental information related to the Woodridge Lake Sewer District (WLSD) and its proposed Regional Sewer Connection Project (Project) since the Facilities Plan Summary Report (FPSR) of May 9, 2016 was Approved by the Department of Energy and Environmental Protection (DEEP) on May 17, 2016. This PUR: recaps wastewater facilities planning tasks; provides an updated summary of the alternatives analysis; and describes the recommended plan for the proposed Project. Copies of the Appendices included in the earlier FPSR have not been included in this PUR.

##### B. PLANNING ENTITY

WLSD acts as an independent municipal tax district. WLSD is an entity currently comprised of only 691 existing residential dwellings, led by volunteers and citizen participation. The WLSD Board and its Sub-Committees (Finance, Planning, Operations and Capital) meet regularly to review budgets, capital projects, and wastewater planning information.

##### C. PLANNING AREA

The Woodridge Lake Sewer District (WLSD) is an existing, private residential development around 385-acre Woodridge Lake in the Town of Goshen, Connecticut. The Planning Area, including the existing sewer service area, parcels comprising WLSD and Woodridge Lake itself, is depicted in the figure in Appendix A.

##### D. DRIVERS

WLSD's wastewater infrastructure was constructed in 1972. DEEP issued a Consent Order (CO) to WLSD on July 27, 1989. The CO requires WLSD to address its sanitary sewer collection and wastewater treatment/disposal needs. The CO remains in effect today.

The regulatory concerns associated with the Water Pollution Control Facility (WPCF) effluent disposal system are centered on the surrounding GAA groundwater, and separation to groundwater and travel time, all of which relate to protection of public health and the environment. Therefore, identification of a long-term wastewater treatment and disposal solution is the primary Project goal.

##### E. FACILITIES PLANNING BACKGROUND

The Woodridge Lake Sewer District (WLSD) retained Woodard & Curran in 2010 to complete the Wastewater Facilities Plan Project, including wastewater management goals for the 20 year planning period.

##### F. COORDINATION WITH OTHER AGENCIES

Several agencies were contacted and consulted during the Project. These include DEEP, the Department of Public Health (DPH), other Federal/State offices per the above environmental/social resources, the Town of Goshen (First Selectman, WPCA, Inland Wetlands and Planning/Zoning), the City of Torrington (WPCA, Inland Wetlands, Planning/Zoning, Department Heads, Mayor's Office), WLSD residents, the Torrington Water Company, local, State and Federal elected officials.

WLSD prepared and submitted the scope of work for the Wastewater Facilities Plan Project, together with subsequent Amendments, to DEEP for review. DEEP subsequently issued Pre-Approvals, the Clean Water Fund (CWF) Agreement, and CWF Amendments for the Wastewater Facilities Plan Project. The FPSR of May 9, 2016 was submitted to DEEP for review. DEEP issued an Approval Letter on May 17, 2016, a copy of which is included in Appendix B. WLSD is not requesting funding from DEEP through its Clean Water Fund (CWF) Program for the proposed Regional Sewer Connection Project.

WLSD secured a funding commitment from the United States Department of Agriculture's Rural Development (USDA-RD) office in April 2016 for the proposed Project. As part of their funding program, USDA-RD approved both the Preliminary Engineering Report (PER) of February 10, 2016, and the Environmental Report (ER) of March 16, 2016 for the proposed Regional Sewer Connection Project.

Since DEEP's Approval of May 17, 2016, WLSD commenced the Design and Permitting Phases for the proposed Regional Sewer Connection Project. This PUR includes an update of the alternatives analysis based on Torrington Water Company (TWC) watershed mapping that was made available to WLSD during the wetlands permitting process in August 2016. We note that during the planning phase, no maps were available to identify the boundaries of the TWC watershed. Despite multiple public meetings, earlier permitting events, as well as notices and conversations, TWC did not identify the issues of, or boundaries of, the watershed as they relate to the proposed Project.

## **G. PUBLIC PARTICIPATION PROGRAM**

WLSD holds regular Annual Meetings with its residents, has an active public participation program, and a WLSD website regarding activities and projects in the sewer service area and at the Water Pollution Control Facility (WPCF).

During this facilities planning process, there were regular Planning Committee meetings, Finance Committee meetings, WLSD Board meetings, informational workshops with residents, and Annual District meetings and budget meetings. In addition, WLSD is familiar with capital planning efforts, having recently implemented the I/I Removal and Pump Station Upgrades Projects, both of which were funded by USDA-RD. The public participation process included several meetings over the past five years with residents, Torrington, Litchfield, DEEP, DPH and DOT, as well as Torrington Water Company representatives, some of whom live in and adjacent to the WLSD sewer service area.

WLSD held its most recent Annual Meeting on April 30, 2016, to discuss the plans associated with the proposed Regional Sewer Connection Project with its residents. The residents expressed support for the Project. The residents subsequently voted to Authorize funds for the proposed Project at their Annual Budget Meeting on May 28, 2016.

In addition to WLSD's public meetings, the Town of Goshen and City of Torrington also held public meetings for their Planning & Zoning (P&Z) and Inland Wetlands Commissions (IWC). Both P&Z Commissions provided positive 8-24 Referrals, and both IWCs issued permits for the proposed Project.

## **H. RECENT SYSTEM UPGRADES**

WLSD implemented several wastewater system upgrades and proactive maintenance measures over the past several years:

- In 2013, open cut sewer main repairs were performed to address pipe needs, eliminating the potential for excessive infiltration and inflow (I/I) at these locations.

- In 2015, an I/I Removal Project was performed to grout and line sewer mains and manholes. Although WLSD's unit I/I flows are well below the State's wastewater design guidelines (TR-16), these efforts further reduced extraneous flows into the collection system.
- Also in 2015, the Pump Station Upgrades Project was implemented to improve emergency readiness and remote monitoring capabilities, by adding supervisory control and data acquisition (SCADA) systems at WLSD's eight wastewater pump stations.

## 2. EXISTING CONDITIONS

The existing sanitary sewer collection system, pump stations, WPCF and effluent disposal system are shown in the figures in Appendix A.

### A. COLLECTION SYSTEM

The WLSD collection system was privately constructed approximately 40 years ago, and includes 16.2 miles (85,500 feet) of gravity sewer and 1.9 miles (10,000 feet) of force main piping. The majority of the gravity sewer mains are plastic truss pipe, with a limited amount of cast iron pipe. Of the 691 existing sewer connections, approximately 115 are low-lying homes around Woodridge Lake that are served by individual grinder pumps, which discharge to mainline gravity sewers.

During the Wastewater Facilities Plan Project, the average daily wastewater flow to the WLSD WPCF was approximately 105,000 gallons per day (gpd) from January 2010 through December 2011.

Wastewater is comprised of sanitary and I/I flow sources. Although there are only 691 current sewer connections, WLSD's sewer system includes a greater length of sewer mains than a typical sewer system. This is based on the layout of the sewer system around Woodridge Lake. On a unit I/I flow basis, WLSD's system-wide I/I is relatively low, even compared to the State's design standards (TR-16) for current day new sewer pipe construction.

Based on our observations since the 2015 I/I Removal Project, the average annual sanitary flow is approximately 63,000 gpd, and the remaining average annual I/I (substantially reduced from recent efforts) is approximately 42,000 gpd.

In order to minimize I/I, the Wastewater Facilities Plan incorporated several I/I evaluation tasks and investigations, including flow monitoring, flow isolation, physical site inspection, building inspections, smoke and dye testing, manhole inspections and CCTV inspections.

The 2015 I/I Removal Project significantly reduced I/I in the collection system, and based on flow data since Summer 2015, I/I flows have decreased considerably.

WLSD has also implemented an annual I/I monitoring program to observe I/I in its collection system. These efforts will allow WLSD to continuously monitor I/I, remove I/I sources as necessary, and continue to proactively manage its I/I flows on an annual basis.

### B. PUMP STATIONS

The WLSD collection system includes eight pump stations. The pump stations were constructed approximately 40 years ago, concurrent with the sewer system.

During the Wastewater Facilities Plan Project, the primary emphasis in the evaluation of WLSD's pump stations was improving emergency readiness, remote connectivity, and flow monitoring capabilities.

These concerns were addressed in 2015 as part of the Pump Stations/SCADA Upgrades Project, which included emergency bypass headers, magnetic flow meters and valve upgrades at WLSD's two primary pump stations (Pump Station 6 and Plant Pump Station), as well as SCADA integration of all eight pump stations, including the six smaller/satellite pump stations around Woodridge Lake, with the control system at the WPCF. WLSD now has advanced remote monitoring capabilities at all of its pump stations, fostering improved emergency readiness for its wastewater systems.

### **C. WATER POLLUTION CONTROL FACILITY**

The WPCF and effluent disposal system are located on a separate 90-acre site, east of the sewer service area. The existing WPCF was constructed in 1972. The WPCF incorporates several unit treatment processes, including preliminary treatment equipment, activated sludge, rapid rate multi-media filtration, aerobic sludge digestion, sludge drying beds, a waste sludge dewatering system, as well as an Operations Building and Garage Building.

Effluent produced by the WPCF typically meets the existing permit requirements for treatment.

The entire WPCF was evaluated during the Facilities Plan. The planning process included the evaluation of several potential permit conditions, based primarily on the anticipated effluent disposal system needs. For example, WPCF needs under the current permit discharge conditions were evaluated, which resulted in a typical secondary treatment system. In addition, WPCF permit conditions centered on reuse-quality effluent were also considered to simulate the potential limit-of-technology option for an advanced WPCF upgrade.

Visual inspection of the 40+ year old in-ground steel tanks suggests that remaining serviceability is severely limited. The rapid rate multimedia filtration system has neither been able to perform as intended since construction in 1972 nor remain in service since being upgraded approximately five to ten years ago. Solids produced at the WPCF are dewatered and disposed of on-site to the east of the WPCF unit processes. The anticipated future permit requirements and excessive age of the equipment at the WLSD WPCF minimize the life expectancy of the facility.

The WPCF was not designed to provide the high levels of treatment that are anticipated to be required in the future as a result of the continued use of the on-site effluent disposal fields. In order to incorporate nitrogen removal at the WPCF, the existing tank volume would need to be approximately three times as large as the existing process tanks.

### **D. EFFLUENT DISPOSAL SYSTEM**

WLSD utilizes groundwater disposal for treated effluent, which is regulated by DEEP through a 1977 Discharge Permit as well as the 1989 CO. The WLSD WPCF discharges effluent to the effluent disposal system, which consists of approximately 90 beds across the 90 acre site. These beds were constructed in a ridge and furrow configuration with most of the beds approximately 25 feet wide, and ranging in length from just over 100 feet up to 700 feet. Treated effluent is discharged to the beds via a series of pipelines and valves. WPCF staff manually open and close valves to direct effluent to individual beds, and typical operation involves loading only a single bed at a time. The system is not configured to allow operation of multiple beds simultaneously: (1) because of existing piping limitations; and (2) since the beds are not at the same elevation, thus preventing effective distribution of flow.

In addition to collection system needs, the existing effluent disposal system was tested and evaluated during the Wastewater Facilities Plan. This testing protocol, approved by DEEP, incorporated a number of considerations from DEEP's "Guidance for Design of Large-Scale

On-Site Wastewater Renovation Systems” (2006 Guidance Manual) for the Field Flow Testing Plan. Because the 2006 Guidance Manual is based on development of new systems versus renovation of existing ones, WLSD performed large-scale testing to demonstrate site capacity in lieu of small-scale and laboratory testing criteria. The key testing and evaluation criteria included separation distance under seasonal high groundwater conditions, unit flow rate and travel time.

The 2006 Guidance Manual requires an unsaturated separation distance of three feet between the top of mounded groundwater and the bottom of the effluent disposal system. For the purpose of the testing, WLSD used a distance of 1.5 feet from the bottom of the existing beds to the top of mounded groundwater under seasonal high groundwater conditions. The reduction in separation distance to groundwater is similar to other facilities in the State where variances were granted, or in those cases where advanced treatment systems are in use to provide advanced pathogen reduction prior to discharge of the effluent to disposal systems. Separation distance must be maintained under seasonal high groundwater conditions. However, these conditions did not exist in Spring 2012 when the testing was conducted. Therefore, WLSD modified its approach to account for the conditions at the time of testing by increasing the separation maintained during the testing based on well elevations in both on-site and USGS reference wells.

The 2006 Guidance Manual allows a maximum unit flow rate of 1.2 gallons per day per square foot (gpd/sf) of bed bottom area for tertiary treated wastewater effluent. The 2006 Guidance Manual requires a minimum travel time from the point of effluent discharge of a bed to the closest point of concern (surface water or property line) of 21 days.

The capacity of the existing beds considered, provided an estimated capacity ranging from 125,000 to 195,000 gpd under seasonal high groundwater conditions, depending on design and operational features. However, DEEP disagreed with the results of the testing and contends that the existing effluent disposal system does not have sufficient capacity for the current or proposed system flows.

During the Facilities Planning Process, we estimated that average annual flows, including current connections, future connections (previously approved with no changes to sewer service area limits), and I/I flows would be greater than 100,000 gpd, the design capacity of the existing effluent disposal system, at design conditions. Although the 2015 I/I Removal Project reduced I/I flows, the long-term reduction of average annual system flows below 100,000 gpd may not be possible.

### 3. FUTURE CONDITIONS

There are no proposed changes to WLSD’s sewer service area, and no new collector sewers are proposed as part of the proposed Regional Sewer Connection Project. WLSD’s Project includes only measures to provide a long-term solution for wastewater treatment and disposal.

There are currently 691 existing residential developments connected to the WLSD sanitary sewer system. Based on 2010 Census data, the unit population per home in Goshen is 2.54. This results in an estimated current population of approximately 1,755. Over the past several years, there have been approximately six new sewer connections per year. WLSD’s current sewer service area includes 835 buildable lots, all of which were originally approved as part of the Sewer Service Area. There are no proposed changes to WLSD’s sewer service area. At full buildout, the estimated sewered population is approximately 2,121. It should be noted that many of the WLSD homes are used seasonally, so the actual full-time population is lower than Town-wide Goshen unit population per household estimates. This contributes to lower water use and wastewater generation patterns in WLSD’s sewer service area.

During the Facilities Planning process, we projected the future flow and pollutant loadings at build-out conditions by estimating average dwelling and per-capita unit generation rates from existing data, and applying them to the projected sewer connections and estimated population at build out. For this analysis, which was updated in March 2016 for USDA-RD's PER, we utilized existing data provided by WLSD, and we compiled additional information from the Town of Goshen and the State of Connecticut. This information included land use, zoning, wetlands, sensitive resources, conservation restrictions, flood zones, and areas designated by the State for preservation or development. For these projections, we considered developed lots, vacant lots, new lots that can be created through subdivision, and undevelopable lots that will never be connected to the sewer system. Specifically, we developed per-connection and per-capita unit generation rates from influent flow and load data collected by the WLSD from January 2010 to December 2011 (confirmed by comparing this data to more recent 2015 flow data during preparation of USDA-RD's PER). The projected build-out sewer population was estimated to be 2,121 individuals using the total number of existing (691) and projected (170) sewer connections from the build-out analysis. This includes an assumption of 2.54 persons per connection, based on the average household size for the Town of Goshen from the 2010 census data. This projection represents an increase in the sewer population of approximately 366 people above the current sewer population of approximately 1,755. The future flow estimate is important in evaluating effluent disposal needs for the Local Alternative, and considering potential flow allocations with neighboring communities for the Regional Alternatives.

Pollutant loads were also important for considering the range of treatment requirements for the Local Alternative. The flows and loads data was used to facilitate the comparison of Local Alternative and Regional Alternatives. WLSD residents use very little water as compared to State-wide usage patterns, and these conservative use patterns are expected to continue in the future. For example, the sanitary flow is estimated at 63,000 gallons per day (gpd), which is equivalent to 91 gpd per connection, based on the 691 existing sewer connections.

#### **4. SUMMARY OF ALTERNATIVES**

In general, Local and Regional Alternatives were developed, evaluated and compared during the Facilities Planning process. Following is a summary regarding our approach to how the wastewater management and treatment elements were considered in these Alternatives. In addition, a summary of the Local Alternative and updated Regional Alternatives (Torrington and Litchfield), which consider the TWC watershed information that was provided by TWC during the recent permitting phase, are summarized in this section of the PUR.

##### **A. LOCAL ALTERNATIVE**

For the Local Alternative, we focused on a replacement WPCF utilizing a membrane bioreactor (MBR) process adjacent to the existing WPCF. The replacement WPCF would include preliminary treatment (including an equalization tank), an MBR process building, disinfection using ultraviolet (UV) light, sludge storage and processing equipment, a building addition for plant superintendent and administrative staff and new effluent distribution piping and valves. The proposed WPCF would include a raw sludge storage tank, sludge thickening equipment, and a thickened sludge storage tank. These tanks would be sized to provide adequate sludge storage for weekly removal off site. Following treatment and disinfection, effluent would be conveyed and distributed to the disposal beds. Modifications to the beds are also incorporated in the Local Alternative including: influent equalization; supplemental treatment to achieve drinking water quality effluent; site piping between beds and flow controls; fill in beds; low permeability cover over beds and stormwater controls; groundwater monitoring systems; and effluent equalization.

The MBR will significantly reduce effluent solids to protect the disposal system, and improve effluent dispersal efficiency. The UV disinfection system will be designed to remove pathogens to a much higher level (4-log removal) than conventional on-site systems, thus providing far higher pathogen reduction, even before discharge to the effluent disposal system.

The site layout for the Local Alternative is shown in Appendix C. The figure shows the location of the existing WPCF and unit processes, as well as the location of the proposed replacement WPCF associated with the Local Alternative.

The Local Alternative would drastically improve the level of wastewater treatment to reuse quality. The improved water quality, together with advanced disinfection, will result in state-of-the-art effluent prior to discharge to the on-site disposal system. This would improve groundwater quality, protect the Class GAA groundwater designation, and promote positive impacts to the environment. In addition, abandonment of on-site sludge disposal will result in improved site, groundwater and stormwater control measures.

The Local Alternative includes use of the existing site. No new land acquisitions are needed to construct the local alternative. WLSD owns the entire treatment and disposal site. Since the treatment system associated with the Local Alternative can be constructed adjacent to the existing WPCF, there are no anticipated construction coordination limitations. Upgrades to the effluent disposal system can also occur in a phased approach.

Based on the size of the 90-acre site, and the anticipated closed-bed approach to effluent disposal, the Local Alternative lends itself to exploration of renewable energy opportunities (i.e. solar) to help offset future operation and maintenance costs.

Despite proposing to achieve a 4-log disinfection goal within the treatment system, regulatory challenges associated with separation to groundwater and travel time for the effluent disposal system remain. Although we believe the on-site local wastewater management alternative is viable, and that the disposal beds have adequate capacity for current and future flows, concurrence is needed from DEEP on separation to groundwater, travel time and the average annual permitted flow limit. We believe the Local Alternative, as was developed, meets the objectives and the DEEP Guidance Manual, especially when the proposed level of treatment far exceeds DEEP Guidelines for similar facilities, creating near reuse quality effluent, dramatically improving the quality of effluent discharged from the WPCF. However, DEEP has not demonstrated a willingness to approve this concept without advanced full-scale testing and potential/subsequent input from the Department of Public Health. The full-scale piloting would be challenging to execute and monitor, as well as cost prohibitive.

For these reasons, the Local Alternative was tabled. The remaining comparison of viable alternatives focuses on further evaluation of the Regional Alternatives.

## **B. REGIONAL ALTERNATIVES**

As an alternative to on-site wastewater treatment and disposal, associated with the Local Alternative, the options of connecting to nearby communities with treatment at their respective WPCFs were also evaluated. In terms of proximity to the existing WLSD WPCF, the likeliest communities for connections are the City of Torrington and the Town of Litchfield. These alternatives are shown in the figure in Appendix D. Based on the watershed information provided by the TWC in June 2016, we revisited the details associated with the Torrington and Litchfield Regional Alternatives as part of this PUR.



Following is a brief description of each of the routes considered for the Regional Alternatives:

- **Alternative T1:** Alternative T1, to the Torrington WPCF, involves a route along Brush Hill Road, Old Middle Street (Route 63), Pie Hill Road, East Street South and Torrington Road (Route 4), with interconnection to the Torrington sewer system near the intersection of Lover’s Lane and Goshen Road (Route 4).
- **Alternative T2:** Alternative T2, also to the Torrington WPCF, involves a route along Brush Hill Road, Old Middle Street (Route 63), through Litchfield along Deming Road, to Weed Road and Highland Avenue, with interconnection to the Torrington sewer system west of Birney Brook Road.
- **Alternative T3:** Alternative T3, the third alternative to the Torrington WPCF, involves a route along Brush Hill Road, Old Middle Street (Route 63), along Deming Road through Litchfield, to Weed Road and then to Goshen Road (Route 4), with interconnection to the Torrington sewer system at Lover’s Lane and Goshen Road (Route 4).
- **Alternative T4:** Alternative T4, the fourth and final alternative to the Torrington WPCF, involves a route involves a route along Brush Hill Road, then south along Old Middle Road (Route 63) and Goshen Road (Route 63) to West Street (Route 202) and then Torrington Road (Route 202), where it connects to the existing sewers on Torrington Road in Litchfield. Alternative T4 was not evaluated further because it is a connection to a low pressure sewer system (grinder pump systems), and the hydraulics of the system will not accommodate an 8-inch force main pipe. Therefore, Alternative T4 was eliminated from the alternatives analysis.
- **Alternative L1:** Alternative L1, to the Litchfield WPCF, involves a route south from the Plant Pump Station along Town Hill Road to the Litchfield Town line, then along Beach Street and Constitution Way in Litchfield, where it connects to the existing Litchfield sewer system at the intersection of Constitution Way and Whites Wood Road.

The following table summarizes the anticipated lengths of piping in each of the three communities (Goshen, Torrington and Litchfield) for each of the Regional Alternatives:

Community	Length of Pipe (Regional Alternatives)			
	T1	T2	T3	L1
Goshen	20,985	8,930	8,930	4,140
Torrington	13,385	25,850	25,975	-
Litchfield	-	1,235	1,235	19,750
<b>Total =</b>	<b>34,370</b>	<b>36,015</b>	<b>36,140</b>	<b>23,890</b>

For the Regional Alternatives, we assumed the following basis of design conditions for each of the four remaining Regional Alternatives (Alternatives T1, T2, T3 and L1):

- Average annual flow rate of 110,000 gallons per day (gpd), or 76 gallons per minute (gpm).
- Design pumping rate of approximately 500 gpm (needed to maintain force main scouring velocity of three feet per second).
- For the Torrington Regional Alternatives T1, T2, and T3, one pump station.
- For the Litchfield Regional Alternative L1, multiple pumping stations due to Town preference for gravity sewer service to future customers adjacent to the pipe route.

- 8-inch diameter force main(s).
- All pumping units (minimum of two at each pump station) on variable frequency drives (VFDs).

## 5. OPINION OF PROBABLE COSTS

An opinion of probable project cost (OPC), in calendar year (CY) 2018 costs, was developed for the Local Alternative and for each Regional Alternative. Similarly, an estimated Year 1 operation and maintenance (O&M) cost, following construction, was also prepared for each Local/Regional Alternative.

### A. LOCAL ALTERNATIVE

The opinion of probable project cost for the Local Alternative in 2015 was \$18,393,000, and the anticipated annual O&M cost (2015) for the local alternative was \$744,800. The capital and annual O&M costs were escalated by 3% per year from 2015 to 2016 costs. The resulting 2016 capital and annual O&M costs are \$18,945,000 and \$768,000, respectively.

### B. REGIONAL ALTERNATIVES

Following is a summary of capital and annual O&M cost projections for the Torrington and Litchfield Regional Alternatives:

- Regional Alternative T1: Our opinion of probable project cost for Regional Alternative T1 (Torrington) is \$15,612,000. The anticipated annual O&M cost (2016 costs) for Regional Alternative T1 of the Regional Alternatives is \$590,486.
- Regional Alternative T2: Our opinion of probable project cost for Regional Alternative T2 (Torrington) is \$20,010,000. The anticipated annual O&M cost (2016 costs) for Regional Alternative T2 is approximately \$605,486.
- Regional Alternative T3: Our opinion of probable project cost for Regional Alternative T3 (Torrington) is \$18,200,000. The anticipated annual O&M cost (2016 costs) for Regional Alternative T3 is approximately \$600,486.
- Regional Alternative L1: Our opinion of probable project cost for Regional Alternative L1 (Litchfield) is \$23,909,000. The anticipated annual O&M cost (2016 costs) for Regional Alternative L1 is approximately \$797,514.

## 6. NON-COST CONSIDERATIONS

WLSD completed an Environmental Report in February 2016 that was subsequently approved by USDA-RD. The approved Environmental Report evaluated potential impacts to environmental resources, and other non-cost considerations, as well as mitigation efforts to project these resources. Similarly, DEEP Approved the FPSR of May 9, 2016 on May 17, 2016 (Appendix B), which also evaluated environmental resources and non-cost elements for the proposed Regional Sewer Connection Project. This PUR includes the following updated evaluation of environmental resources and non-cost considerations for the Regional Alternatives.

### A. AIR QUALITY

The Local Alternative includes building a replacement WPCF at the existing WLSD WPCF site. The MBR, UV and reverse osmosis treatment processes are energy intensive. This represents a redundant treatment system that will consume additional electricity, as compared to the Regional Alternatives, which rely on treatment and disposal at existing WPCFs (i.e. Torrington or Litchfield).

Generally, the Regional Alternative(s) with the fewest pump station(s) and shortest pipe routes will have the lowest energy and heating costs, and thus will have lower impacts on air quality. For example, the Regional Alternative L1 (Litchfield) has multiple pump stations, and will have the highest pumping and hearing costs of the Regional Alternatives. Regarding the Torrington Alternatives, all three Alternatives will have one pump station. However, Regional Alternative T1 is shorter than T2 and T3, and T3 is shorter than T2. Therefore, Regional Alternative T1 will have the least overall impacts on air quality.

We do not believe that any of the Regional Alternatives will have long-term impacts on air quality. However, during construction, construction equipment may result in temporary nuisance conditions. Such temporary impacts can be mitigated by using low-sulfur emitting construction equipment.

## **B. WATER QUALITY**

The proposed treatment system for the Local Alternative incorporates treatment systems to produce reuse quality effluent. This represents the highest level of treatment possible with current wastewater technologies. However, it is unclear if DEEP and DPH would ever approve the Local Alternative.

Each of the Regional Alternatives include a wastewater conveyance and transmission system from WLSD's existing WPCF to either the City of Torrington or Town of Litchfield WPCF. The proposed force main for each Regional Alternative will be constructed in existing roadway rights-of-way. Excavation work, where performed for the Regional Alternatives, will include erosion control and dewatering methods to prevent sedimentation of nearby water bodies and/or wetlands. Controlling potential runoff will help maintain water quality adjacent to the construction work.

Similar to the Local Alternative, the Regional Alternatives will result in improved effluent discharge and surrounding water quality. However, the Regional Alternatives involve pumping the wastewater to nearby existing WPCFs for treatment and disposal. By no longer applying treated effluent at the existing WPCF site (even a high quality effluent), this will protect the Class GAA groundwater designation, and similarly promote positive impacts to the environment. Abandonment of on-site sludge disposal will also result in improved site, groundwater and stormwater control measures.

For Regional Alternative T1, TWC has raised concerns about potential impacts to their watershed resulting from the highly unlikely event of a force main break. All of the Regional Alternatives would incorporate remote monitoring capabilities. We believe that water quality concerns associated with the 44 existing and known potential sources of pollution (septic systems, fuel tanks, farm, zoo, etc.) in the TWC watershed represent risks greater than those associated with the WLSD's proposed Project. Per TWC's Water Supply Plan, the Allen Dam is used sparingly, and generally only during emergency conditions. Therefore, in the highly unlikely event of a force main failure, which would be remotely detected, WLSD would respond to such concern, and TWC has the ability to utilize its other water source. Further, the Allen Dam water is conveyed to the TWC water filtration plant.

The level of treatment at the Torrington WPCF (Regional Alternatives T1, T2 and T3) are slightly higher than that at the Litchfield WPCF (Regional Alternative L1).

## **C. FLOODPLAINS**

There are no floodplain areas adjacent to the proposed work associated with the Local Alternative.

For the Regional Alternatives, the force main will be constructed in existing roadways along the alignment shown in Appendix D. Further, the above areas are associated with crossings through existing culverts, and there will be no impact on existing streams and/or the three Zone A floodplain areas. The roadway will be restored to existing conditions. No permits from the Army Corps of Engineers (ACOE) are anticipated for any of the Regional Alternatives.

For Regional Alternative T1, the proposed force main will traverse three 100-year floodplain areas as follows:

- A Zone A area on Old Middle Road (Route 63) in Goshen, associated with an unnamed brook, north of Brush Hill Road.
- A Zone A area on Pie Hill Road in Goshen, associated with Ivy Mountain Brook.
- A Zone A area on Goshen Road in Torrington, associated with Lovers Lane Brook.

For Regional Alternative T2 the proposed force main will traverse two 100-year floodplain areas as follows:

- A Zone A area on Weed Road in Torrington, associated the Bantam River.
- A Zone A area on Goshen Road in Torrington, associated with Lovers Lane Brook.

For Regional Alternative T3 the proposed force main will traverse one 100-year floodplain area as follows:

- A Zone A area on Weed Road in Torrington, associated the Bantam River.

For Regional Alternative L1 the proposed force main will traverse one 100-year floodplain area as follows:

- A Zone A area on Beach Street in Litchfield, associated with Moulthrop Brook.

The City of Torrington and the Town of Goshen both unanimously approved their respective Inland Wetlands Applications for the proposed Regional Sewer Connection Project (Regional Alternative T1) in September 2016. Copies of the Inland Wetlands staff recommendations, as well as the approvals by both Inland Wetlands Commissions, are included in Appendix E.

Regional Alternative T1 is preferred, because the wetlands permits are approved, and no ACOE permits are anticipated.

#### **D. WETLANDS**

For the Regional Alternatives, the proposed pipe routes from WLS D's existing WPCF on Brush Hill Road in Goshen to the existing sanitary sewer system in the City of Torrington (Regional Alternatives T1, T2 and T3) and the Town of Litchfield (Regional Alternative L1) are shown in Appendix D.

All of the proposed pipe routes lie within existing road right-of-ways in the Town of Goshen, City of Torrington and the Town of Litchfield. No work is proposed in wetlands. Work will only occur in the Upland Review Area (URA). Proper best management practices, including erosion control (haybales and siltation fencing) and dewatering measures will be utilized to prevent sedimentation of nearby water bodies and/or wetland resource areas. The existing roadways will be restored to existing conditions in those areas where it is disturbed for construction activities.

The Local Alternative will have the least impacts to the URA, as compared to the Regional Alternatives.

Since the wetlands areas along the pipe routes are generally proportional to the overall length of the pipe route for each alternative, those Regional Alternatives with the shortest pipe routes, including new pipe and downstream replacement piping, will likely result in the fewest least temporary impacts to the URA. Regional Alternative L1 has the shortest pipe route of the Regional Alternatives. Regarding the Torrington Alternatives, Regional Alternative T1 is shorter than Alternatives T2 and T3, and Regional Alternative T2 is shorter than T3.

The City of Torrington and the Town of Goshen both unanimously approved their respective Inland Wetlands Applications for the proposed Regional Sewer Connection Project (Regional Alternative T1) in September 2016. Copies of the Inland Wetlands staff recommendations, as well as the approvals by both Inland Wetlands Commissions, are included in Appendix E.

Therefore, Regional Alternative T1 is preferred, because of minimized short-term impacts in the URA, and that the wetlands permits are approved.

#### **E. FARMLANDS**

The Local Alternative includes construction of a replacement WPCF on the existing WPCF site. No farmlands will be impacted.

There are a number of both Prime Farmland Soils and Statewide Important Farmland Soils along the pipe alignments for the Regional Alternatives. None of the Prime Farmland Soils and Statewide Important Farmland Soils will be impacted as a result of the proposed Project. The proposed pipe routes lie within existing road right-of-ways in the Town of Goshen, City of Torrington and Town of Litchfield. These road right-of-ways were established prior to August 4, 1984, and therefore we do not believe are subject to the Farmland Protection Policy Act. Construction activities will utilize best management practices for excavation/backfill and stormwater mitigation, including haybales and siltation fencing, to protect adjacent Prime Farmland Soils and Statewide Important Farmland Soils.

The City of Torrington and the Town of Goshen both unanimously approved their respective Inland Wetlands Applications for the proposed Regional Sewer Connection Project (Regional Alternative T1). Copies of the Inland Wetlands staff recommendations, as well as the approvals by both Inland Wetlands Commissions, are included in Appendix E.

Relative to protection of existing farmlands, Regional Alternative T1 is preferred, because the wetlands permits are approved.

#### **F. LAND USE**

There are no anticipated changes associated with the Local Alternative. The replacement WPCF will be constructed at the existing WPCF site, and the WLSL sewer service area will remain unchanged.

For the Torrington Regional Alternatives (T1, T2 and T3), there are no proposed sewer services along the wastewater transmission main. Regional Alternative T1 traverses very few existing residences, and the potential for future sewer pressure or growth resulting from the sewer system is unlikely. However, the pipe routes for Regional Alternatives T2 and T3 pass by and through several existing residential sub-divisions causing greater short-term disruption during construction. In addition, we believe that future requests and pressure to connect to the pipelines will be higher for these routes than for Alternative T1.

For the Litchfield Regional Alternative L1, the Town prefers to run gravity sewers, when extensions occur, to sewer properties. Therefore, the potential for land use changes and growth is highest with Regional Alternative L1.

Relative to land use considerations, Regional Alternative T1, which also received positive 8-24 referrals from the Goshen and Torrington Planning & Zoning Commissions, is the preferred alternative.

## **G. ENVIRONMENTALLY SENSITIVE AREAS**

The WLSD community surrounds Woodridge Lake, which is a man-made waterbody. Central sewer service to each property was provided when the residential development was constructed. Wastewater generated in the WSDL sewer service area is routed to the WPCF site, which is outside the drainage area of Woodridge Lake. This helps ensure protection of the groundwater in the Project Area.

The Local Alternative does not result in impacts to environmentally sensitive areas, since there is no expansion of the WPCF site.

Each of the Regional Alternatives (Torrington and Litchfield) traverse existing roadways that are adjacent to environmental resources. Generally speaking, those Alternatives with the shortest routes, have lower potential to temporarily impact the areas adjacent to these resources during construction.

TWC has expressed concerns about the proposed path of Regional Alternative T1 through a section of its watershed. We proposed an updated design concept for the Torrington Inland Wetlands Commission. It includes dual pipes and containment sleeves through the Class 1 land, results in sufficient engineering measures to protect the TWC watershed. Other similar design concepts can be developed. We also believe such measures are consistent with sewer crossings through other watershed areas in the State.

Relative to protection of environmentally sensitive areas, and given the additional engineering measures incorporated in the proposed Project, Regional Alternative T1 is preferred, because of the length of the route and that the wetlands permits are approved.

## **H. WATER SUPPLY INCLUDING AVAILABILITY OF SUPPLY**

We do not believe that Regional Alternatives T2, T3 or L1 traverse watershed areas.

Until recently, we were unaware that a portion of the proposed force main, which is in the Route 4 right-of-way, traversed a section of the TWC Watershed. However, a section of the proposed force main for Alternative T1 traverses the TWC watershed area in Goshen and Torrington along Route 4. The proposed crossing through the TWC watershed includes 200 feet of Class 1 Land, 1,100 feet of Class 2 Land and non-TWC land.

Upon receipt of the TWC watershed mapping in August 2016 (such mapping was otherwise unavailable and not a public record), we updated the proposed design to include additional protective measures, which we believe are consistent with or exceed measures taken for other sewer mains that traverse watershed areas in Connecticut. The proposed piping in the Class 2 and unclassified areas is 8-inch PVC C900 DR18 pipe, which meets the intent of "tight" pipe per the DPH technical design standards. For the proposed culvert crossing, which is designated as Class 1 land (200 foot width centered on culvert), the proposed design includes two 10-inch HDPE SDR11 pipes (primary and spare force main), with pressure ratings of 160 psi. Both pipes are sleeved in 18-inch SDR11 HDPE carrier pipes, also with pressure ratings of 160 psi. The proposed operating pressure in this section of the force main is approximately 30 psi when the pumps are running, and close to 0 psi when the pumps are off, allowing the force main to drain down the hill as a gravity sewer. At each end of the proposed crossing, we included a precast concrete vault, with valves, to allow the licensed wastewater operations team to switch the flow path, in the event that one of the two pipes is not available. As shown on the attached Drawing, the proposed pipes go

over the existing 4-foot diameter culvert, since the culvert is approximately 13-feet deep to invert beneath the roadway surface. This allows for sufficient clearance between the culvert and the proposed pipes, as well as cover over the force main pipes. Please note that the final design of the system is subject to approval by the City of Torrington WPCA, and other designs can be developed to provide similar protections.

We believe that the above approach for Regional Alternative T1 is appropriate and consistent with other force main applications in the State that traverse, or are adjacent to, watershed resources. Appendix F includes a figure and table illustrating the approximately 40 communities in Connecticut where the sewershed and watershed areas overlap.

## **I. IMPACTS ON AQUIFER PROTECTION AREAS**

The existing WLSD sanitary sewer system lies entirely within the Waterbury watershed, and will continue to do so in the future. As a wastewater utility in a prominent watershed, WLSD has had a positive working relationship with the City of Waterbury for more than 40 years.

The existing WLSD Water Pollution Control Facility (WPCF) is located on a 90-acre site to the east of the WLSD sewer service area (Appendix A). Treated effluent from the WPCF is discharged to the ground via infiltration beds. Since the WPCF is located in a GAA groundwater supply area, maintaining superior groundwater quality within WLSD is a critical element of the Project goals.

Decommissioning of the existing WPCF for the Regional Alternatives will positively impact water quality, and will result in the elimination of a wastewater effluent discharge to the GAA groundwater supply area at the current WPCF site.

Regional Alternatives T1, T2, T3 and L1 are most advantageous relative to protection of aquifer protection areas. The Local Alternative is least advantageous relative to aquifer protection areas.

The optimal piping route runs along State Route 4 through the edge of a small stretch of the Torrington Water Company watershed. This introduction of a wastewater pipeline to the watershed presents a potential pollution source in the very unlikely event of a pipe failure. For this reason, we are proposing additional engineering control measures to ensure that the sewer pipe does not leak in the TWC watershed.

## **J. SHELLFISHING**

There are no coastal areas, and thus no shellfishing areas, in or adjacent to the proposed Project Area. This item is not applicable.

## **K. ENDANGERED SPECIES**

There are several Natural Diversity Areas along the proposed pipe alignments for the Regional Alternatives. We reviewed the United States Fish and Wildlife Service and their Federally Listed Endangered and Threatened Species in Connecticut. With the exception of the Northern Long-Eared Bat, the list confirms that there are no federally threatened and endangered species or their habitats within Litchfield County and the Project Area. Since the Project is planned to be constructed within the existing roadway right-of-ways, it is unlikely that any tree cutting/trimming/clearing will be required. Therefore, we do not believe that there will be the potential for impacts to the Northern Long-Eared Bat.

The proposed Project will utilize best management practices for construction and stormwater mitigation, including haybales and siltation fencing, to protect adjacent Natural Diversity Areas. If any work is proposed outside the existing roadway right-of-ways, or if trees need to be removed and/or trimmed as part of the Project, we will coordinate this work with a

wildlife biologist to ensure that there are no impacts to the Northern Long-Eared Bat or its habitat.

The Local Alternative, together with the Regional Alternatives (T1 – Torrington) with the shortest overall lengths and fewest pump stations (no easements required), are the most advantageous Alternatives with regard to endangered species considerations.

#### **L. HISTORICAL AND ARCHAEOLOGICAL SITES**

As part of the Environmental Report, USDA-RD contacted the State's Historic Preservation Officer on February 9, 2016. The proposed Project will be constructed within existing roadway right-of-ways, and we do not believe there will be any impacts to areas that could be historic or historically sensitive.

The proposed project will be constructed within existing roadway right-of-ways, and we do not believe there will be any impacts to areas that could be historic or historically sensitive.

Since Regional Alternative T1 has already been reviewed by the State and USDA-RD, we believe it is the most advantageous alternative relate to historical and archaeological sites.

#### **M. WILD AND SCENIC RIVERS**

Only the Eightmile and Farmington Rivers are designated as Wild and Scenic Rivers in the State of Connecticut. Neither River is within or adjacent to the proposed Project Area. This item does not impact any of the Local or Regional Alternatives.

#### **N. COASTAL ZONE MANAGEMENT**

The proposed Project is not near any coastal resource areas. Therefore, there are no impacts or environmental consequences associated with coastal resources. Since there are no coastal resources, there will be no mitigation necessary.

#### **O. INDIRECT IMPACTS**

We do not believe there will be any negative indirect impacts associated with the proposed Project. Through the permitting process (Inland Wetlands, Planning and Zoning, WPCA, Department of Transportation, etc.), we will identify any short-term construction mitigation efforts that may be required, and incorporate such provisions in the Contract Documents.

#### **P. SOCIO-ECONOMIC IMPACTS**

The annual budget for Fiscal Year 2015-16 was \$1,042,954, which included payment of the annual debt service for the recently completed I/I Removal and Pump Station/SCADA Upgrade Projects, as funded by USDA-RD. Given the limited number of parcels served by the WLSD sewer system, including 691 current connections, current unit annual costs are high. The average annual sewer charge per WLSD property is \$1,211, as compared to the estimated 2013 Connecticut State-wide average of \$406, as published by Tighe & Bond in its 2013 Connecticut Sewer Rates Survey Summary Report.

There are no changes to the WLSD sewer service area as a result of this proposed Project. No adverse human health issues are anticipated from this Project work. The proposed Project will take place at the WLSD WPCF site and along the proposed force main transmission route. No sewer service will be provided along the transmission main, which will serve strictly as a conveyance and transmission system, therefore there no anticipated socio-economic impacts outside the WLSD sewer service area in either Goshen or Torrington. However, it should be noted that the allocation of the \$15,612,000 project cost among the 691 residences in WLSD is a major financial burden on this small community's residents.



Since the other Alternatives are more costly, Regional Alternative T1 is preferable relative to the anticipated socio-economic impacts.

## **Q. PLANS OF CONSERVATION AND DEVELOPMENT**

Regional Alternative T1 is consistent with the Plans of Conservation and Development within both the Town of Goshen and the City of Torrington. There are no changes to either sewer service area. The proposed wastewater transmission main will traverse areas outside the sewer service areas, but no connections will be allowed. In December 2015, WLSD met with the Torrington Planning & Zoning Commission to present the proposed Project. The City issued a positive 8-24 Referral supporting the concept. WLSD similarly met with the Town of Goshen and its Planning & Zoning Commission in January 2016, and obtained a similar positive 8-24 referral.

Regional Alternatives T2 and T3 also traverse the Town of Litchfield, and would require consideration by the Litchfield Planning & Zoning Commission. For those reasons, Regional Alternative T1 is preferred relative to the communities' Plans of Conservation and Development.

## **R. INTER-MUNICIPAL AGREEMENTS**

The proposed Project includes transmission of WLSD's wastewater to the City of Torrington for Alternatives T1, T2 and T3, and the Town of Litchfield for Alternative L1. The City of Torrington has previously entered into Agreements with the Towns of Litchfield and Harwinton to convey and treat their wastewater. Over the past six to twelve months, WLSD and the City of Torrington have been discussing a similar Inter-Municipal Agreement (IMA) to facilitate the Project. The City of Torrington prefers Regional Alternative T1 because it has the shortest route, results in the fewest downstream sewer upgrades, and will be the least maintenance intensive after constructed.

Detailed capital needs at the Litchfield WPCF were not evaluated, since the Town of Litchfield confirmed that the Town has already allocated wastewater treatment and disposal capacity within its sewer service area, and such capacity is not available for WLSD.

## **S. MISCELLANEOUS**

Noise during construction may occur, but will be controlled to the best practicable degree as possible, to avoid disrupting local populations. No net impact on noise pollution will occur from the proposed work. Best management practices including calcium chloride for dust control, water use, and regular paving will mitigate dust concerns during construction. Traffic control measures will be utilized to minimize traffic impacts on the roads in the project area.

## **T. PERMITTING**

Based on WLSD's testing of the effluent system during the Wastewater Facilities Plan, as well as the State's wastewater/effluent disposal guidelines, addressing these concerns with an on-site re-use quality treatment system and an enhanced disposal system on the existing site (Local Alternative) proved to be too costly, with no clear path to regulatory/permitting approval.

Of the Regional Alternatives, Alternative T1 (Torrington) is preferred because the Planning & Zoning Commissions' positive referrals and wetlands approvals that are already in place.

## **7. COMPARISON OF ALTERNATIVES**

### **A. COSTS**

In order to evaluate the funding and finance options, and to allow comparison of annualized costs for each of the alternatives, the following financing alternatives were considered for the Local Alternative and the Regional Alternatives:

- Local Financing:** Based on a locally-financed 20-year loan, absent any grants, at an interest rate of 3.8%. The following table includes Year 1 annualized costs for the local financing option for each alternative, as well as metrics indicating both the annual sewer costs as a percentage of median household income (MHI) and how these costs compare to other Connecticut sewer users.

Alternative	CY2016 OPC	Year 1 O&M	Local Finance		
			Year 1 Annual Payment	% of MHI	Ratio to 2013 Avg CT Sewer Rate
Local	\$ 18,945,000	\$ 768,000	\$2,137,431	4.0%	7.6
Regional T1	\$ 15,612,000	\$ 590,486	\$1,768,144	3.3%	6.3
Regional T2	\$ 20,010,000	\$ 605,486	\$2,101,052	4.0%	7.5
Regional T3	\$ 18,200,000	\$ 600,486	\$1,965,217	3.7%	7.0
Regional L1	\$ 23,909,000	\$ 797,515	\$2,553,128	4.8%	9.1

- CWF Funding and Financing:** Includes a 25% grant, with the remaining 75% financed via a 20-year loan from the State's Clean Water Fund (CWF) Program at an interest rate of 2.0%. Similar to the above table, the following table includes Year 1 annualized costs and metrics for the CWF funding and financing option.

Alternative	CY2016 OPC	Year 1 O&M	CWF Funding/Finance		
			Year 1 Annual Payment	% of MHI	Ratio to 2013 Avg CT Sewer Rate
Local	\$ 18,945,000	\$ 768,000	\$1,537,799	2.9%	5.5
Regional T1	\$ 15,612,000	\$ 590,486	\$1,545,049	2.9%	5.5
Regional T2	\$ 20,010,000	\$ 605,486	\$1,761,774	3.3%	6.3
Regional T3	\$ 18,200,000	\$ 600,486	\$1,508,485	2.8%	5.5
Regional L1	\$ 23,909,000	\$ 797,515	\$2,210,312	4.2%	7.9

- USDA-RD Funding:** Includes a fixed grant of \$2,825,000, with the remaining amount financed via a 40-year loan from USDA-RD at an interest rate of 2.25%. The following table includes Year 1 annualized costs and metrics for the CWF funding and financing option.

Alternative	CY2016 OPC	Year 1 O&M	USDA-RD Funding/Finance		
			Year 1 Annual Payment	% of MHI	Ratio to 2013 Avg CT Sewer Rate
Local	\$ 18,945,000	\$ 768,000	\$ 1,383,419	2.6%	4.9
Regional T1	\$ 15,612,000	\$ 590,486	\$ 1,127,812	2.1%	4.0
Regional T2	\$ 20,010,000	\$ 605,486	\$ 1,310,716	2.5%	4.7
Regional T3	\$ 18,200,000	\$ 600,486	\$ 1,236,615	2.3%	4.4
Regional L1	\$ 23,909,000	\$ 797,515	\$ 1,629,809	3.1%	5.8

Based on the financial information presented above, Regional Alternative T1 (Torrington) has the lowest capital cost, the lowest annual O&M cost, the lowest Year 1 annualized costs, and thus the lowest lifecycle costs. The USDA-RD funding and finance option yields the lowest overall annual costs of the three funding and finance options that were evaluated.

WLS D currently uses Ad Valorem taxing, based on assessed property values, to apportion capital and annual operation and maintenance (O&M) costs to the parcels within the sewer service area. Therefore, WLS D does not use a sewer user fee system based on a fixed fee or fixed rate basis. WLS D proposes to continue to use this revenue collection method for the proposed Project.

## B. NON-COST CONSIDERATIONS

The table in Appendix G summarizes our observations regarding each of the non-cost considerations, as well as which alternative(s) are most advantageous for each consideration.

For the majority of the non-cost considerations, Regional Alternative T1 is the most preferable alternative.

## 8. RECOMMENDED PLAN

### A. SELECTION OF ALTERNATIVE

In summary, Regional Alternative (Alternative T1) was selected for the cost and non-cost factors described above.

WLS D conducted a robust upgrade of its collection system as part of the recently completed 2015 I/I Removal and Pump Stations/SCADA Upgrade Projects. The proposed Regional Alternative T1 does not include any additional/proposed upgrades to the existing sanitary sewer collection system. An 8-inch diameter force main (ductile iron and PVC based on system pressures) will be used to convey untreated wastewater from the existing WLS D WPCF site (converted to a pump station site) to the City's existing collection system at Lover's Lane on Route 4.

The Regional Alternative T1 includes a proposed pump station for conveyance of untreated wastewater from the WLS D WPCF to the Torrington sewer system.

The proposed Regional Alternative T1 will incorporate use of the existing Torrington WPCF for wastewater treatment and disposal. Therefore, there are no new treatment systems being constructed as part of the proposed Project.

WLS D and the City of Torrington must develop an inter-municipal agreement (IMA) where WLS D will discharge wastewater to the City of Torrington's municipal wastewater system for conveyance to its WPCF, where it will be treated by the City. This is similar to existing

agreements between the City of Torrington and the Towns of Harwinton and Litchfield. WLS D's proposed 8-inch force main will discharge to the existing sewer system at Lover's Lane on Route 4. The existing 8-inch diameter gravity sewer will be reconstructed with a 12-inch diameter gravity sewer along Route 4 from Lover's Lane to Riverside Avenue, where it discharges to an existing 20-inch diameter interceptor sewer.

The City's engineering consultant, Wright-Pierce developed an evaluation memo (September 8, 2015) that concluded that the proposed WLS D discharge has minimal impact on the City's wastewater collection, treatment and disposal systems, and that capacity exists for the proposed discharge in the City's existing 7,000,000 gpd NPDES permit. It should be noted that the memo was based on an earlier potential average design flow of 162,000 gpd, including unlikely potential future sewer needs areas in the Town of Goshen. The purpose of these conservative flows was to evaluate a single flow scenario. The Town of Goshen and its WPCA have since formally reiterated its sewer avoidance policies, and there are no proposed flows from any areas in Goshen outside the limits of the existing WLS D sewer service area. The current proposed flow of 110,000 gpd is even lower, based on the successful results of the 2015 I/I Removal Project, and will still have no impacts on downstream wastewater infrastructure.

The framework for the IMA includes facility connection charges (FCC) for capital allocation of the WLS D flows. For example, Torrington assesses FCCs based on \$3,500 per 65,000 gallons per year of wastewater. WLS D proposes an average design flow capacity of 110,000 gpd, which equates to approximately \$2,161,915 in FCCs. It is our understanding that WLS D will be assessed its fair share of future annual capital costs based on wastewater capacities (i.e. 110,000 gpd / 7,000,000 gpd x annual capital debt service costs). Similarly, O&M costs will be allocated based on actual flows for each calendar year (i.e. 105,000 gpd / 5,700,000 gpd x annual O&M costs).

The pump station will be equipped with an emergency generator, odor control (Bioxide) provisions, quick connect piping and bypass headers to facilitate proactive measures during extreme weather conditions and extended power outages, and SCADA connectivity including remote after-hours monitoring.

The Regional Alternative T1 represents the lowest capital, O&M and annualized costs of the alternatives considered. As compared to the other Regional Alternatives, it also has the clearest permitting and construction path leading to implementation.

For all wastewater treatment and disposal alternatives (Local and Regional), maintaining low I/I conditions is important. As such, WLS D implemented an ongoing I/I removal program and maintenance program to minimize future I/I flow contributions, which continued beyond the 2015 I/I Removal Project, with system flow monitoring during Spring 2016. Based on the results of these efforts, WLS D is annually monitoring and adjusting I/I removal conditions, adjusting I/I removal goals as necessary, and considering seasonal flow, groundwater and precipitation factors, together with the rate at which new sewer users are connected to the system. The specifics of the pending IMA with Torrington will be incorporated in WLS D's long-term I/I management goals.

For the existing WPCF, sludge is currently disposed on-site. For the preferred Regional Alternative T1 (Torrington), sludge disposal would be through the City's current sludge management practices, which include dewatering, and hauling off-site for additional treatment and disposal.

For the Local Alternative, the proposed WPCF Upgrade included re-use quality effluent to meet the anticipated needs of the effluent disposal system. However, a path to regulatory approval did not appear possible. For the Regional Alternative T1, effluent discharge limits

will be in accordance with Torrington's NPDES permit, which includes new phosphorus removal requirements and on-going nitrogen removal through the State's General Permit.

## **B. ANTICIPATED PERMITS**

The City of Torrington and the Town of Goshen approved their respective Inland Wetlands Applications. Permits from the Department of Transportation (DOT) will be required for work in Route 63 and 4. In addition, CT-DEEP approved the FPSR on May 17, 2017 (Appendix B). However, since sewer connections along the proposed force main in both Torrington and Goshen will be strictly prohibited, there will be no changes to the sewer service areas in Goshen or Torrington. The City of Torrington and WLS D must enter in an IMA, approval of which will be required by the Torrington WPCA.

## **C. SCHEDULE**

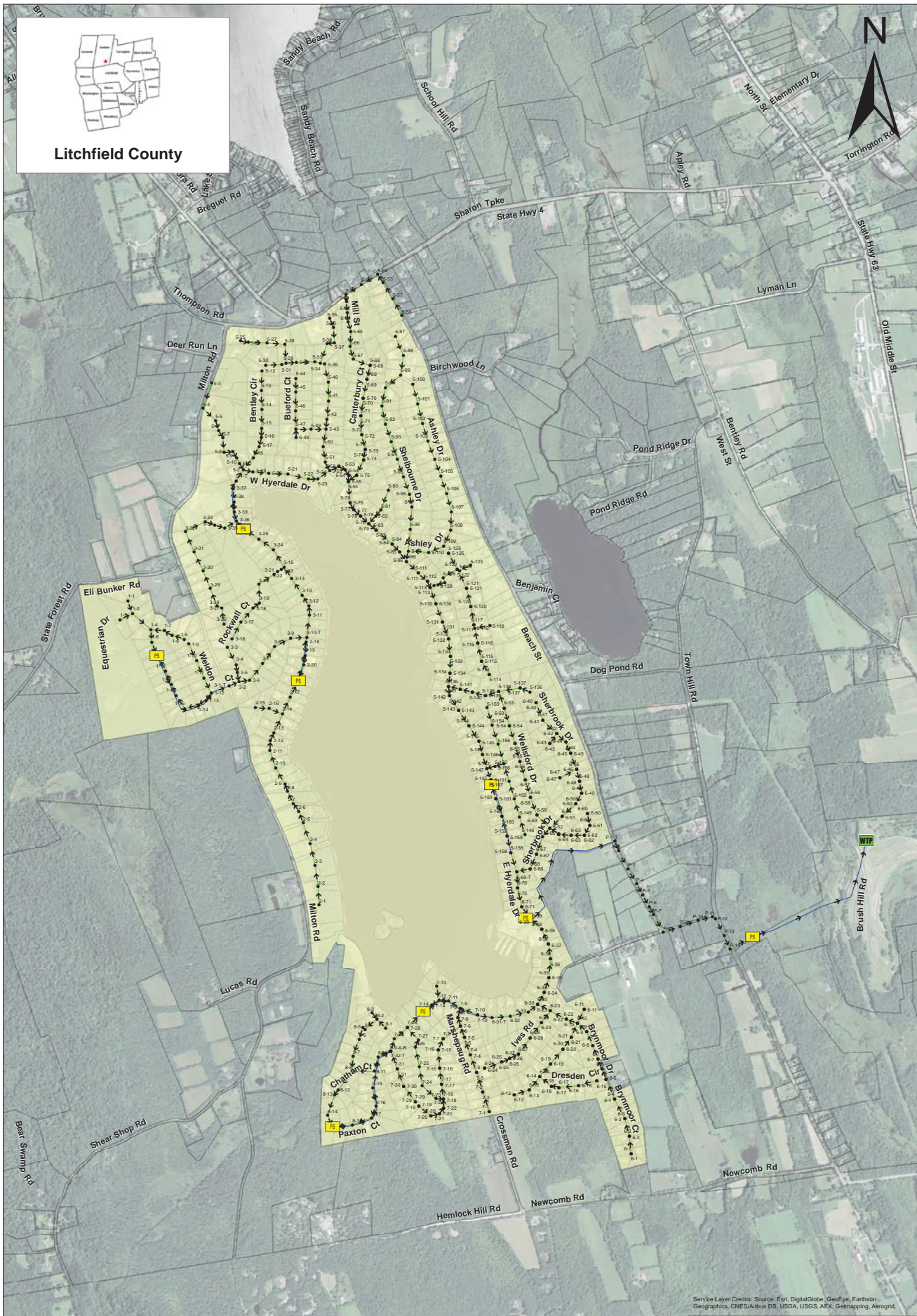
WLS D commenced preliminary design phase activities beginning in Summer 2015, to advance the "shovel readiness" of this Project. Initial efforts included soil borings at 100-foot increments along the proposed pipe route, aerial mapping for survey data, and preliminary easement survey work. Both DEEP planning phase approval and a loan/grant commitment were received from USDA Rural Development in May 2016 and April 2016, respectively. The design phase is underway, and is expected to be completed by Fall 2016. WLS D expects to begin the bidding phase in early 2017. We anticipate that the Project may be constructed as two separate construction contracts due to the size of the Project. Construction is expected to start in Spring 2017, with final paving and punchlist work to be completed by Spring 2019.

The current/updated Project schedule, based on recent permitting delays associated with TWC's Intervention of the Goshen and Torrington Inland Wetlands Applications, and quite possibly other forums, is included in this PUR.

**APPENDIX A**  
**EXISTING WLSD WASTEWATER**  
**INFRASTRUCTURE**

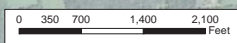


Litchfield County



**Legend**

WTP Treatment Plant	Manhole
PS Pump Station	Gravity Sewer
Sewer Service Area	Force Main
	Parcel



Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Gdmapping, Aerialist.

**Woodridge Lake Sewer District**

Collection System and Sewer Service Area

David Prickett Consulting, LLC

JOB NO: WLSD	DRAWN BY: JR
DATE: Dec. 5, 2015	

**APPENDIX B**  
**DEEP APPROVAL OF FACILITIES PLAN**  
**SUMMARY REPORT**



FACILITY PLAN APPROVAL

May 17, 2016

Mr. Raymond Turri, President  
Woodridge Lake Sewer District  
766 Riverside Avenue  
Torrington, CT 06790

Re: Facility Plan  
CWF # 643-PG

Dear Mr. Turri:

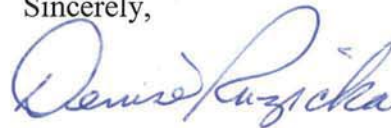
The engineering report titled *Regional Sewer Connection Project Facilities Plan Summary Report*, date May 9, 2016, prepared for Woodridge Lake Sewer District by Woodard & Curran and David Prickett Consulting, LLC, has been reviewed by the Department of Energy and Environmental Protection (DEEP). The Department concurs with the selection of the Regional Alternative system which will convey untreated wastewater from the district to the City of Torrington's existing collection system.

In accordance with the requirements of Section 22a-482-3 of the Regulations of Connecticut State Agencies, the report is hereby approved. This letter represents final approval of this document.

This APPROVAL does not relieve you of the obligation to obtain any other authorizations as may be required by Federal, State or Local laws or regulations.

If you have any questions relative to this matter, please contact Ann Straut at 860-424-3137 or [ann.straut@ct.gov](mailto:ann.straut@ct.gov).

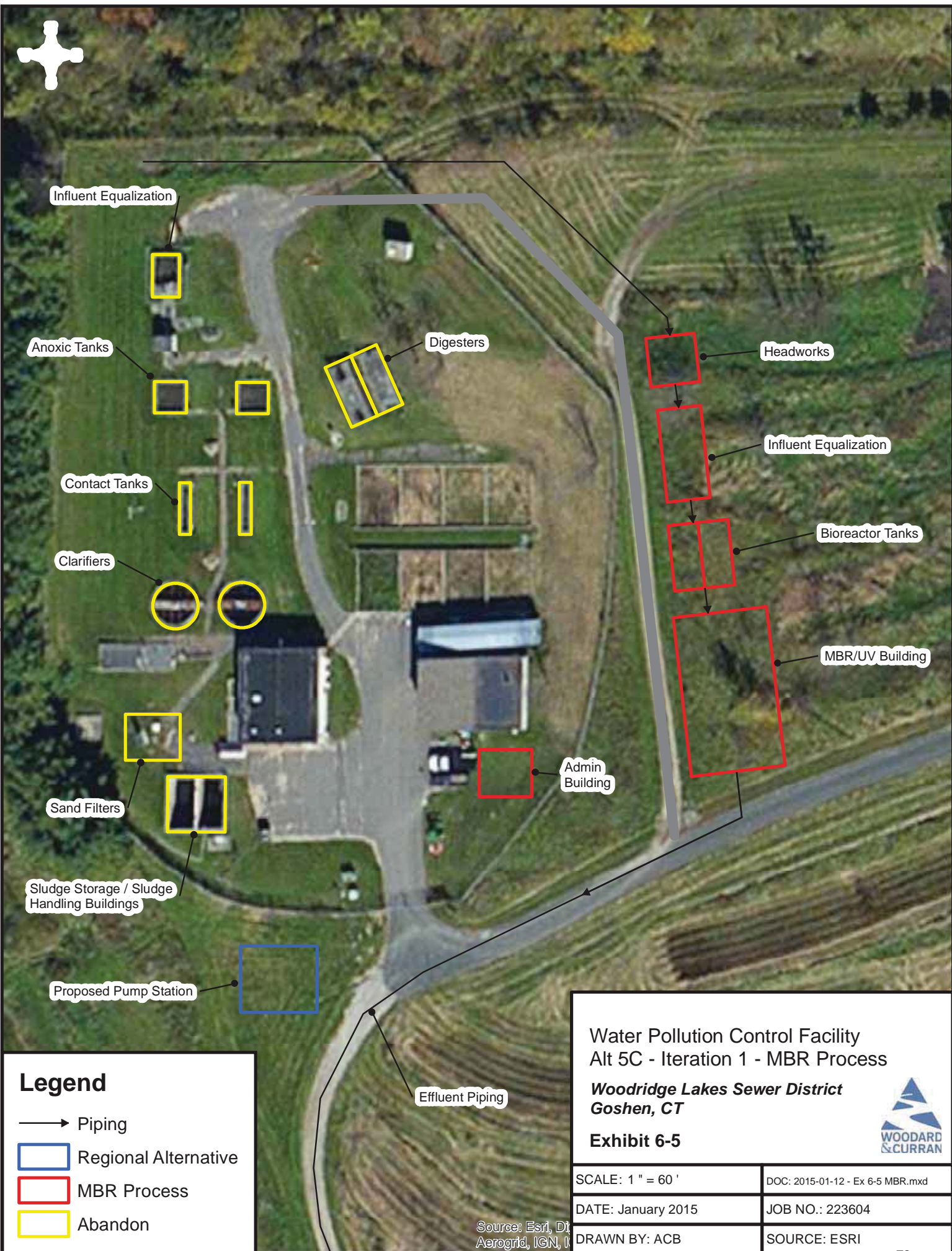
Sincerely,



Denise Ruzicka  
Director of Planning and Standards  
Bureau of Water Protection and Land Reuse

cc: Ken Green, WLSO Planning Committee Chair (via e-mail)  
Jim Mersfelder, WLSO (via e-mail)  
Jay Sheehan, Woodard & Curran (via e-mail)  
Dave Prickett, DPC (via e-mail)  
Joe Wettemann, DEEP (via e-mail)  
Hank Olszewski, DEEP (via e-mail)


**APPENDIX C**  
**LOCAL ALTERNATIVE FIGURES**



**Legend**

-  Piping
-  Regional Alternative
-  MBR Process
-  Abandon

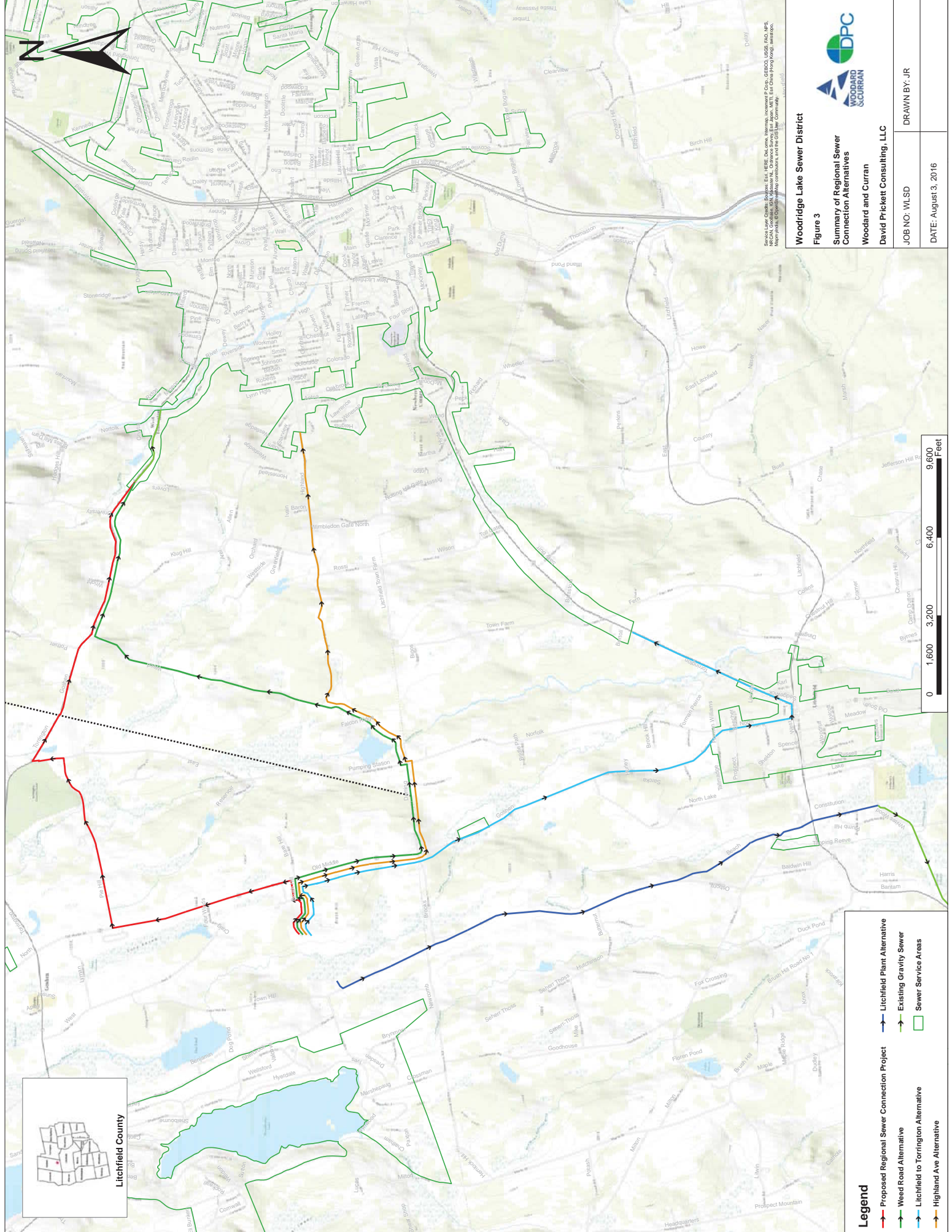
Water Pollution Control Facility  
 Alt 5C - Iteration 1 - MBR Process  
**Woodridge Lakes Sewer District**  
**Goshen, CT**  
**Exhibit 6-5**



SCALE: 1 " = 60 '	DOC: 2015-01-12 - Ex 6-5 MBR.mxd
DATE: January 2015	JOB NO.: 223604
DRAWN BY: ACB	SOURCE: ESRI

Source: Esri, DeLorme, GeoEye, IGN, Aerogrid, IGN, I

**APPENDIX D**  
**REGIONAL ALTERNATIVES FIGURES**

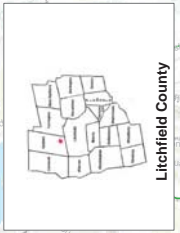


Source: Litchfield County GIS, Esri, HERE, DeLorme, Intermap, P. Corp., GEBCO, IGN, FAO, NPS, Swire, NOAA, OpenStreetMap contributors, and the GIS User Community.

**Woodridge Lake Sewer District**  
**Figure 3**  
**Summary of Regional Sewer Connection Alternatives**  
**Woodard and Curran**  
**David Prickett Consulting, LLC**  
**JOB NO. WLSD**  
**DATE: August 3, 2016**

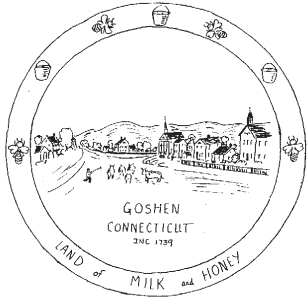


DRAWN BY: JR



- Legend**
- Proposed Regional Sewer Connection Project
  - Weed Road Alternative
  - Litchfield to Torrington Alternative
  - Highland Ave Alternative
  - Litchfield Plant Alternative
  - Existing Gravity Sewer
  - Sewer Service Areas

**APPENDIX E**  
**INLAND WETLANDS STAFF**  
**RECOMMENDATIONS AND APPROVALS**



## TOWN OF GOSHEN

42A NORTH STREET GOSHEN, CT 06756-0187  
PHONE 860 491-2308 x 232 FAX 860 491-6028

**Martin J Connor, AICP, Town Planner/Zoning and Inland Wetlands Enforcement Officer**

**To:** Inland Wetlands Commission  
**From:** Martin J. Connor, AICP  
**Subject:** James Mersfelder, Vice President/Treasurer for Woodridge Lake Sewer District, Construction of a wastewater transmission system line from the Existing WLSO Water Pollution Control Facility (WPCF) at 113 Brush Hill Road to the Existing Municipal Sewer System in the City of Torrington  
**Date:** 8/27/16

I have reviewed the application and have inspected the route of the proposed wastewater transmission system line from the existing WLSO Water Pollution Control Facility (WPCF) at 113 Brush Hill Road to the City of Torrington and Goshen Town line. In reviewing the above Inland Wetlands application, plans, documents, and testimony presented at the public hearing on August 4, 2016, it is my opinion that the construction proposed wastewater transmission system line will have no adverse impact on the wetlands or watercourses. No actual work will be performed in the wetlands or watercourses, only a temporary disturbance to the upland review areas. I recommend the Commission make a finding that the proposed regulated activities do not represent a significant activity per Section 2 of the Town of Goshen Inland Wetlands and Watercourses Regulations. In accordance with Section 10 of the Town of Goshen Inland Wetlands and Watercourses Regulations, I recommend that the application be approved with conditions. Also it is my recommendation related to the Intervention filed by the Torrington Water Company pursuant to Section 22a-19 of the Connecticut General Statutes, the Commission make a finding that this proposal does not have a reasonable likelihood resulting in the unreasonable pollution, impairment, or destruction of the public trust in the air, water, or other natural resources of the State of Connecticut.

The following expert testimony is part of the public hearing record.

1. The expert testimony both written and oral, received at the public hearing from Michael Klein, Registered Soil Scientist/Certified Professional Wetlands Scientist from Environmental Planning Services, LLC. He testified that there was no reasonable likelihood of adverse impact to the wetlands and watercourses and only temporary disturbance to the upland review area, where the natural resources present were adapted to this type of disturbance. Mr. Klein also testified that he believed the conduct associated with this proposal does not have a reasonable likelihood resulting in the unreasonable pollution, impairment, or

destruction of the public trust in the air, water, or other natural resources of the State of Connecticut.

2. The expert testimony received Project Engineer, David Prickett, P.E., David Prickett Consulting, LLC, indicated that the activities proposed would not result in an adverse impact to wetlands or watercourses.
3. The expert testimony by the Commission's Consulting Engineer, David Battista, P.E., Lenard Engineering, Inc., testified that the proposed project should not result in any adverse impact to the wetlands provided there was an appropriate standard of care with erosion and sedimentation controls followed during construction. Mr. Parson's concerns cited in his July 26, 2016 letter to Town of Goshen Land Use Administrator, Martin Connor, were addressed orally at the public hearing and as outlined in a written response to Todd Parsons, P.E., Lenard Engineering, by David Prickett, P.E., David Prickett Consulting, LLC, dated August 3, 2016. Prickett agreed, as a condition of approval, to update the plans to address the Commission's Consulting Engineer's comments as indicated in the August 3, 2016 response to Todd Parson, P.E., Lenard Engineering Inc., letter to the Town of Goshen Land Use Administrator Martin Connor, dated July 26, 2017.
4. The expert testimony by Garret Harlow, Town of Goshen Public Works Supervisor. He testified that he had reviewed materials submitted by the applicant, and he agreed with the statements made by the applicant. Mr. Harlow stated that he believed the proposal would have minimal impact to the Town's drainage system.

**Based on this and other expert testimony received, I would recommend approval with the following conditions:**

1. If the authorized activity is not completed within Five years from the issuance date of: **September 1, 2016**, said activity will cease and, if not previously revoked or specifically renewed or extended, this permit will be null and void. Any request to renew or extend the expiration date of a permit should be filed in accordance with the Inland Wetlands Regulations of the Town of Goshen. Expired permits may not be renewed and the Inland Wetlands Commission may require a new application for regulated activities.
2. The permittee will notify the Inland Wetlands Enforcement Officer upon commencement of work and upon its completion.
3. All work and all regulated activities conducted pursuant to this authorization will be consistent with the terms and conditions of this permit. Any structures, excavation, fill, obstructions, encroachments, or regulated activities *not specifically identified and authorized herein* will constitute a violation of this permit and may result in its modification, suspension or revocation.
4. This authorization is not transferable without the written consent of the Inland Wetlands Commission.
5. In evaluating this application, the Inland Wetlands Commission has relied on information provided by the applicant. If such information is subsequently proved to be false, incomplete, or misleading, this permit may be modified, suspended, or revoked and the permittee may be subject to any other remedies or penalties provided by law.



6. The permittee will employ the best management practices as outlined in the 2002 CT E&S Guidelines, March 2002 edition and all amendments, consistent with the terms and conditions of this permit, to control storm water discharges and to prevent erosion and sedimentation and to otherwise prevent pollution of wetlands or watercourses. For information and technical assistance, contact the Wetlands Enforcement Officer. The permittee will immediately inform the Commission of any problems involving the wetlands or watercourses that have developed in the course of, or that is caused by, the authorized work.
7. No equipment or material including without limitation, fill, clippings, brush, construction materials, or debris, will be deposited, placed, or stored in any wetland or watercourse on or off site unless specifically authorized by this permit. Any such activity not authorized by this permit may be just cause for revocation of the permit.
8. This permit is subject to and does not derogate any rights or powers of the Town of Goshen, conveys no property rights or exclusive privileges, and is subject to all public and private rights to all applicable federal, state and local laws. In conducting and maintaining any activities authorized herein, the permittee may not cause pollution, impairment, or destruction of the inland wetlands and watercourses of Goshen.
9. If the activity authorized by the inland wetlands permit also involves activity or a project that requires zoning or subdivision approval, special permit, variance, or special exception, no work pursuant to the wetlands permit may begin until such approval is obtained.
10. The permittee will maintain sediment and erosion controls at the site in such an operable condition as to prevent the pollution of wetlands and watercourses. Said controls are to be inspected by the permittee for deficiencies at least once per week and immediately after rains. The permittee will correct any such deficiencies within 24 hours of said deficiency being found. The permittee will maintain such control measures until all areas of disturbed soils at the site are stabilized.
11. Erosion and sedimentation controls are installed and inspected **prior** to start of construction.
12. The Project Engineer, David Prickett, P.E., David Prickett Consulting, LLC, shall update the plans to address the Commission's Consulting Engineer's comments in accordance with Mr. Prickett's August 3, 2016, written response letter to Todd Parson, P.E., Lenard Engineering Inc., letter to the Town of Goshen Land Use Administrator Martin Connor, dated July 26, 2017.

A draft approval motion for the Commissions consideration follows:

**Draft Motion of approval of the James Mersfelder, Vice President/Treasurer for Woodridge Lake Sewer District, construction of a wastewater transmission system line from the existing WLSO Water Pollution Control Facility (WPCF) at 113 Brush Hill Road to the existing municipal Sewer System in the City of Torrington application**

Whereas James Mersfelder, Vice President/Treasurer for Woodridge Lake Sewer District, has made application for regulated activities within 100 feet of wetlands or watercourses, including construction of a wastewater transmission system line from the existing WLSO Water Pollution Control Facility (WPCF) at 113 Brush Hill Road to the Town of Goshen Town/City of Torrington Town line;

Whereas said application contains the following maps and plans titled, "Woodridge Lake Sewer District, Goshen, Connecticut, WLSO Regional Sewer Extension, Torrington & Gosh, CT, Project No. 214383.00," dated June 2016, by Woodward & Curran and David Prickett Consulting, LLC, along with other documents, letters, reports, submitted along with the application, as well as the testimony accepted at the public hearing on August 4, 2016;

Whereas, the Inland Wetlands Commission of the Town of Goshen convened and completed a public hearing on this application August 4, 2016;

Whereas, the professional advisors have reviewed said application and provided written and verbal reports to the Commission on this application;

Whereas, the Inland Wetlands Commission of the Town of Goshen, has evaluated the application according to the standards and criteria for a decision per Section 10 of the Town of Goshen Inland Wetlands and Watercourses Regulations, in carrying out the purpose and policies of Section 22(a)-45 of the CT General Statutes, including matters related to regulating, licensing and enforcing the provisions whereof, the Commission has taken into consideration all relevant facts and circumstances. The proposed regulated activities do not represent a significant activity per Section 2 of the Town of Goshen Inland Wetlands and Watercourses Regulations. The Commission finds that there is no reasonable likelihood of adverse impact to the wetlands and watercourses from the regulated activities proposed.

**NOW THEREFORE BE IT RESOLVED by the Inland Wetlands Commission of the Town of Goshen that the aforementioned application is approved with the following conditions:**

1. If the authorized activity is not completed within Five years from the issuance date of: **September 1, 2016**, said activity will cease and, if not previously revoked or specifically renewed or extended, this permit will be null and void. Any request to renew or extend the expiration date of a permit should be filed in accordance with the Inland Wetlands Regulations of the Town of Goshen. Expired permits may not be renewed and the Inland Wetlands Commission may require a new application for regulated activities.
2. The permittee will notify the Inland Wetlands Enforcement Officer upon commencement of work and upon its completion.
3. All work and all regulated activities conducted pursuant to this authorization will be consistent with the terms and conditions of this permit. Any structures, excavation, fill, obstructions, encroachments, or regulated activities *not specifically identified and authorized herein* will constitute a violation of this permit and may result in its modification, suspension or revocation.
4. This authorization is not transferable without the written consent of the Inland Wetlands Commission.
5. In evaluating this application, the Inland Wetlands Commission has relied on information provided by the applicant. If such information is subsequently proved to be false, incomplete, or misleading, this permit may be modified, suspended, or revoked and the permittee may be subject to any other remedies or penalties provided by law.
6. The permittee will employ the best management practices as outlined in the 2002 CT E&S Guidelines, March 2002 edition and all amendments, consistent with the terms and conditions of this permit, to control storm water discharges and to prevent erosion and sedimentation and to otherwise prevent pollution of wetlands or watercourses. For information and technical assistance, contact the Wetlands Enforcement Officer. The permittee will immediately inform the Commission of any problems involving the wetlands or watercourses that have developed in the course of, or that is caused by, the authorized work.
7. No equipment or material including without limitation, fill, clippings, brush, construction materials, or debris, will be deposited, placed, or stored in any wetland or watercourse on or off site unless specifically authorized by this permit. Any such activity not authorized by this permit may be just cause for revocation of the permit.
8. This permit is subject to and does not derogate any rights or powers of the Town of Goshen, conveys no property rights or exclusive privileges, and is subject to all public and private rights to all applicable federal, state and local laws. In conducting and maintaining any activities authorized herein, the permittee may not cause pollution, impairment, or destruction of the inland wetlands and watercourses of Goshen.
9. If the activity authorized by the inland wetlands permit also involves activity or a project that requires zoning or subdivision approval, special permit, variance, or special exception, no work pursuant to the wetlands permit may begin until such approval is obtained.
10. The permittee will maintain sediment and erosion controls at the site in such an operable condition as to prevent the pollution of wetlands and watercourses.

Said controls are to be inspected by the permittee for deficiencies at least once per week and immediately after rains. The permittee will correct any such deficiencies within 24 hours of said deficiency being found. The permittee will maintain such control measures until all areas of disturbed soils at the site are stabilized. Erosion and sedimentation controls are installed and inspected **prior** to start of construction.

11. The Project Engineer, David Prickett, P.E., David Prickett Consulting, LLC, shall update the plans to address the Commission's Consulting Engineer's comments in accordance with Mr. Prickett's August 3, 2016, written response letter to Todd Parson, P.E., Lenard Engineering Inc., letter to the Town of Goshen Land Use Administrator Martin Connor, dated July 26, 2017.

**In response to the Intervention filed by the Torrington Water Company pursuant to Section 22a-19 of the Connecticut General Statutes, the Inland Wetlands Commission of the Town of Goshen makes a finding that this proposal does not have a reasonable likelihood resulting in the unreasonable pollution, impairment, or destruction of the public trust in the air, water, or other natural resources of the State of Connecticut.**



## TOWN OF GOSHEN

42A NORTH STREET, GOSHEN, CT 06756  
PHONE (860) 491-2308 EXT. 232 FAX (860) 491-6028

### Inland Wetlands Commission

September 13, 2016

#### **CERTIFIED MAIL RETURN RECEIPT REQUESTED**

James Mersfelder, Vice President/Treasurer  
Woodridge Lake Sewer District  
PO Box 258  
Goshen, CT 06756

**Re: Inland Wetlands Permit # 16-09-03W – Woodridge Lake Sewer District – Construction of a wastewater transmission system from the Existing WLSD Water Pollution Control Facility (WPCF) at 113 Brush Hill Road to the Existing Municipal Sewer System in the City of Torrington.**

Dear Mr. Mersfelder:

The Town of Goshen Inland Wetlands Commission has granted your above-referenced permit for **Construction of a wastewater transmission system from the Existing WLSD Water Pollution Control Facility (WPCF) at 113 Brush Hill Road to the Existing Municipal Sewer System in the City of Torrington.** Please read your permit carefully as *all* construction and/or other work must conform to what the permit authorizes. Please final grade and stabilize all disturbed ground as soon as possible to avoid erosion and runoff.

If you have any questions about the enclosed permit or your responsibilities, please contact me at 860-491-2308 Ext. 232.

Sincerely,

Martin J. Connor, AICP  
Town Planner and Zoning & Inland Wetlands Enforcement Officer

MJC/sms

Enclosures

# INLAND WETLANDS PERMIT

Issuance Date: September 1, 2016 Expiration Date: September 1, 2021

Applicant/Owner: Woodridge Lake Sewer District  
James Mersfelder, Vice President/Treasurer

Mailing Address: 113 Brush Hill Road  
PO Box 258  
Goshen, CT 06756

Property Location: Starting at the Goshen-Torrington Town line heading west and south, the Project traverses: Torrington Road (State Route 4) at Goshen-Torrington Town line west to East Street South; then south along East Street South (Town road) to Pie Hill Road; then west on Pie Hill Road (Town road) until Old Middle Street (State Route 63); south on Old Middle Street (State Route 63) to Brush Hill Road; then west along Brush Hill Road (Town road); the portions of the proposed Project in State Routes 4 and 63 are within the State right-of-way; the proposed portions of the proposed Project within East Street South, Pie Hill Road and Brush Hill Road are within the Town right-of-way; the proposed Project also traverses two proposed easements from Brush Hill Road (Wadhams easement at 533 Old Middle Street, and Goodhouse easement at 38 Brush Hill Road) before it enters the Woodridge Lake Sewer District property of 113 Brush Hill Road to the existing Water Pollution Control Facility.

Permit #: 16-09-03W

In regard to your application to conduct regulated activities within the Town of Goshen, the Inland Wetlands Commission has considered your application with due regard for the matters enumerated in the Inland Wetlands Regulations and has found that the proposed work, as specified and conditioned below, conforms to the purposes and provisions of said regulations.

Activity: Construction of a wastewater transmission system from the Existing WLSD Water Pollution Control Facility (WPCF) at 113 Brush Hill Road to the Existing Municipal Sewer System in the City of Torrington.

The authorized activity is as per all oral and written testimony, which includes:

- The package of maps and plans prepared by David Prickett Consulting, LLC and Woodard & Curran dated June 2016 entitled "Woodridge Lake Sewer District, Goshen, Connecticut, WLSD Regional Sewer Extension, Torrington & Goshen, CT" Sheets G-01 through G03, C-14 through C-34, CD-01 through CD03;
- All other documents, letters, and reports submitted as a part of this application; and
- Testimony accepted at the public hearing on August 4, 2016.

This permit is issued subject to the following conditions and/or modifications:

1. If the authorized activity is not completed within Five years from the issuance date of **September 1, 2016** said activity will cease and, if not previously revoked or specifically renewed or extended, this permit will be null and void. Any request to renew or extend the expiration date of a permit should be filed in accordance with the Inland Wetlands Regulations of the Town of Goshen. Expired permits may not be renewed and the Inland Wetlands Commission may require a new application for regulated activities.
2. **The permittee will notify the Inland Wetlands Enforcement Officer upon commencement of work and upon its completion.**

3. All work and all regulated activities conducted pursuant to this authorization will be consistent with the terms and conditions of this permit. Any structures, excavation, fill, obstructions, encroachments, or regulated activities *not specifically identified and authorized herein* will constitute a violation of this permit and may result in its modification, suspension or revocation.
4. This authorization is not transferable without the written consent of the Inland Wetlands Commission.
5. In evaluating this application, the Inland Wetlands Commission has relied on information provided by the applicant. If such information is subsequently proved to be false, incomplete, or misleading, this permit may be modified, suspended, or revoked and the permittee may be subject to any other remedies or penalties provided by law.
6. The permittee will employ the best management practices as outlined in the 2002 CT E&S Guidelines, March 2002 edition and all amendments, consistent with the terms and conditions of this permit, to control storm water discharges and to prevent erosion and sedimentation and to otherwise prevent pollution of wetlands or watercourses. For information and technical assistance, contact the Inland Wetlands Enforcement Officer. The permittee will immediately inform the Commission of any problems involving the wetlands or watercourses that have developed in the course of, or that are caused by, the authorized work.
7. No equipment or material including without limitation, fill, clippings, brush, construction materials, or debris, will be deposited, placed, or stored in any wetland or watercourse on or off site unless specifically authorized by this permit. Any such activity not authorized by this permit may be just cause for revocation of the permit.
8. This permit is subject to and does not derogate any rights or powers of the Town of Goshen, conveys no property rights or exclusive privileges, and is subject to all public and private rights to all applicable federal, state and local laws. In conducting and maintaining any activities authorized herein, the permittee may not cause pollution, impairment, or destruction of the inland wetlands and watercourses of Goshen.
9. If the activity authorized by the inland wetlands permit also involves activity or a project that requires zoning or subdivision approval, special permit, variance, or special exception, no work pursuant to the wetlands permit may begin until such approval is obtained.
10. The permittee will maintain sediment and erosion controls at the site in such an operable condition as to prevent the pollution of wetlands and watercourses. Said controls are to be inspected by the permittee for deficiencies at least once per week and immediately after rains. The permittee will correct any such deficiencies within 24 hours of said deficiency being found. The permittee will maintain such control measures until all areas of disturbed soils at the site are stabilized.
11. **Erosion and sedimentation controls are installed and inspected prior to the start of construction.**
12. **Prior to commencing work, the Project Engineer, David Prickett, PE, David Prickett Consulting, LLC, shall incorporate into the plans the Commission's Consulting Engineer's comments in accordance with Mr. Prickett's August 3, 2016 written response letter to Todd Parsons, PE, Lenard Engineering Inc., which addressed issues raised in Mr. Parsons' letter to the Town of Goshen Land Use Administrator Martin Connor dated July 26, 2016.**

Martin J. Connor, AICP  
Town Planner and Zoning & Inland Wetlands Enforcement Officer

# CITY OF TORRINGTON



LAND USE OFFICE  
140 Main Street • City Hall  
Torrington, CT 06790-5245

Phone: (860) 489-2221  
Fax: (860) 496-5928  
[www.torringtonct.org](http://www.torringtonct.org)

**To:** Inland Wetlands Commission  
**From:** Rista Malanca, Wetlands Agent  
**Subject:** James Mersfelder, Vice President/Treasurer for Woodridge Lake Sewer District, Install a force main pipe along Route 4 from the Town line to Lovers Lane & Replace the existing 8" diameter gravity sewer pipe to a 12" diameter gravity sewer pipe in the same alignment from Lovers Lane to Riverside Avenue within the upland review area.  
**Date:** 9/19/2016

The City of Torrington's Inland Wetlands and Watercourse Commission (Commission), based on the oral and written testimony supplied at the public hearing, must:

1. Address the intervention filed by the Torrington Water Company pursuant to Section 22a-19 of the Connecticut General Statutes. **The Commission must make a finding that this proposal does or does not have a reasonable likelihood resulting in the unreasonable pollution, impairment, or destruction of the public trust in the air, water, or other natural resources of the State of Connecticut.**

The jurisdiction of the Commission does not change or expand due to the filing of an intervenor. The Commission must limit its review of this application to matters that are within their jurisdiction as per the City of Torrington Inland Wetlands and Watercourse Regulations (Regulations).

2. Act on the application referenced above. The Commission should consider the Criteria for Decision in Section 10 of the Regulations.

The Commission must carefully consider all information submitted at the public hearing and **determine if there is a reasonable likelihood that these activities would cause an unreasonable pollution, impairment or destruction to wetlands or watercourses.**

The record contains the following documents (in chronological order):

Original Application includes:

- Woodridge Lake Sewer District, Regional Sewer Connection Project, Application for Inland Wetlands Permit, City of Torrington – dated July 13, 2016
- Maps and Plans prepared by Woodard & Curran / David Prickett Consulting, LLC, Titled "Woodridge Lake Sewer District, Goshen Connecticut, WLSR Regional Sewer Extension, Torrington & Goshen CT" dated June 2016

Other Documents:

- Letter from Torrington Water Company (TWC) to Raymond Turri & Jim Mersfelder of the Woodridge Lake Sewer District (WLSR), dated July 11, 2016 re: Woodridge Lake Sewer



#### District Regional Wastewater Connection Project

- Letter from WLSD to Susan Suhanovsky (TWC), dated July 15, 2016 re: Woodridge Lake Sewer District (“WLSD”) – Regional Sewer Connection Project
- Letter from Pullman & Comley and Intervention of the Torrington Water Company verified pleading filed pursuant to Section 22a-19 of the CT General Statutes, dated July 19, 2016
- Letter from Woodard & Currand to Ms. Patricia Bisacky (CT Dept. of Public Health) re: proposed Regional Sewer Connection Project, Woodridge Lake Sewer District, dated July 30, 2016
- Letter from the State of CT Department of Public Health to Mr. Thomas Stansfield, dated August 4, 2016, re: Inland Wetlands Application of Woodridge Lake Sewer District – Construction of Wastewater Transmission System
- Letter from the State of CT Department of Public Health to Mr. Jay Bate, Jr, dated August 15, 2016, re: Inland Wetlands Application of Woodridge lake Sewer District – Construction of Wastewater Transmission System
- Report from Environmental Planning Services, Titled “Wetland Evaluation and Impact Assessment” dated August 15, 2016
- Packet in support of application for permission to conduct regulated activities associated with a proposed wastewater transmission system located in Torrington, Connecticut, submitted by Christopher Smith Esq., dated August 16, 2016
- Statement of James L. Mersfelder re: Woodridge Lake Sewer District Application, Torrington Inland Wetlands Public Hearing: August 16, 2016
- Report from Tata & Howard to Ms. Susan Suhanovsky (TWC) dated August 16, 2016
- Map of Hall meadow Dam Watershed 7676 Acres

In reviewing the above Inland Wetlands application, plans, documents, and testimony presented at the public hearing, which was opened and closed on August 16, 2016, it is my opinion that the proposed wastewater transmission system line will have no adverse impact on the wetlands or watercourses. No actual work will be performed in the wetlands or watercourses, only a temporary disturbance to the upland review areas.

Furthermore; the applicant’s expert Mr. M. Klein clearly stated on the record that is the Regulated Activities are not likely to cause an unreasonable pollution, impairment or destruction of wetland or watercourses. Mr. M. Klein is a Registered Soil Scientist as well as a Certified Professional wetland Scientist. In Mr. M. Klein’s report on page 6, section 6.1.1 states “there will be no direct wetland impacts associated with the proposed regulated activities” In Summary on page 8 he concludes that “these measures are appropriately designed to prevent any long term adverse impacts to wetlands and watercourses.” No other certified professional wetland Scientists or soil scientists testified.

The Applicant’s Engineer, Mr. Pricket also clearly stated on the record that the Regulated Activities are not likely to cause an unreasonable pollution, impairment or destruction of wetland or watercourses.

The TWC’s Engineers from Tata & Howard did not clearly state that the Regulated Activities would likely cause unreasonable pollution, impairment or destruction to wetlands or watercourses. In fact, throughout their report they reference the possible risks, and specifically on page 9 states “based on the potential risk to the TWC public water supply ...” Neither in their testimony nor in their report did they identify specifically what unreasonable pollution, or impairment nor destruction of the wetlands would occur.

Therefore; it is my recommendation related to the Intervention filed by the Torrington Water that the Commission make a finding that this proposal does not have a reasonable likelihood of resulting in

the unreasonable pollution, impairment, or destruction of the public trust in the air, water, or other natural resources of the State of Connecticut.

Also I recommend that the Commission make a finding that the proposed regulated activities do not represent a significant activity per Section 2 of the City of Torrington Inland Wetlands and Watercourses Regulations. In accordance with Section 10 of the City of Torrington Inland Wetlands and Watercourses Regulations, I recommend that the application be approved with the following conditions:

1. If the authorized activity is not completed within Five years from the issuance date of: **September 20, 2016**, said activity will cease and, if not previously revoked or specifically renewed or extended, this permit will be null and void. Any request to renew or extend the expiration date of a permit should be filed in accordance with the Inland Wetlands Regulations of the City of Torrington. Expired permits may not be renewed and the Inland Wetlands Commission may require a new application for regulated activities.
2. The permittee will notify the Inland Wetlands Enforcement Officer upon commencement of work and upon its completion.
3. All work and all regulated activities conducted pursuant to this authorization will be consistent with the terms and conditions of this permit. Any structures, excavation, fill, obstructions, encroachments, or regulated activities *not specifically identified and authorized herein* will constitute a violation of this permit and may result in its modification, suspension or revocation.
4. This authorization is not transferable without the written consent of the Inland Wetlands Commission.
5. In evaluating this application, the Inland Wetlands Commission has relied on information provided by the applicant. If such information is subsequently proved to be false, incomplete, or misleading, this permit may be modified, suspended, or revoked and the permittee may be subject to any other remedies or penalties provided by law.
6. The permittee will employ the best management practices as outlined in the 2002 CT E&S Guidelines, March 2002 edition and all amendments, consistent with the terms and conditions of this permit, to control storm water discharges and to prevent erosion and sedimentation and to otherwise prevent pollution of wetlands or watercourses. For information and technical assistance, contact the Wetlands Enforcement Officer. The permittee will immediately inform the Commission of any problems involving the wetlands or watercourses that have developed in the course of, or that is caused by, the authorized work.
7. No equipment or material including without limitation, fill, clippings, brush, construction materials, or debris, will be deposited, placed, or stored in any wetland or watercourse on or off site unless specifically authorized by this permit. Any such activity not authorized by this permit may be just cause for revocation of the permit.
8. This permit is subject to and does not derogate any rights or powers of the City of Torrington, conveys no property rights or exclusive privileges, and is subject to all public and private rights to all applicable federal, state and local laws. In conducting and maintaining any activities authorized herein, the permittee may not cause pollution, impairment, or destruction of the inland wetlands and watercourses of Torrington.
9. If the activity authorized by the inland wetlands permit also involves activity or a project that

requires zoning or subdivision approval, special permit, variance, or special exception, no work pursuant to the wetlands permit may begin until such approval is obtained.

10. The permittee will maintain sediment and erosion controls at the site in such an operable condition as to prevent the pollution of wetlands and watercourses. Said controls are to be inspected by the permittee for deficiencies at least once per week and immediately after rains. The permittee will correct any such deficiencies within 24 hours of said deficiency being found. The permittee will maintain such control measures until all areas of disturbed soils at the site are stabilized.
11. Erosion and sedimentation controls are installed and inspected **prior** to start of construction.

**Draft Motion of approval of the James Mersfelder, Vice President/Treasurer for Woodridge Lake Sewer District, Install a force main pipe along route 4 from the Town line to Lovers Lan & Replace the existing 8” diameter gravity sewer pipe to a 12” diameter gravity sewer pipe in the same alignment from Lovers lane to Riverside Ave within the upland review area, within Goshen Road (Route 4), starting at the Goshen/Torrington municipal boundary extending to Riverside Ave.**

Whereas James Mersfelder, Vice President/Treasurer for Woodridge Lake Sewer District, has made application for regulated activities within 100 feet of watercourses and/or 75 feet of wetlands, including Installation of a force main pipe along route 4 from the Town line to Lovers Lan & Replace the existing 8” diameter gravity sewer pipe to a 12” diameter gravity sewer pipe in the same alignment from Lovers lane to Riverside Ave within the upland review area, within Goshen Road (Route 4), starting at the Goshen/Torrington municipal boundary extending to Riverside Ave.

Whereas said application contains the following maps and plans titled, Maps and Plans prepared by Woodard & Curran / David Prickett Consulting, LLC, Titled “Woodridge Lake Sewer District, Goshen Connecticut, WLSR Regional Sewer Extension, Torrington & Goshen CT” dated June 2016 along with other documents, letters, reports, submitted along with the application, as well as the testimony accepted at the public hearing on August 16, 2016;

Whereas, the Inland Wetlands Commission of the City of Torrington convened and completed a public hearing on this application August 16, 2016;

Whereas, the professional advisors have reviewed said application and provided written and verbal reports to the Commission on this application;

Whereas, the Inland Wetlands Commission of the City of Torrington, has evaluated the application according to the standards and criteria for a decision per Section 10 of the City of Torrington Inland Wetlands and Watercourses Regulations, in carrying out the purpose and policies of Section 22(a)-41 of the CT General Statutes, including matters related to regulating, licensing and enforcing the provisions whereof, the Commission has taken into consideration all relevant facts and circumstances. The proposed regulated activities do not represent a significant activity per Section 2 of the City of Torrington Inland Wetlands and Watercourses Regulations. The Commission finds that there is no reasonable likelihood of adverse impact to the wetlands and watercourses from the regulated activities proposed.

**NOW THEREFORE BE IT RESOLVED by the Inland Wetlands Commission of the City of Torrington that the aforementioned application is approved with the following conditions:**

1. If the authorized activity is not completed within Five years from the issuance date of: **September 16, 2016**, said activity will cease and, if not previously revoked or specifically renewed or extended, this permit will be null and void. Any request to renew or extend the expiration date of a permit should be filed in accordance with the Inland Wetlands Regulations of the City of Torrington. Expired permits may not be renewed and the Inland Wetlands Commission may require a new application for regulated activities.

2. The permittee will notify the Inland Wetlands Enforcement Officer upon commencement of work and upon its completion.
3. All work and all regulated activities conducted pursuant to this authorization will be consistent with the terms and conditions of this permit. Any structures, excavation, fill, obstructions, encroachments, or regulated activities *not specifically identified and authorized herein* will constitute a violation of this permit and may result in its modification, suspension or revocation.
4. This authorization is not transferable without the written consent of the Inland Wetlands Commission.
5. In evaluating this application, the Inland Wetlands Commission has relied on information provided by the applicant. If such information is subsequently proved to be false, incomplete, or misleading, this permit may be modified, suspended, or revoked and the permittee may be subject to any other remedies or penalties provided by law.
6. The permittee will employ the best management practices as outlined in the 2002 CT E&S Guidelines, March 2002 edition and all amendments, consistent with the terms and conditions of this permit, to control storm water discharges and to prevent erosion and sedimentation and to otherwise prevent pollution of wetlands or watercourses. For information and technical assistance, contact the Wetlands Enforcement Officer. The permittee will immediately inform the Commission of any problems involving the wetlands or watercourses that have developed in the course of, or that is caused by, the authorized work.
7. No equipment or material including without limitation, fill, clippings, brush, construction materials, or debris, will be deposited, placed, or stored in any wetland or watercourse on or off site unless specifically authorized by this permit. Any such activity not authorized by this permit may be just cause for revocation of the permit.
8. This permit is subject to and does not derogate any rights or powers of the City of Torrington, conveys no property rights or exclusive privileges, and is subject to all public and private rights to all applicable federal, state and local laws. In conducting and maintaining any activities authorized herein, the permittee may not cause pollution, impairment, or destruction of the inland wetlands and watercourses of Torrington.
9. If the activity authorized by the inland wetlands permit also involves activity or a project that requires zoning or subdivision approval, special permit, variance, or special exception, no work pursuant to the wetlands permit may begin until such approval is obtained.
10. The permittee will maintain sediment and erosion controls at the site in such an operable condition as to prevent the pollution of wetlands and watercourses. Said controls are to be inspected by the permittee for deficiencies at least once per week and immediately after rains. The permittee will correct any such deficiencies within 24 hours of said deficiency being found. The permittee will maintain such control measures until all areas of disturbed soils at the site are stabilized.
11. Erosion and sedimentation controls are installed and inspected **prior** to start of construction.

**In response to the Intervention filed by the Torrington Water Company pursuant to Section 22a-19 of the Connecticut General Statutes, the Inland Wetlands Commission of the City of Torrington makes a finding that this proposal does not have a reasonable likelihood resulting in the unreasonable pollution, impairment, or destruction of the public trust in the air, water, or other natural resources of the State of Connecticut.**

**Draft Motion of denial of the James Mersfelder, Vice President/Treasurer for Woodridge Lake Sewer District, Install a force main pipe along route 4 from the Town line to Lovers Lan & Replace the existing 8” diameter gravity sewer pipe to a 12” diameter gravity sewer pipe in the same alignment from Lovers lane to Riverside Ave within the upland review area, within Goshen Road (Route 4), starting at the Goshen/Torrington municipal boundary extending to Riverside Ave.**

Whereas James Mersfelder, Vice President/Treasurer for Woodridge Lake Sewer District, has made application for regulated activities within 100 feet of watercourses and/or 75 feet of wetlands, including Installation of a force main pipe along route 4 from the Town line to Lovers Lan & Replace the existing 8” diameter gravity sewer pipe to a 12” diameter gravity sewer pipe in the same alignment from Lovers lane to Riverside Ave within the upland review area, within Goshen Road (Route 4), starting at the Goshen/Torrington municipal boundary extending to Riverside Ave.

Whereas said application contains the following maps and plans titled, Maps and Plans prepared by Woodard & Curran / David Prickett Consulting, LLC, Titled “Woodridge Lake Sewer District, Goshen Connecticut, WLSR Regional Sewer Extension, Torrington & Goshen CT” dated June 2016 along with other documents, letters, reports, submitted along with the application, as well as the testimony accepted at the public hearing on August 16, 2016;

Whereas, the Inland Wetlands Commission of the City of Torrington convened and completed a public hearing on this application August 16, 2016;

Whereas, the professional advisors have reviewed said application and provided written and verbal reports to the Commission on this application;

Whereas, the Inland Wetlands Commission of the City of Torrington, has evaluated the application according to the standards and criteria for a decision per Section 10 of the City of Torrington Inland Wetlands and Watercourses Regulations, in carrying out the purpose and policies of Section 22(a)-41 of the CT General Statutes, including matters related to regulating, licensing and enforcing the provisions whereof, the Commission has taken into consideration all relevant facts and circumstances. The proposed regulated activities do represent a significant activity per Section 2 of the City of Torrington Inland Wetlands and Watercourses Regulations. The Commission finds that there is reasonable likelihood of adverse impact to the wetlands and watercourses from the regulated activities proposed.

**NOW THEREFORE BE IT RESOLVED by the Inland Wetlands Commission of the City of Torrington that the aforementioned application is denied for the following reasons:**

# CITY OF TORRINGTON



LAND USE OFFICE  
140 Main Street • City Hall  
Torrington, CT 06790-5245

Phone: (860) 489-2221  
Fax: (860) 496-5928  
[www.torringtonct.org](http://www.torringtonct.org)

**RE: Inland Wetland Permit – WC 16-09-01  
Goshen Road (Route 4), Starting at the Goshen/Torrington municipal boundary  
extending to Riverside Avenue in Torrington, CT.**

Dear, Mr. Mersfelder

On September 20, 2016 the Torrington Inland Wetland meeting the Commission voted unanimously to approve a permit to Install a force main sewer pipe along Route 4 from the Town line to Lovers Lane and replace the existing 8" diameter gravity sewer pipe to a 12" diameter gravity sewer pipe in the same alignment from Lovers lane to Riverside Ave. within Goshen Road (Route 4), Starting at the Goshen/Torrington municipal boundary extending to Riverside Avenue in Torrington. Your permit is enclosed. Please read it carefully as *all* conditions and work must conform to what the permit authorizes.

A legal notice was placed in the Republican American, a newspaper having general circulation in the City of Torrington, on **September 22, 2016**.

If you have any questions about the enclosed permit or your responsibilities, please contact me at (860)489-2221.

Sincerely,

Rista Malanca, CZ&WEO

cc: PZC  
file



# CITY OF TORRINGTON



## INLAND WETLAND AND WATERCOURSE PERMIT

**Date:** September 27, 2106

**Issuance Date:** September 20, 2016 **Expiration Date:** September 20, 2021

**Applicant:** James Mersfelder on behalf of the Woodridge Lake Sewer District

**Mailing Address:** PO Box 258, Goshen Ct 06756

**Property Location:** Goshen Road (Route 4), Starting at the Goshen/Torrington municipal boundary extending to Riverside Avenue

**Inland Wetlands Permit Number:** WC 16-09-01

In regard to your application to conduct regulated activities within the City of Torrington, the Inland Wetlands Commission has considered your application with due regard for the matters enumerated in the Inland Wetlands Regulations and has found that the proposed work, as specified and conditioned below, conforms to the purposes and provisions of said regulations.

**Activity:** Install a force main sewer pipe along Route 4 from the Town line to Lovers Land and replace the existing 8" diameter gravity sewer pipe to a 12" diameter gravity sewer pipe in the same alignment from Lovers lane to Riverside Ave. within the upland review area

**The authorized activity is per Plans and details provided by Woodard & Currant along with David Prickett Consulting, LLC as submitted in the application for Inland Wetlands Permit, for Woodridge Lake Sewer District, Regional Sewer Connection Project dated July 13, 2016.**

This permit is issued subject to the following conditions and/or modifications:

1. If the authorized activity is not completed within **Five years** from the issuance **date of: September 20, 2016** said activity shall cease and, if not previously revoked or specifically renewed or extended, this permit shall be null and void. Any request to renew or extend the expiration date of a permit should be filed in accordance with the Inland Wetlands Regulations of the City of Torrington. Expired permits may not be renewed and the Inland Wetlands Commission may require a new application for regulated activities.
2. The permittee shall notify the Inland Wetlands Enforcement Officer upon commencement of work and upon its completion.
3. All work and all regulated activities conducted pursuant to this authorization shall be consistent with the terms and conditions of this permit. Any structures, excavation, fill, obstructions, encroachments, or regulated activities *not specifically identified and authorized herein* shall constitute a violation of this permit and may result in its modification, suspension or revocation.
4. This authorization is not transferable without the written consent of the Inland Wetlands Commission.
5. In evaluating this application, the Inland Wetlands Commission has relied on information provided by the applicant. If such information is subsequently proved to be false, incomplete, or misleading, this permit may be modified, suspended, or revoked and the permittee may be subject to any other remedies or penalties provided by law.
6. The permittee shall employ the best management practices as outlined in the 2002 CT E&S Guidelines, March 2002 edition and all amendments, consistent with the terms and conditions of this permit, to control storm water discharges and to prevent erosion and sedimentation and to otherwise prevent pollution of wetlands or watercourses. For information and technical assistance, contact the Wetlands Enforcement Officer. The permittee shall immediately inform the Commission of any problems involving the wetlands or watercourses that have developed in the course of, or that are caused by, the authorized work.
7. No equipment or material including without limitation, fill, clippings, brush, construction

materials, or debris, shall be deposited, placed or stored in any wetland or watercourse on or off site unless specifically authorized by this permit. Any such activity not authorized by this permit may be just cause for revocation of the permit.

8. This permit is subject to and does not derogate any rights or powers of the City of Torrington, conveys no property rights or exclusive privileges, and is subject to all public and private rights to all applicable federal, state and local laws. In conducting and maintaining any activities authorized herein, the permittee may not cause pollution, impairment, or destruction of the inland wetlands and watercourses of Torrington.
9. If the activity authorized by the inland wetlands permit also involves activity or a project that requires zoning of subdivision approval, special permit, variance, or special exception, no work pursuant to the wetlands permit may begin until such approval is obtained.
10. The permittee shall maintain sediment and erosion controls at the site in such an operable conditions as to prevent the pollution of wetlands and watercourses. Said controls are to be inspected by the permittee for deficiencies at least once per week and immediately after rains. The permittee shall correct any such deficiencies within 24 hours of said deficiency being found. The permittee shall maintain such control measures until all areas of disturbed soils at the site are stabilized.
11. Erosion and sedimentation controls be installed and inspected **prior** to start of construction.
12. **All disturbed areas shall be stabilized (even if temporarily) prior to November 1.**

---

Rista Malanca  
Certified Zoning and Wetlands Enforcement Officer  
City of Torrington  
cc: file

**APPENDIX F**  
**STATE-WIDE INFORMATION ON**  
**OVERLAPPING WATERSHEDS AND**  
**SEWERSHEDS**



**Table X**  
Communities with Overlaps Between Sewershed and Watershed Areas

<b>Community</b>	<b>Water Utility Name</b>	<b>Sewer Utility Name</b>
Bloomfield	METROPOLITAN DISTRICT COMMISSION	MDC
Branford	REGIONAL WATER AUTHORITY	Branford Water & Sewer
Bristol	NEW BRITAIN WATER DEPARTMENT	Bristol WPCA
Canton	METROPOLITAN DISTRICT COMMISSION	Canton WPCA
Cheshire	REGIONAL WATER AUTHORITY	Cheshire WPCA
Danbury	DANBURY WATER DEPARTMENT	Danbury Public Utilities
East Haven	REGIONAL WATER AUTHORITY	GNHWPCA
Ellington	CTWC - NORTHERN REG-WESTERN SYSTEM	Ellington WPCA
Fairfield	AQUARION WATER CO OF CT-MAIN SYSTEM	Fairfield WPCA
Goshen	WATERBURY WATER DEPARTMENT	WLSD
Groton	GROTON UTILITIES	Groton WPCA
Hamden	REGIONAL WATER AUTHORITY	GNHWPCA
Manchester	MANCHESTER WATER DEPARTMENT	Manchester Water & Sewer
Mansfield	WINDHAM WATER WORKS	Mansfield WPCA
Mansfield	WINDHAM WATER WORKS	Mansfield WPCA
Meriden	MERIDEN WATER DIVISION	Meriden Water Pollution Control Division
Montville	NEW LONDON DEPT. OF PUBLIC UTILITIES	Montville WPCA
Naugatuck	CTWC - NAUGATUCK REGION-CENTRAL SYSTEM	Naugatuck Water Pollution Control
Naugatuck	CTWC - NAUGATUCK REGION-CENTRAL SYSTEM	Naugatuck Water Pollution Control
New Britain	NEW BRITAIN WATER DEPARTMENT	New Britain Sewer
North Branford	REGIONAL WATER AUTHORITY	North Branford WPCA
Plymouth	CTWC - NAUGATUCK REG-THOMASTON SYSTEM	Plymouth WPCA
Plymouth	BRISTOL WATER DEPARTMENT	Plymouth WPCA
Ridgefield	AQUARION WATER CO OF CT-MAIN SYSTEM	Ridgefield WPCA
Ridgefield	AQUARION WATER CO OF CT-STAMFORD	Ridgefield WPCA
Ridgefield	NORWALK FIRST TAXING DISTRICT	Ridgefield WPCA
Seymour	REGIONAL WATER AUTHORITY-ANSONIA	Seymour WPCA
Shelton	AQUARION WATER CO OF CT-MAIN SYSTEM	Shelton WPCA
Sprague	SPRAGUE WATER & SEWER AUTHORITY	Sprague Water & Sewer Authority
Stamford	AQUARION WATER CO OF CT-GREENWICH SYST	Stamford WPCA
Thomaston	WATERBURY WATER DEPARTMENT	Thomaston WPCA
Tolland	CTWC - NORTHERN REG-WESTERN SYSTEM	Tolland WPCA
Torrington	METROPOLITAN DISTRICT COMMISSION	Torrington WPCA
Trumbull	AQUARION WATER CO OF CT-MAIN SYSTEM	Trumbull WPCA
Vernon	CTWC - NORTHERN REG-WESTERN SYSTEM	Vernon WPCA
Vernon	MANCHESTER WATER DEPARTMENT	Vernon WPCA
Wallingford	MERIDEN WATER DIVISION	Wallingford Sewer
Wallingford	WALLINGFORD WATER DEPARTMENT	Wallingford Water & Sewer
Wallingford	REGIONAL WATER AUTHORITY	Wallingford Water & Sewer
West Hartford	METROPOLITAN DISTRICT COMMISSION	MDC
Wolcott	SOUTHINGTON WATER DEPARTMENT	Wolcott Sewer
Woodstock	PUTNAM WATER POLLUTION CONTROL AUTHORITY	Woodstock WPCA

Notes:

References

Sewer Service Area - CT DEEP GIS

Public Watersheds - CT DEEP GIS

Town Websites

**APPENDIX G**  
**NON-COST CONSIDERATIONS**  
**SUMMARY TABLE**

Non-Cost Consideration	Summary of Considerations for Alternatives					Most Advantageous Alternative(s)
	Local	Regional T1	Regional T2	Regional T3	Regional L1	
Air Quality	Highest energy consumption due to redundant WPCF, as compared to Regional Alternatives	Shortest pipe route will have the lowest pumping costs, as compared to T2 and T3	Intermediate pipe route will have slightly higher pumping costs than T1	Longest Torrington pipe route will have slightly higher pumping costs than T3	Multiple pump stations; higher pumping and heating costs that Torrington alternatives	Regional Alternative T1
Water Quality	Yields reuse quality effluent; effluent discharge remains in GAA groundwater supply area	Level of treatment anticipated at Torrington WPCF slightly higher than Litchfield WPCF	Level of treatment anticipated at Torrington WPCF slightly higher than Litchfield WPCF	Level of treatment anticipated at Torrington WPCF slightly higher than Litchfield WPCF	Slightly lower effluent quality from Litchfield WPCF as compared to Torrington WPCF	Regional Alternatives T1, T2 and T3
Floodplains	No floodplain impacts	No proposed direct impacts; work proposed in road right-of-way; wetlands permits approved	No proposed direct impacts; work proposed in road right-of-way	No proposed direct impacts; work proposed in road right-of-way	No proposed direct impacts; work proposed in road right-of-way; multiple pump stations less desirable	Local Alternative; Regional Alternative T1
Wetlands	Least impacts to URA since project site is already developed	Shortest pipe route of the Regional Alternatives; Wetlands permits already secured	Pipe route longer than Regional Alternative T1	Pipe route longer than Regional Alternative T2	Shortest pipe route of the Regional Alternatives, but several pump stations need to be sited	Regional Alternative T1
Farmlands	No proposed direct impacts; work proposed on existing WPCF site	No proposed direct impacts; work proposed in road right-of-way; wetlands permits approved	No proposed direct impacts; work proposed in road right-of-way	No proposed direct impacts; work proposed in road right-of-way	No proposed direct impacts; work proposed in road right-of-way; multiple pump station less desirable	Local Alternative; Regional Alternative T1
Land Use	No impacts	Positive referrals from both P&Z Commissions; shorter route is better	Route adjacent to several existing residential developments; increased potential for local disruption and future sewer service	Route adjacent to several existing residential developments; increased potential for local disruption and future sewer service	Town's preference for gravity sewers yields increased potential for future sewer service demands	Local Alternative; Regional Alternative T1
Environmentally Sensitive Areas	No proposed direct impacts; work proposed at existing WPCF site	No proposed direct impacts; work proposed in road right-of-way; wetlands permits approved; shorter route is better	No proposed direct impacts; work proposed in road right-of-way	No proposed direct impacts; work proposed in road right-of-way	No proposed direct impacts; work proposed in road right-of-way	Local Alternative; Regional Alternative T1



Non-Cost Consideration	Summary of Considerations for Alternatives					Most Advantageous Alternative(s)
	Local	Regional T1	Regional T2	Regional T3	Regional L1	
Water Supply	No known impacts	Traverses a section of TWC watershed, but measures implemented to minimize risk	No known impacts	No known impacts	No known impacts	Local Alternative; Regional Alternatives T2, T3 and L1, and T1 with measures implemented to minimize risk
Aquifer Protection Areas	Effluent discharged to GAA water supply area	No known impacts	No known impacts	No known impacts	No known impacts	Regional Alternatives
Shellfishing	Not applicable.	Not applicable.	Not applicable.	Not applicable.	Not applicable.	Not applicable.
Endangered Species	No anticipated impacts	No anticipated impacts	No anticipated impacts	No anticipated impacts	No anticipated impacts	Regional Alternative T1
Historical & Archaeological Sites	No anticipated impacts	No anticipated impacts	No anticipated impacts	No anticipated impacts	No anticipated impacts	Regional Alternative T1
Wild & Scenic Rivers	No impacts	No impacts	No impacts	No impacts	No impacts	Not applicable.
Coastal Zone Management	Not applicable.	Not applicable.	Not applicable.	Not applicable.	Not applicable.	Not applicable.
Indirect Impacts	No anticipated impacts	No anticipated impacts; shorter route is better	No anticipated impacts	No anticipated impacts	No anticipated impacts	Regional Alternative T1
Socio-Economic Impacts	Moderate cost to residents	Lowest cost to residents	Moderate cost to residents	Higher cost to residents	Higher cost to residents	Regional Alternative T1
Plans of Conservation & Development	No anticipated impacts	Positive referrals from both P&Z Commissions	Increased potential for growth pressure from sewers.	Increased potential for growth pressure from sewers.	Increased potential for growth pressure from sewers.	Regional Alternative T2
Inter-Municipal Agreements	No impacts	Torrington's preferred pipe route; shorter route is better	Torrington does not prefer pipe route	Torrington does not prefer pipe route	Litchfield does not have available capacity	Local Alternative; Regional Alternative T1
Miscellaneous	Short-term construction mitigation	Short-term construction mitigation	Short-term construction mitigation	Short-term construction mitigation	Short-term construction mitigation	All Alternatives
Permitting	DEEP/DPH permit approval unlikely	Inland Wetlands Permits secured; limited additional permits needed	Several permits required	Several permits required	Several permits required	Regional Alternative T1