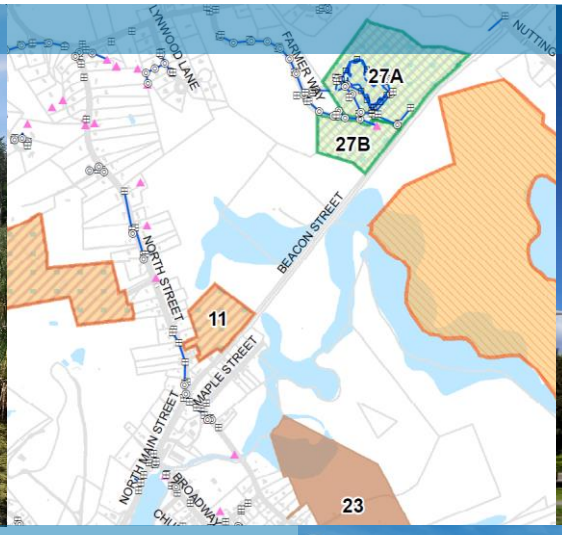

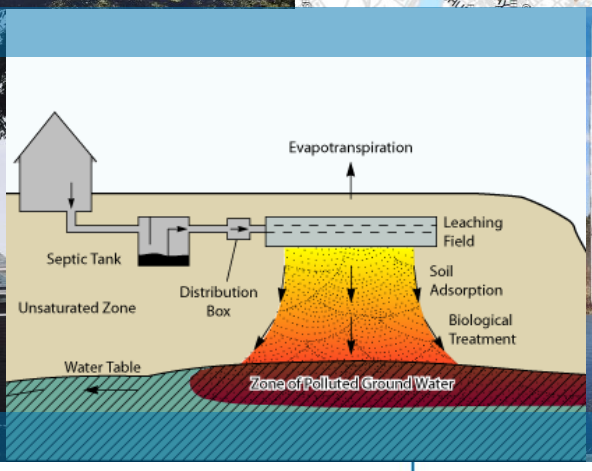

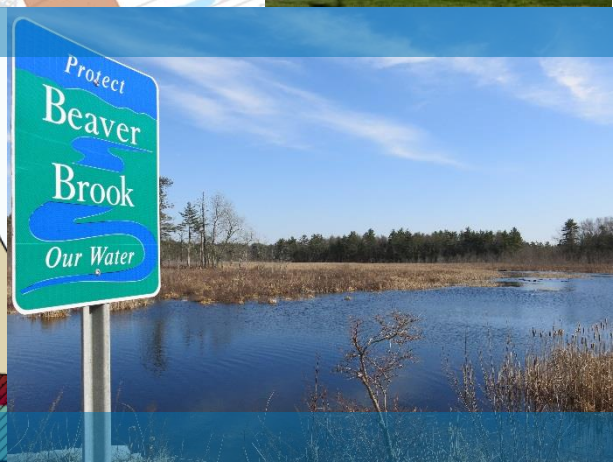

Tighe&Bond

MUNICIPAL WASTEWATER ASSET OPERATION & MAINTENANCE PLAN

For the

Town of Westford, Massachusetts

Final – October 2016

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Section 1
Introduction

The Town of Westford is almost entirely sewered by onsite wastewater treatment and disposal systems that are privately maintained by Westford's residents and businesses. The Town of Westford, through various responsible departments, owns and/or operates properties throughout Town made up of buildings, facilities and parks/open spaces. These municipal properties are described in the T*own-Wide Operation & Maintenance Plan*, Volume 3 of the Stormwater Management Master Plan. With the exception of a small pressure sewer system and four groundwater discharge wastewater treatment facilities (WWTFs), the majority of Town-owned properties with facilities have wastewater treatment and disposal infrastructure (may include grease traps and tight tanks) that the Town must maintain for proper inspection.

The Town of Westford's Public Works Initiative Committee worked with the Board of Health to develop a preliminary assessment of its municipally-owned wastewater assets but it lacks a complete and robust inventory that includes comprehensive operation and maintenance procedures. This plan includes the locations of and details associated with Town-owned or operated subsurface wastewater disposal systems including septic systems, grease traps, tight tanks, and cesspools.

This O&M Plan was prepared to formalize practices and present a consistent framework for use Town-wide among staff in various departments that are responsible for maintaining wastewater assets. This plan applies to all Town-owned or operated subsurface wastewater disposal systems including septic systems, tight tanks, and cesspools. Specifically, the plan identifies all of the types of systems, and Standard Operating Procedures (SOPs) to address activities and pollutants of concern, and it establishes responsibilities and potential implementation schedules. This plan does not include developing operation and maintenance procedures for the Town's large wastewater treatment and disposal facilities located on the grounds of the Blanchard School, Westford Academy, Abbot School, and the Stony Brook School, including Groundwater Discharge Permit compliance, operation and maintenance of pump stations and other conveyance infrastructure. We assumed that these facilities are maintained separately and are incorporated by reference only.

Tighe & Bond also evaluated Westford's municipal wastewater assets for their potential to contribute nonpoint source pollution to receiving waters, particularly pollutants of concern in impaired watersheds, and illicit discharge potential. This was accomplished by identifying systems that fall within watersheds with phosphorus or bacteria impairments and highlighting potentially substandard or poorly performing systems (i.e., cesspools, septic systems not decommissioned properly, or ones with variances). Based on this screening, some of these facilities and adjacent drainage infrastructure were prioritized for the Town's Illicit Discharge Detection and Elimination Program and other relevant components of the NPDES Stormwater Program Compliance Plan, Volume 4 of the SWMMP.

1.1 Meeting with Public Works Initiative Committee

On February 22, 2016 Tighe & Bond staff met with the following members of the Public Works Initiative Committee; John Mangiaratti, John Cunningham, Bob Price, and Hugh Maguire. Together, we discussed the wastewater systems in Westford and identified the following goals for this plan.

Overall goals of the plan:

- Understand the Town's responsibility for O&M of wastewater systems.
- Identify wastewater systems in need of immediate attention, if any.
- Highlight potential sources of illicit discharge in Town.
- Present short-term and long-term recommendations in order to centralize and/or track operation and maintenance of municipal subsurface wastewater systems.
- Identify Town Departments and personnel responsible for wastewater O&M commitment and make recommendations for future.

Throughout the process of developing this plan, Tighe & Bond communicated with the PWIC to obtain additional input.

1.2 Development of O&M Plan

To prepare this O&M Plan, Tighe & Bond worked closely with Town of Westford Staff to expand on the information included in the initial inventory of Town facilities with sub-surface wastewater systems (**Appendix A**). All of the systems were spatially located in Westford by its associated address/parcel ID from the Assessor's Database and the town's GIS parcel layer. For ease of plan implementation, all of the wastewater assets identified were grouped by "property" that might contain multiple parcels, and properties were assigned a number that is used in tables and figures throughout this Plan. There are 34 total properties and, in many instances, multiple types of wastewater systems existed on the same property. For example, we considered the East Boston Camp site to be one property with nine separate wastewater systems (septic systems and grease traps) on multiple parcels.

For the 34 properties, Tighe & Bond staff went through existing Board of Health (BOH) records to fill in any inventory data gaps from the Town's original list. The record review was performed over a two-day period on each municipal owned property with a subsurface wastewater system. During the review, additional system information was obtained including the type of system, date of install/upgrade, capacity, pumping information, variances, and system failure history, if available.

Section 2
Inventory of Municipal Facilities with Wastewater Assets

Tighe & Bond compiled all of the municipal wastewater asset information for ease of use by the Town in the following formats:

1. Tabular format in Excel – **Appendix A**
2. Maps of wastewater assets by type of system – **Figure 2-1**
3. GIS Geodatabase for long-term data management (delivered electronically)

The Town's wastewater inventory and the BOH document review identified the following types of wastewater assets on 34 municipal properties: WWTFs, septic systems, grease traps, cesspools, tight tanks and floor drains. The following sections provide brief definitions of the existing systems identified and a summary of which systems are in operation at each facility.

2.1 Town WWTFs

Of the 34 municipal properties identified, twelve[1] were confirmed to discharge to one of the four Town owned WWTFs: Abbot WWTF, Blanchard WWTF, Academy WWTF, and Stony Brook WWTF. These facilities handle larger volumes of wastewater and are maintained by Whitewater Inc. working with the Westford Water Department. **Operation and maintenance of the WWTFs was specifically excluded from this planning effort**. The properties that discharge to the four WWTFs are as follows:

- Six properties that discharge to Abbot WWTF: Fletcher Library, Town Hall, Roudenbush Community Center, Roudenbush Child Care (Frost School Day Care), Main Street Fire and Police Station, and Abbot School & Millennium School,
- Two facilities that discharge to the Blanchard WWTF: Blanchard School and Norman Day School,
- Two properties that discharge to the Academy WWTF: Crisafulli and Robinson School and Westford Academy, and
- Two properties that discharges to the Stony Brook WWTF: Stony Brook Middle School and Stony Brook Housing.

While wastewater is ultimately treated and discharged to these WWTFs, each property has additional wastewater infrastructure (holding tanks, grease traps, tight tanks and floor drains) that is operated by the Town and is described in the following sections.

[1] Please refer to Section 1.2, which describes how some contiguous buildings and facilities were grouped into one "property" and Map ID.

All sewered properties are shown in **Figure 2-1** and are labeled with their associated Property ID. The Property ID list can be used to cross-reference the inventory in **Appendix A**. **Table 2-1** lists the properties that discharge to WWTFs.

2.2 Septic Tank Effluent Sewer System

In Westford, septic tank effluent sewers transport wastewater to the four WWTFs described in Section 2.1. This system uses either new or existing watertight septic tanks to collect solids, grit, grease, and stringy material that could cause problems in pumping and conveyance through small diameter piping. Septic tank effluent then flows to a WWTF either by gravity or through a pumped system. **Table 2-1** summarizes operation and maintenance considerations and components for the sewered properties. Refer to **Table 3-1** for the department(s) responsible for these properties.

Septic Tanks. On each sewered property, there is a septic tank that requires maintenance including periodic removal of the sludge and grease collected within the septic tank by a licensed septage hauler. Through Tighe & Bond's Board of Health record review, we found records that these tanks were being pumped regularly. The Westford Water Department and Whitewater Inc. maintain the WWTFs and tanks.

In cases where the existing Title 5 septic tank was abandoned due to inadequate size, infiltration concerns, or other factors, and a new tank was installed, the Town should verify that the tank was properly decommissioned. Refer to Section 3 for additional information and requirements.

Pumps and Conveyance. Westford uses a combination of two types of septic tank effluent collections systems: 1) Septic Tank Effluent Pump (STEP) and 2) Septic Tank Effluent Gravity (STEG) systems. The STEP system requires installation of a pump immediately downstream of the septic tank that discharges the effluent through a low-pressure sewer to the WWTF. **Table 2-1** indicates which properties rely on a pump and low-pressure sewer. These pumps must be maintained in accordance with the manufacturer's specifications. **The operation and maintenance of the pumps and conveyance system was specifically excluded from this planning effort, and based on input from the PWIC, it is unclear what Town department and personnel is currently responsible for the collection system.**

One important consideration for the low-pressure portion of the collection system is electrical power to operate pumps during an extended power outage. While standby power is easily provided to a single pump station, it is more challenging to keep many individual grinder pumps operational during a power outage.

SCADA: Supervisory Control and Data Acquisition or SCADA is a computer-based system for gathering and analyzing real-time data to monitor and control critical equipment and infrastructure. The Water Department maintains a SCADA system to monitor the four WWTFs and is in the process of (about 75 percent complete) expanding the system to include the Town center sewer system.

TABLE 2-1
Summary of Sewered Properties

Map ID	Name	Abandoned Title 5 System[2]	Pumps	Sewer Main Type	Destination WWTF
1	Abbot School	Unknown	No	Gravity	Abbot
1	Millennium School	No	No	Gravity	Abbot
2	Blanchard Middle School	No	No	Gravity	Blanchard
6	Crisafulli School	No	Yes	Pressure	Academy
6	Robinson School	Yes	Yes	Pressure	Academy
8	Fire Department Center Station and Police Station	Yes	Yes	Pressure	Abbot
10	Fletcher Library	Yes	Yes	Pressure	Abbot
18	Norman Day School	Yes	Yes	Pressure	Blanchard
25	Roudenbush Community Center	Yes	Yes	Pressure	Abbot
26	Roudenbush Child Care (Frost Day Care)	Yes	Yes	Pressure	Abbot
27 (A)	Stony Brook School	No	No	Gravity	Stony Brook
27 (B)	Stony Brook Housing #1 and #2	No	Yes	Pressure	Stony Brook
31	Westford Academy	No	No	Gravity	Academy
32	Westford Town Hall	Yes	Yes	Pressure	Abbot

2.3 Septic Systems

A conventional septic system is "an onsite system designed to treat and dispose of domestic sewage" that is made up of a septic tank, pump (in some cases), distribution box, and a soil absorption system (SAS) (also known as a leach field, drainfield, or absorption field).[3] Within the septic system, the septic tank is a water-tight tank which separates out wastewater liquids from the solids. After the solids settle out, the liquid wastewater then enters a distribution box that provides equal distribution of the wastewater to the SAS. The SAS is typically comprised of subsurface tanks or pipes that provide onsite treatment before the liquid wastewater infiltrates the soil. According to Title 5, new construction sites looking to install a SAS should not have percolation rates slower than 60 minutes per inch.

In Massachusetts, septic systems are typically regulated locally by the Board of Health or Health Department except in instances that involve innovative/alternative technologies, shared systems, large systems, and systems with requested variances. Additionally, septic systems are regulated by Title 5, 310 CMR 15.000, and implemented by MassDEP and locally trained staff. The most recent version of Title 5 took effect January 3, 2014 which puts forth requirements for the proper siting, constriction, upgrade, maintenance of on-

[2] Information provided by the PWIC. For all abandoned Title 5 tanks, some are still intact and others may or may not have been properly decommissioned.

[3] EPA. September 1, 2015. EPA's Glossary of Septic System Terminology. https://www.epa.gov/septic/septic-systems-overview

site wastewater systems and the proper transport and disposal of septage. Based on Title 5 requirements site septic systems are typically only inspected:

- When properties are sold, divided or combined.
- When there is a change in use or an expansion of a facility.
- When MassDEP or the local Board of Health requires an inspection.
- For large systems, shared systems, and condominiums on a periodic basis.
- Cities and towns with MassDEP-approved inspection programs are required to comply with local inspection requirements.[4]

Specifically, Westford's Board of Health has regulating authority over all septic systems in Town. The Board of Health put forth its most recent *Requirements for the Subsurface Disposal of Sanitary Sewage* regulation (**Appendix B**) as of August 26, 2005 which is meant to complement and enhance the State's Title 5 (310 CMR 15.000) and Groundwater Discharge Program (314 CMR 5.00) regulations. The BOH 2005 regulations state that, "All facilities for the disposal, treatment, or transmission of sanitary sewage (including but not limited to Wastewater Treatment Facilities) which are located in the Town of Westford shall require approval and a permit from the Approving Authority".

The Town of Westford's municipal properties predominantly (19 of 34 properties) rely on traditional septic systems for wastewater treatment and disposal (**Figure 2-1**). **Table 2-2** indicates which of the 34 properties discharge to septic systems. The Town should note that the Recreation Department indicated that there are public restrooms at Forge Pond Beach and Graniteville Ball Fields, however Tighe & Bond was unable to find Board of Health records that indicate the type of system or maintenance performed. These properties are assumed to have a Title 5 septic system in **Table 2-2**, however further investigation is recommended in Section 5.

2.4 Grease Traps

Grease traps are watertight structures installed at restaurants, cafeterias, nursing homes, schools, hospitals and any other facility that discharges grease. The function of a grease trap is to separate out grease and oil from food preparation areas from the other solid or liquid sewage. Based on MassDEP's 310 CMR 15.000 Title 5 Standard Requirements, all grease traps must flow to a properly designed septic tank or building sewer prior to a septic tank, they should be a minimum of four feet deep with a minimum capacity of 1,000 gallons and they should provide at least a 24-hour detention period before entering the septic tank. Additional grease trap requirements are included in the Title 5 regulations.

Grease traps should be inspected monthly and must be cleaned by a licensed septage hauler whenever the level of grease is 25% of the effective depth of the trap, or at least every three months, whichever is sooner.

Out of the 34 municipal properties, nine have grease traps installed (**Figure 2-1**). All nine of the properties with grease traps also discharge to either a conventional septic system

[4] MassDEP. 2016. System Inspections and Property Transfers: Frequently Asked Questions. http://www.mass.gov/eea/agencies/massdep/water/wastewater/system-inspections-and-property-transfers-faqs.html#Whenareon-sitesysteminspectionsrequired

or a WWTF thereby compliant with Title 5 regulations. **Table 2-2** provides a summary of which systems have existing grease traps.

2.5 Cesspools

A cesspool is a pit with open-jointed linings or holes in the bottom and/or sidewalls into which raw sewage is discharged, where the liquid sewage seeps into the surrounding soils and the solids settle and remain in the pit. **A cesspool is considered a non-conforming wastewater system because the system does not meet Title 5 requirements.** Cesspools may overload the soil's capacity to remove bacteria, viruses, phosphorus and nitrify ammonia and organic nitrogen compounds. All cesspools are not required to be upgraded based on Title 5 requirements, but they are considered outdated systems and should be upgraded immediately if they experience signs of hydraulic failure, are located extremely close to private or public water supplies, or fail to protect or pose a threat to public health, safety or the environment (310 CMR 15.303). In addition, cesspools need to be upgraded before the design flow is increased.

Only one municipal property, the Recreation Department Offices, still sends its wastewater to an onsite cesspool (**Figure 2-1 and Table 2-2**).

2.6 Tight Tanks

Sanitary Sewage. A tight tank for sanitary sewage is similar to a septic tank except it does not have an outlet and must be pumped regularly to maintain in proper working order. Tight tanks are meant to hold wastewater and therefore do not provide any treatment. For this reason, the use of tight tanks for wastewater maintenance is discouraged and should only be used in situations where previous subsurface wastewater systems have failed and there are not any other alternatives possible. Tight tanks are not permitted for new construction and are only approved for certain situations as cited in 310 CMR 15.260. Additional tight tank requirements can be found in Title 5. **Our review of Town wastewater assets did not reveal any properties relying on a tight tank for sanitary sewage.**

Other Liquid Waste: The Town currently has twelve properties with existing tight tanks or holding tanks used to capture water and other liquid waste discharging to floor drains (**Figure 2-1**). **Table 2-2** provides a summary of which properties have floor drains that discharge to a tight tank. According to Westford's *Hazardous Materials Storage and Underground Tank Regulations* (**Appendix B**), areas where hazardous materials are "used, stored, or generated may not contain a floor drain that leads to a storm drain, septic system or leaching structure of any kind or to a wetland or other surface water body. Floor drains in such areas must drain to a containment vessel or tight tank and collected material must be removed by a MassDEP-approved hazardous waste hauler for disposal. If the drain cannot meet these requirements it must be sealed."

2.7 Floor Drains

Westford Board of Health Regulation Regarding Floor Drains defines a floor drain as "an intended drainage point on a floor constructed to be otherwise impervious which serves as the point of entry into any subsurface drainage, treatment, disposal containment, or other plumbing system". Floor drains that discharge with or without pretreatment to the ground, leaching structure, or septic system in any industrial or commercial facility are

prohibited if the floor drain is located in an industrial or commercial process area or a petroleum, toxic, or hazardous material and/or waste storage area. All other existing floor drains must abide by Westford's *Floor Drain Regulations* (**Appendix B**) and the Massachusetts Plumbing, Building, and Fire code requirements.

The Town currently has twelve properties with floor drains that discharge to tight tanks at the site. **Table 2-2** provides a summary of which municipal properties have floor drains.

2.8 Inventory Summary

Table 2-2 provides a brief summary of each of the 34 municipal properties with subsurface wastewater systems and the types of assets currently in use.

TABLE 2-2
Subsurface Wastewater Systems Summary Table

				Title IV				
Map ID	**Name**	**Address**	**WWTF[5]**	**Septic System**	**Grease Trap**	**Cesspools**	**Tight Tanks**	**Floor Drain**
1	Abbot and Millennium School	25 Depot St	X		X		X	x
2	Blanchard Middle School	20 West St	X		X			
3	Cameron Senior Center	20 Pleasant St		X	X			
4	Cemetery Department Pine Grove Office	68 Forge Village Rd		X				
5	Fairview Cemetery	0 Main St			No Bathroom			
6	Crisafulli and Robinson School	33 Robinson Rd	X		X			
7	East Boston Camps	0 Depot St		X	X			
8	Fire Department Center Station and Police Station	51 -53 Main St	X				X	X
9	Fire Department Rogers Station	39 Town Farm Rd		X			X	X
10	Fletcher Library	50 Main St	X					
11	School Maintenance Garage (Old Highway Garage)	30 Beacon St		X			X	X
12	Highway Garage	28 North St		X			X	X
13	Hill Orchard	4 Hunt Rd		X				
14	IT Department [Old Forge Village Fire Station]	1 E Prescott St		X				
15	Westford Museum and Cottage	2 Boston Rd		X				
16	Nabnasset Fire Station	14 Oak Hill Rd		X			X	X
17	Nabnasset School	99 Plain Rd		X				

[5] Refer to Sections 2.1 and 2.2 for details.

			Title IV					
Map ID	**Name**	**Address**	**WWTF[5]**	**Septic System**	**Grease Trap**	**Cesspools**	**Tight Tanks**	**Floor Drain**
18	Norman Day School	75 E Prescott St	X					
19	Parkerville Schoolhouse	110 Carlisle Rd		X				
20	Recreation Department Offices	35 Town Farm Rd				X		
21	Edwards Beach Facility	0 Williams Ave		X				
22	Forge Pond Town Beach Facility	0 W Prescott St		X				
23	Graniteville Ball Fields	15 River St		X				
24	Rita Miller School	1 Mitchell Way		X	X			
25	Roudenbush Community Center	73 Main St	X					
26	Roudenbush Child Care (Frost Day Care)	170 Plain Rd	X					
27 (A)	Stony Brook School	9 Farmer Way	X		X		X	X
27 (B)	Stony Brook Housing #1 and #2	3-7 Farmer Way	X		X		X	X
28	Water Treatment Plant	60 Forge Village Rd		X			X	X
29	Water Department Office and Water Treatment Plant	19 Nutting Rd		X			X	X
30	Water Department Garage	65 Forge Village Rd		X			X	X
31	Westford Academy	30 Patten Rd	X		X		X	X
32	Westford Town Hall	55 Main St	X					
33	VFW Softball Field	52 W Prescott St			No Bathroom			
Total			**12**	**19**	**9**	**1**	**12**	**12**

DUNSTABLE

TYNGSBOROUGH

LOWELL

GROTON

CHELMSFORD

LITTLETON

ACTON

CARLISLE

Legend

Wastewater Systems

- Cesspool
- Grease Trap
- Tight Tank
- WWTF
- Septic System
- Floor Drains
- No WW Assets

Structure Type

- Catch Basin
- Inlet
- Manhole
- Outfalls
- Drain Pipes
- Culverts

- Parcels
- Roads
- Town Boundary

1:18,000

0 1,500 3,000

Feet

Based on MassGIS Data

FIGURE 2-1
SUB-SURFACE MUNICIPAL WASTEWATER INVENTORY TYPES

Westford, Massachusetts

September 2016

Tighe&Bond
Consulting Engineers
Environmental Specialists

G:\GIS\MA\WestfordMA\avproj\O&M Amendment\Maps\Figure2TypesofWW.mxd

Section 3
Standard Operating Procedures

This section recommended Standard Operating Procedures (SOPs) to maintain each type of wastewater systems found on Westford municipal properties. These recommendations were developed from the Westford Board of Health Regulations effective as of December 1st, 2006, MassDEP Title 5 requirements and our professional experience. (For more detail refer to **Appendix B** for copies of the regulations). Additional recommendations, including high priority recommendations for specific systems, are included in Section 5.

3.1 Recommended SOPs for Regular Operation & Maintenance

3.1.1 Septic Systems

Pumping Frequency: According to Title 5, 310 CMR 15.351 MassDEP recommends that a septic tank should be pumped at least **once every three years and annually if there is a garbage disposal on site** in order to ensure the system functions properly reducing the chance of a system failure.

Generally, all septic tanks, tight tanks for sanitary sewage, and cesspools should be pumped out as needed to guarantee that the system continues to function properly. Each system must be pumped when:

1. The top of the sludge layer is within 12 inches or less of the outlet tee; or
2. The bottom of the scum layer is within six inches of the top of the outlet tee.[6]

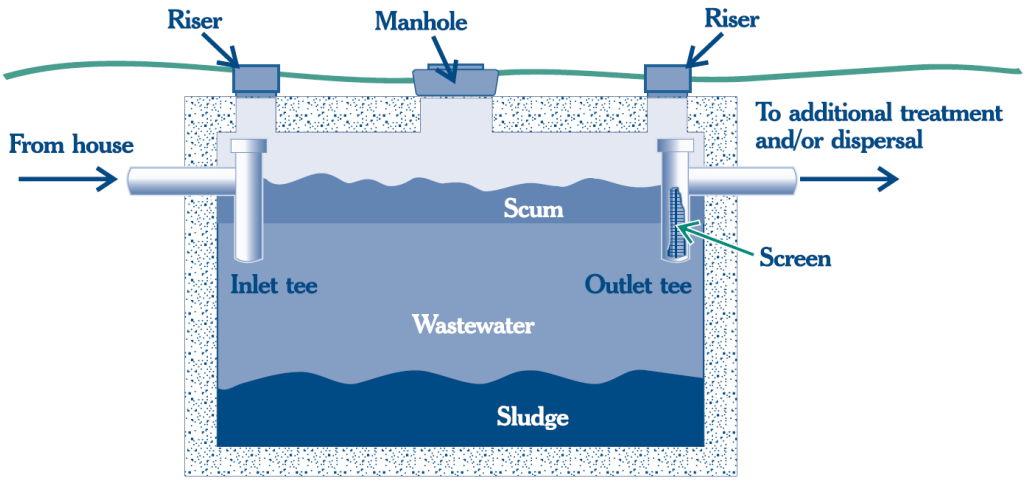

Figure 3-1: Typical single-compartment septic tank

[6] Information and septic tank figure from U.S. EPA. *A Homeowner's Guide to Septic Systems*. Pp.2-5.

For the sewered properties in Section 2.2, the septage must also be periodically pumped from each septic tank and transported to a wastewater treatment facility. For most of these tanks, design capacity is greater than 2,000 gallons per day, and therefore must be inspected every three months and pumped once every three years (at a minimum). However, **one advantage of a septic tank effluent sewer system is that solids removal can be customized and tank pumping frequency can be optimized, and often reduced since effluent is continuously removed from the tank.** Refer to Recommendations in Section 5.2. During routine inspections and pumping, the Town should note any persistent odor issues. Odor control may be necessary at any discharge point and downstream pump stations to mitigate hydrogen sulfide in the effluent. Manholes at the discharge points should be protected from and inspected for corrosion resulting from potentially high hydrogen sulfide concentrations.

After each pumping event, the company contracted to pump a system should note the condition on the proper form and send the results to the Board of Health within fourteen days of the pumping date.

Decommissioning Requirements. In the event a septic system is decommissioned the proper procedures must be followed to discontinue its use based on 310 CMR 15.354:

> *(a) Within 14 days prior to discontinuance of use of a system, the facility owner shall apply to the Approving Authority to abandon the existing system citing the reason(s) abandonment is necessary, and where connection to municipal or private sanitary sewer has been made, a copy of the sewer connection permit shall be submitted with the application; (b) Upon receipt of the Approving Authority's written approval to abandon the system, the septic tank shall be pumped of its entire contents by a licensed septage hauler; and (c) The tank shall be excavated and removed from the site, or the bottom of the tank shall be opened or ruptured after being pumped of its content so as to prevent retainage of water and the tank shall be completely filled with clean sand or other suitable material approved in writing by the Approving Authority.*

Once a system is properly decommissioned it is listed as abandoned and any further use of the system for any reason is prohibited.

Inspection Frequency: Title 5 requires an inspection to be completed typically only at the time a property is sold, divided or combined, or expanded. During property sales, the inspection must occur within 2 years of the time of transfer. It is recommended that systems less than 2,000 gallons per day be inspected once a year. As noted previously, system inspections should be performed **no less than every three months if a system is serving a facility with a design flow of 2,000 gallons per day or greater** This applies to the majority of tanks ultimately discharging to the municipal WWTFs.

3.1.2 Grease Traps

Pumping Frequency: Proper operation and maintenance is required to ensure grease traps remain in working order. Grease traps should be pumped whenever the level of grease is 25% of the effective depth of the trap or at least every three months, whichever condition is reached sooner.

Inspection Frequency: Grease traps should be inspected monthly by the owner/operator to determine sludge levels and assess the pumping frequency required.

Pumps, alarms and other equipment requiring periodic or routine inspection and maintenance shall be operated, inspected and maintained in accordance with the manufacturer's and the designer's specifications.

Grease traps should also be inspected once every three months for a system serving a facility with a design flow of 2,000 gallons per day or greater, and annually for any system serving a facility with a design flow of less than 2,000 gallons per day (310 CMR 15.351).

3.1.3 Floor Drains and Tight Tanks

Floor Drains and Pollution Prevention. Floor drains should be kept unobstructed and free of debris and sediment to the maximum extent practicable. It is the responsibility of all facility personnel to prevent discharge of oil, hazardous materials, hazardous waste and solids from entering the floor drains.

Tank Inspections.

- Check tight tanks regularly using a gauge or alarm system to ensure the tank is less than 75% full.
- On a semi-annual basis (or as required by the holding tank permit), The Town shall arrange for an electrician to test any high level alarms located on the holding tanks to ensure that they are in proper working order. The electrician will submit a written report of the alarm condition, with operation recommendations for any required servicing.
- The Town will arrange for the prompt repair of any defective wastewater holding tanks or components of those tanks and any additional requirements required by the permit for the holding tanks.

Comply with Applicable Federal and State Regulations. According to the Massachusetts Department of Environmental Protection (MassDEP), "holding tanks, mobile tanks and containers are commonly used by commercial, industrial, institutional and municipal facilities - particularly in areas not served by sewers - to store wastewater for off-site disposal, recycling or treatment. Depending on storage vessel functions, wastewater characteristics and facility locations, these tanks and containers may be subject to different federal and state regulations. All owners and operators of industrial wastewater holding tanks (IWHTs), mobile tanks and containers used exclusively to accumulate or store non-hazardous, non-sanitary wastewater are required to comply with a Massachusetts Department of Environmental Protection (MassDEP) industrial wastewater holding tank regulation (314 CMR 18.00) that took effect in November 2002."

Tight Tank Pumping and Discharge. When a tight tank is found to contain 75% or more of its holding capacity, the wastewater will be pre-characterized for its waste stream. After characterization, the wastewater will be disposed of as either hazardous waste (transported with a hazardous waste manifest) or as non-hazardous waste (transported with a bill of lading). The Town is also responsible for signing and retaining hazardous waste manifests for wastewater that is characterized and disposed of as hazardous waste.

Tight tanks should be thoroughly pumped, cleaned and inspected for structural integrity by a licensed professional engineer every five years from the date the tight tank was permitted by the Department of Environmental Protection (DEP) or at the frequency

specified in the permit (if applicable). Inspection and repair records will be maintained at the Board of Health.

It appears that all of the floor drains discharge to tight tanks according to local regulations and are periodically pumped out. However, if it is discovered that existing facilities that have floor drains that violate Westford's *Floor Drain Regulation* but were installed prior to the effective date of the regulation, the Town is required to redirect the drainage in one of the following ways:

- Disconnect and plug all inlets and outlets,
- Remove all existing sludge and dispose of it properly, and/or
- Adjust the floor drain system so it drains to either a holding tank, municipal sanitary sewer line, or is permanently sealed.

3.2 Current Responsible Parties

In order to confirm a wastewater system is in proper working order, a designated party should be in charge of handling and coordinating all of the O&M of the system. Currently, Westford's wastewater assets are being maintained by various Town departments who divide the maintenance responsibility. **Table 3-1** below provides a summary of the responsible parties of each municipal property with wastewater systems.

TABLE 3-1
Responsible Parties for O&M of Wastewater Assets (Excludes WWTFs)

Map ID	SWMMP Map No.	Name	Care & Custody (Budget and Daily Use)	Management & Control (Maint., Inspections, & Records)
1	BF12	Abbot and Millennium School	School Department	School Department
2	BF13	Blanchard Middle School	School Department	School Department
3	BF1	Cameron Senior Center	Council on Aging	Council on Aging
4	PO5	Cemetery Department Pine Grove Office	Cemetery Commission	Cemetery Department
5	PO1	Fairview Cemetery	Cemetery Commission	Cemetery Department
6	BF17	Crisafulli and Robinson School	School Department	School Department
7	PO9	East Boston Camps	Conservation Commission	Conservation Commission
8	BF24	Fire Department Center Station and Police Station	Engineering	Engineering
9	BF25	Fire Department Rogers Station	Selectmen	Fire Department
10	BF3	Fletcher Library	Library	Engineering
11	BF18	School Maintenance Garage (Old Highway Garge)	Selectmen	School Department
12	BF4	Highway Garage	Selectmen	Highway Department
13	PO14	Hill Orchard	Conservation Commission	Conservation Commission
14	BF2	IT Department [Old Forge Village Fire Station]	Selectmen	IT Department

TABLE 3-1
Responsible Parties for O&M of Wastewater Assets (Excludes WWTFs)

Map ID	SWMMP Map No.	Name	Care & Custody (Budget and Daily Use)	Management & Control (Maint., Inspections, & Records)
15	BF11	Westford Museum and Cottage	Historical Commission	Historical Commission
16	BF23	Nabnasset Fire Station	Fire Department	Fire Department
17	BF14	Nabnasset School	School Department	School Department
18	BF15	Norman Day School	School Department	School Department
19	BF5	Parkerville Schoolhouse	Parkerville School Reuse Committee	Parkerville School Reuse Committee
20	BF7	Recreation Department Offices	Selectmen	Recreation Department
21	PO10	Edwards Beach Facility	Conservation Commission	Recreation Department
22	PO11	Forge Pond Town Beach Facility	Selectmen	Recreation Department
23	PO12	Graniteville Ball Fields	Recreation Commission	Recreation Department
24	BF16	Rita Miller School	School Department	School Department
25	BF8	Roudenbush Community Center	Selectmen	Engineering
26	BF9	Roudenbush Child Care (Frost Day Care)	Selectmen	Engineering
27A	BF19	Stony Brook School	School	School
27B	BF32	Stony Brook Housing #1 and #2	Westford Housing Authority	Engineering
28	BF28	Water Treatment Plant	Water Department	Water Department
29	BF33	Water Department Office and Water Treatment Plant	Water Department	Water Department
30	BF27	Water Department Garage	Water Department/ Selectmen	Water Department
31	BF22	Westford Academy	School Department	School Department
32	BF10	Westford Town Hall	Engineering	Engineering
33	PO19	VFW Softball Field	Recreation Commission	Recreation Department

Section 4 Water Quality Considerations

For consistency with the Stormwater Management Master Plan (SWMMP), Tighe & Bond also evaluated the non-source pollution potential of Westford's wastewater assets, particularly in watersheds that are impaired for bacteria and phosphorous since these are pollutants found in sanitary wastewater. Additionally, we considered the illicit discharge potential of municipal wastewater systems to better prioritize recommendations for ongoing operation and maintenance activities.

4.1 Assets within Bacteria and Phosphorous Impaired Watersheds

Nutrients (i.e., nitrogen and phosphorous) and bacteria leaching from poorly maintained or failing septic systems can pollute groundwater, lakes and streams. Nutrients can cause algae blooms and excessive plant growth in lakes, which further degrade water quality and habitat. Increased bacteria levels in groundwater, lakes and streams can present a public safety issue for swimming and private drinking water wells.

Section 2.3.3 of the Stormwater Management Master Plan Volume 1: Stormwater Assessment describes the watershed-specific water quality concerns in detail. **Figure 4-1** and **Table 4-1** summarize the location of Westford's wastewater assets with respect to watersheds impaired for nutrients or bacteria. Operation and maintenance of wastewater assets in impaired watersheds for bacteria and phosphorous is an important component of the NPDES municipal stormwater program as the Town is obligated to address all nonpoint sources of pollutants of concern.

TABLE 4-1
Systems within Impaired Watersheds for Bacteria and Phosphorous

			Watershed Impairment	
Map ID	Name	Address	Bacteria	Phosphorous
1	Abbot and Millennium School	25 DEPOT ST	✓	
2	Blanchard Middle School	20 WEST ST	✓	
4	Cemetery Department Pine Grove Office	68 FORGE VILLAGE RD	✓	
5	Fairview Cemetery	0 MAIN ST	✓	
6	Crisafulli and Robinson School	33 ROBINSON RD	✓	
7	East Boston Camps	0 DEPOT ST	✓	
8	Fire Department Center Station and Police Station	51 -53 MAIN ST	✓	
9	Fire Department Rogers Station	39 TOWN FARM RD	✓	
10	Fletcher Library	50 MAIN ST	✓	
11	Highway/School Maintenance	30 BEACON ST	✓	
12	Highway/DPW Garage	28 NORTH ST	✓	
13	Hills Orchard	4 HUNT RD	✓	
15	Westford Museum and Cottage	2 BOSTON RD	✓	
17	New Nabnasset School	99 PLAIN RD	✓	
18	Norman Day School	75 E PRESCOTT ST	✓	
19	Parkerville Schoolhouse	110 CARLISLE RD		✓

TABLE 4-1
Systems within Impaired Watersheds for Bacteria and Phosphorous

Map ID	Name	Address	Watershed Impairment	
			Bacteria	Phosphorous
20	Recreation Department Offices	35 TOWN FARM RD	✓	
23	Graniteville Ball Fields	15 River St	✓	
25	Roudenbush Community Center	73 MAIN ST	✓	
26	Roudenbush Child Care	170 PLAIN RD	✓	
27A	Stony Brook School	9 FARMER WAY	✓	
27B	Stony Brook Housing #1 and #2	3-7 FARMER WAY	✓	
28	Water Treatment Plant	60 FORGE VILLAGE RD	✓	
30	Water Department Garage	65 FORGE VILLAGE RD	✓	
31	Westford Academy	30 PATTEN RD	✓	
32	Westford Town Hall	55 MAIN ST	✓	

4.2 Systems with High IDDE Potential

The following sites are considered to have a high potential for illicit discharges and specific recommendations for these facilities are included in Section 5:

- Property No. 11. Highway/School Maintenance Department at 30 Beacon Street. The preliminary inventory by the Town noted a **failed leach field**.
- Property No. 20. Recreation Department Office on 35 Town Farm Road. **Cesspool** in use.
- Property No. 19. Parkerville School house septic system at 110 Carlisle Road. This system received a variance because it is located **within 100 feet from nearby wetlands**.
- Property No. 15. Westford Museum's septic system should also be investigated further and possibly maintained more frequently because Board of Health records indicate the system is **over 35 years old**.
- The following older systems (cesspool or septic) have likely been abandoned or replaced in recent years but the Board of Health lacks any documentation in the records of how the system was **decommissioned**. The PWIC provided some anecdotal information on the status of sewered properties that likely have abandoned systems onsight. The municipal sites in need of further investigation are as follows:
    - Property No. 14. IT Department cesspool at 1 East Prescott Street.
    - Property No. 3. Cameron Senior Center cesspool at 20 Pleasant Street.
    - Property No. 8. The septic tank at the Police Station 53 Main Street was abandoned but not decommissioned.

DUNSTABLE
TYNGSBOROUGH
DRACUT
LOWELL
GROTON
CHELMSFORD
AYER
LITTLETON
CARLISLE
ACTON
BOXBOROUGH

Deep Brook
Flint Pond
Nabnasset Lake
Unnamed
Snake Meadow/Keyes Brook
Stony Brook
Forge Pond
Boutwell Brook
Mill Pond (Beaver Brook)
Tadmuck Brook
Beaver Brook
Merrimack Basin
SuAsCo Basin
Heart Pond
Vine Brook
Nashoba Brook
Nonset Brook
Butter Brook
Nashoba Brook

24
21
16
26
29
17
27A
27B
12
11
7
13
23
2
18
9
20
30
1
5
33
14
22
3
4
28
10
32
25
15
8
31
6
19

P

Legend

- Systems with High IDDE Potential
- Properties with Municipal WW Assets (34)
- Ponds
- Rivers and Streams
- Impervious Surface
- Town Boundary
- Major Basin Boundary
- Sub-basin Boundary
- Assabet River Watershed
- Bacteria
- P — Assabet River Watershed TMDL Total Phosphorus

1:48,000
0 2,000 4,000
Feet

Note: Impairments shown are from Proposed 2014 Massachusetts Integrated List of Waters are not yet finalized as of the date of this map, but are expected to be accepted by the EPA.

FIGURE 4-1
WW ASSETS WITH WATER QUALITY IMPAIRMENTS

Westford, Massachusetts

September 2016

Tighe&Bond
Consulting Engineers
Environmental Specialists

G:\GIS\MA\WestfordMA\avproj\O&M Amendment\Maps\WaterQuality_WWAssets.mxd

W-4787

Section 5 Recommendations

Tighe & Bond recommends that the Town implement the following short-term and long-term actions to meet the desired goals for this program, as restated below.

- Understand Town's responsibility for O&M of wastewater systems
- Identify wastewater systems in need of immediate attention, if any.
- Highlight sources of potential illicit discharge in town.
- Present short-term or long-term recommendations in order to track operation and maintenance of municipal subsurface wastewater systems.
- Identify Town Departments and personnel responsible for wastewater O&M commitment and make recommendations for future.

5.1 Short-Term Recommendations

5.1.1 Implement SOPs for All Facilities

The Town should begin implementing all of the SOPs in Section 3 immediately to ensure continued operation of municipal wastewater treatment and disposal systems.

5.1.2 Site Specific Recommendations

The following properties should receive immediate attention and/or frequent monitoring because of a documented failure, the type of system, abandoned status, the age/size, or the type variance obtained. We consider these systems to be potential sources of nonpoint source pollution or illicit discharges.

The following recommendations are made for the sites considered to have a high potential for illicit discharges:

- **Property No. 11. Highway/School Maintenance Department at 30 Beacon Street.** In the Town's preliminary inventory, the leach field at this site was noted to have failed, but the BOH records did not indicate any additional evidence of the failure. Further investigation is recommended to confirm the status of this system.
- **Property No. 20. Recreation Department Office on 35 Town Farm Road.** Board of Health records indicate that a cesspool is in use. This system seems to still be in working order by the lack of failure documentation, but should be monitored frequently and replaced at any sign of failure for the reasons described in Section 2.4. Cesspools should be pumped regularly to ensure that the system continues to run properly. Like septic tanks and tight tanks, cesspools should also be pumped at least every 3 years depending on the frequency of use at the site and should be increased to once a year if there is a garbage disposal in use (310 CMR 15.351).
- **Property No. 19. Parkerville School house septic system at 110 Carlisle Road.** This system received a variance because it is located **within 100 feet from nearby wetlands**. For this reason, frequent inspections of the system should be performed in order to prevent any unwanted impacts to the nearby resource area.

- **Property No. 15. Westford Museum on Boston Road**. This septic system should also be investigated further and possibly maintained more frequently because Board of Health records indicate the system is **over 35 years old**.
- **Properties No. 22 and 23.** The Recreation Department indicated that there are public restrooms at **Forge Pond Beach** and **Graniteville Ball Fields**, however Tighe & Bond was unable to find Board of Health records that indicate the type of system or maintenance performed. Further investigation is recommended to confirm the condition of these systems.
- In Section 4.3 we identified three older systems with potential to contribute nonpoint source pollution to Westford's drainage system or water bodies. These two cesspools and one septic tank were likely been abandoned or replaced in recent years but the Board of Health lacks any documentation in the records of how the system was **decommissioned**. These systems should be investigated further to confirm that the abandoned system was decommissioned properly.

- During the construction of the sewer system, the contractor was required to properly decommission the existing septic tanks at the following municipal properties:

    - Property No. 1. Abbot School
    - Property No. 6. Robinson School.
    - Property No. 10. Fletcher Library.
    - Property No. 18. Norman Day School.
    - Property No. 25. Roudenbush Community Center.
    - Property No. 26. Roudenbush Child Care (aka Frost Day Care)

    We recommend that the Town reviews the record drawings of these systems in the Engineering Department in order to confirm that the existing tanks were decommissioned properly. Refer to Section 3.1.1.

5.1.3 Formalize Operation and Maintenance of the Sewer Conveyance System

During the preparation of this plan, the operation and maintenance of pumps and the conveyance system (gravity and pressure sewer pipes) was excluded from the planning scope. However, based on input from Town staff and the PWIC, we recommend that the Town compile information related to the conveyance system, including but not limited to record drawings, dates of installation, and manufacturer's operation and maintenance recommendations. The Town should formalize the operation and maintenance plan for the conveyance system, including record keeping, and assign this responsibility to a lead Town Department (such as Engineering or the Water Department) for consistent implementation and oversight.

5.2 Long-Term Recommendations

Tighe & Bond recommends the following long-term initiatives that will allow the Town to more cost-efficiently ensure performance of Town owned and operated wastewater assets and maintain compliance with applicable State and Federal regulations.

5.2.1 Consolidate Responsibility for Implementation Wastewater Asset O&M.

As summarized in **Table 3-1**, there are many Town departments, commissions, and committees that share responsibility for the properties with wastewater assets that need to be maintained. Tighe & Bond recommends that the Town consider assigning the oversight of all sanitary wastewater operation and maintenance to one Town entity. This may or may not include oversight of Whitewater Inc.'s operation of the WWTFs. With so many properties with different onsite wastewater storage, conveyance, treatment, and disposal infrastructure, a single responsible entity could best implement the recommendations in this plan, maintain records, and make recommendations to the Town for upgrades and capital improvements as needed.

A single Town entity should also oversee environmental compliance associated with the floor drains and tight tanks described in Section 3.1.3. The Environmental Compliance Assessment recommended in Section 5.2.5 will better inform the Town as to their obligations for operation and maintenance of these systems, including health and safety, State and Federal requirements, and record keeping.

5.2.2 Optimize Septic Tank Solids Removal and Pumping Frequency

In an effluent sewer system each individual site has an interceptor tank that receives raw wastewater, which then separates into sludge, scum, and liquid effluent with primary treatment taking place within the tank. The solids can remain in the tank for years, with the anaerobic biological process consuming the solids over time. Many residential tanks will only need to be pumped out every 7 to 10 years. The liquid effluent remains in the tank for only a day or two, it is then pumped (STEP) or gravity fed (STEG) to one of the Town's four WWTFs.[7]

Tighe & Bond recommends that the Town take advantage of the reduced sludge management needs of their effluent sewer system and optimize pumping frequency of the interceptor tanks. A licensed septage hauler should use a "sludge judge" during routine inspections to determine the sludge blanket depth and make a determination whether it is necessary to pump the tank at that time. These measurements and observations should be recorded in a database (such as GIS, Access, or Excel) so over time, the Town can move to a predictive pumping and maintenance schedule for each of the decentralized tanks within the framework of the Westford Board of Health Regulations, Title 5, and the Town's MassDEP-issued groundwater discharge permits.

5.2.3 Perform an Environmental Compliance Assessment at Facilities with Hazardous Waste and Oil Storage

An evaluation if environmental compliance, including hazardous waste management and oil storage, was not included as part of this planning effort. However, there are multiple sites described in Sections 2.6 and 2.7, with floor drains and tight tanks installed to capture potentially hazardous materials stored and used onsite. Tighe & Bond recommends an Environmental Compliance Assessment at these facilities with hazardous waste and/or oil storage. The goal of this assessment is to review the Town's facilities to confirm that appropriate environmental, health and safety plans, procedures, and permits are in-

[7] InnoFlow. *STEP and STEG Wastewater Solutions*. URL: http://www.innoflow.com.au/commercial/step-steg-decentralised-wastewater-solution-septic-tank-effluent-pump-gravity

place. This assessment will refer to applicable state, local, and federal environmental, health and safety regulations, which will be used to:

1. Review general inventory control and product and waste handling and storage procedures.
2. Review and identify "trigger" levels that would determine regulatory applicability requiring a permit or registration or a threshold that may require a change in the type of permit, registration or reporting required by the facilities.
3. Conduct a visual assessment of the facilities' compliance with various health and safety regulations.

An onsite assessment may include visual observations of the following facility activities:

- Maintenance facilities and garages
- Equipment handling, storage, and fueling
- Material handling, storage, transfer, loading and unloading operations
- Waste management and material recycling operations
- Wastewater management and control operations
- Stormwater management and control operations
- Aboveground and underground tanks, piping and other equipment management and operations
- Air emissions control and monitoring operations (chemical exhaust systems, etc.)
- Record keeper and reporting practices
- Sampling and analysis practices
- Spill containment and other emergency procedures
- Areas where there is evidence of releases
- Health and safety record keeping and reporting practices
- Compressed gas storage procedures
- Means of egress
- Electrical panels
- General housekeeping practices

As part of each facility assessment, appropriate facility personnel should be interviewed in order to determine whether the facilities' routine practices conform to applicable regulations. The topics that should be discussed during the interviews include, but are not limited to:

- Routine internal inspections of process areas and waste management operations
- Maintenance activities (routine and non-routine)
- Training, permitting or licensing that facility staff are required to maintain

At the conclusion of the site-specific assessments, all findings will be summarized and clearly communicated to the Town with written facility-specific recommendations for the Town to be in compliance with applicable regulations.

Appendix A

Inventory of Municipal Facilities with Wastewater Assets

Appendix A Westford Municipal Underground Waste Assets
Draft Listing of all Westford Septic Other Subsurface Disposal/Waste Assets --- Update June 20, 2014

Property #	Westford Municipal Building /Function Description	Building Address and Contact Staff Name	Parcel - Site Address	Type of System (cesspool, conventional, tight tank, innovative/alternative (I/A))	Date of Install/Last Upgrade Technical Notes	As Built Plan Y/N	BOH Info	Pumping Contractor & Last Date Service	Capacity	Variances Granted (Y/N)	Type of Variance	Original Construction Date
1	Abbot School	25 Depot Street	25 Depot Street	Abbot WWTF	Whitewater Contract	Yes	Yes	Stewart's Septic Service and, Raggs septic service, Andover Septic	10,000 gal/d	N/A	N/A	WWTF 9/23/2002
1	Abbot School Kitchen Grease Trap	25 Depot Street?	25 Depot Street?	Grease Trap			Yes		10,000 gal/d	N/A	N/A	
1	Abbot School -- boiler room floor drains	25 Depot Street	25 Depot Street	Unknown, tight tank		??	Yes			N/A	N/A	
1	Millennium School	23 Depot Street	25 Depot Street	Abbot School WWTF	Whitewater Contract	Yes	Yes	Andover Septic		N/A	N/A	
2	Blanchard Middle School	14 West Street	20 West Street	Blanchard WWTF	Whitewater Contract	Yes	(just letter from DEP about discharge permit requirements)	Andover Septic		N/A	N/A	
2	Blanchard School Grease Trap	14 West Street	20 West Street	Grease Trap				Andover Septic		N/A	N/A	
3	Cameron Senior Center	20 Pleasant Street Joanne Sheehan	20 Pleasant Street	T5 Septic Tank	7/7/2009	Yes	Yes	RJ Lacombe 2x year	7,500 gallon	N/A	N/A	7/7/2009
3	Cameron Senior Center kitchen grease trap	20 Pleasant Street Joanne Sheehan	20 Pleasant Street	Grease Trap	w/ renovation in 7/7/2009	Yes	Yes		1,500 gallon	N/A	N/A	
4	Cemetery dept. [Pine Grove office]	68 Forge Village Road Pat Savage	68 Forge Village Road	As built is for a septic disposal system, T5 or tight tank?	1/7/2002	Yes	Yes	N/A	277.5 gal/day	Variance Requested, 8/8/2001, for the Sewage Disposal System, for waiving an in-season soil evaluation as per the following bylaw, Section 3.1 of Westford BOH, Variance granted? Since septic system was built?	for waiving an in-season soil evaluation as per the following bylaw, Section 3.1 of Westford BOH	9/10/2001
5	Cemetery dept. [Fairview Cemetery]	0 Main Street Pat Savage	0 Main Street	Incinerator type Toilet?	Unknown		No					
6	Crisafulli School	13 Robinson Road	33 Robinson Road	Academy WWTF	Whitewater Contract	No	No					
6	Crisafulli School grease trap	13 Robinson Road	33 Robinson Road	Grease Trap, Septic tank?		No	No	5000 gal pumped 7/11/06				
6	Robinson School	60 Concord Road	33 Robinson Road	Connect to WWTF at Academy, Septic Tank	Whitewater Contract	No	Yes	Joseph Nickerson, Company-A Community Sanitation, 1500 gallons pumped 4/22/2013				
6	Robinson School kitchen and grease traps	60 Concord Road	33 Robinson Road									
7	East Boston Camps -- boy's camp Kitchen / dining	Bill Turner	0 Depot Street	T5	TBD	??	Yes					
7	East Boston Camps Kitchen grease trap	Bill Turner	0 Depot Street									
7	East Boston Camps -- boy's camp bath & showers	Bill Turner	0 Depot Street	T5	TBD	??	Yes					
7	East Boston Camps -- girl's camp	Bill Turner	0 Depot Street	T5	TBD	??	Yes					
7	East Boston TBD	Bill Turner	0 Depot Street	T5	TBD	No	Yes					
7	East Boston TBD	Bill Turner	0 Depot Street	T5	TBD	??	Yes					
7	East Boston TBD	Bill Turner	0 Depot Street	T5	TBD	??	Yes					
7	East Boston TBD	Bill Turner	0 Depot Street	T5	TBD	??	Yes					
7	East Boston TBD	Bill Turner	0 Depot Street	T5	TBD	??	Yes					
8	Fire Department Center Station	Main Street	51-53 Main Street	Center Sewer to Abbot WWTF	Engineering & Whitewater Contract	No	No					
8	Center Fire Station floor drains	Main Street	51-53 Main Street	TBD	connected to PD?	No	No					
8	Center Fire Station Grease Trap	Main Street	51-53 Main Street			No	No					

Appendix A Westford Municipal Underground Waste Assets
Draft Listing of all Westford Septic Other Subsurface Disposal/Waste Assets --- Update June 20, 2014

Property #	Westford Municipal Building /Function Description	If failed, fail date	Construction Update/Repair Dates	Responsible Parties	Pumping Frequency/ Dates for last 5 years	Additional Notes/Comments	Scanned Plans
1	Abbot School	Failed 10/15/1998, 8/19/1998 and 9/9/1998			Pumped Septic 22,000 gallons 8/6/2013, 14000 gal 7/18/2006 septic, 200 gal 8/19/1998,14000 gal 8/11/1999, 1000 gal 8/19/1998, 8/19/1998 15000 gallons	Major spill of heating (500 to 1000 gal) Oil spill happened in 12/2005, confirm exactly what is being sent to the Abbott WWTF	Yes
1	Abbot School Kitchen Grease Trap						Yes
1	Abbot School -- boiler room floor drains						Yes
1	Millennium School				Pumped 2000 gal 9/26/03, 10,000 gal 9/4/03		Yes
2	Blanchard Middle School				Pumped 8,500 gal 7/11/06	Westford (Blanchard) Middle School, groundwater discharge permit for wastewater treatment facility	No
2	Blanchard School Grease Trap				Pumped 2,500 gal 7/11/06		No
3	Cameron Senior Center				9/20/2013 2500 gallons pumped, previous cesspool sytem-2000 gallons pumped 6/26/2006, 2000 gallons pumped 10/3/2005, 2000 gallons pumped 10/20/2004, 2000 gallons pumped 7/24/2004, 1500 gal 2/23/2002	Use: general office, country club dinning room and theater auditorium, complete system upgrade in 7/7/2009, this facility upgraded the previous cesspool at the site, The new facility should provide a properly designed Title 5 grease trap	Yes
3	Cameron Senior Center kitchen grease trap						Yes
4	Cemetery dept. [Pine Grove office]	N/A	Completed System 10/25/2001	Owner Town of Westford	N/A	Maintenance Building for Westford Cemetery Commission (10 employees, 25 public park), Built by LandTech Consultant Inc., percolation rate at 2min/inch, The sewage disposal system will service the maintenance garage	Yes
5	Cemetery dept. [Fairview Cemetery]						No
6	Crisafulli School					Part of WWTF	No
6	Crisafulli School grease trap						No
6	Robinson School						No
6	Robinson School kitchen and grease traps						No
7	East Boston Camps -- boy's camp Kitchen / dining						No
7	East Boston Camps Kitchen grease trap						No
7	East Boston Camps -- boy's camp bath & showers						No
7	East Boston Camps -- girl's camp						No
7	East Boston TBD		Replaced section of pipe for the system located at the Day camp area, included effluent T-filter with Riser to Final Grade, at East Boston Camps, on 8/7/2013				No
7	East Boston TBD						No
7	East Boston TBD						No
7	East Boston TBD						No
7	East Boston TBD						No
8	Fire Department Center Station					BOH records only included hazardous material information for 51 Main Street	No
8	Center Fire Station floor drains						No
8	Center Fire Station Grease Trap						No

Appendix A Westford Municipal Underground Waste Assets
Draft Listing of all Westford Septic Other Subsurface Disposal/Waste Assets --- Update June 20, 2014

Property #	Westford Municipal Building /Function Description	Building Address and Contact Staff Name	Parcel - Site Address	Type of System (cesspool, conventional, tight tank, innovative/alternative (I/A))	Date of Install/Last Upgrade Technical Notes	As Built Plan Y/N	BOH Info	Pumping Contractor & Last Date Service	Capacity	Variances Granted (Y/N)	Type of Variance	Original Construction Date
8	Police Station	53 Main Street	51-53 Main Street	Center Sewer to Abbot WWTF	Engineering & Whitewater Contract	Yes	Yes	?	two 5000 gallon tanks with a 5000 pump chamber, 96' x 47' leach field			
8	Police Station garages - sally port-boiler room drain	53 Main Street	51-53 Main Street	tight tank?	alarms? Oil traps?	Yes	Yes	?				
8	Police station (new for 1999) septic system	53 Main Street	51-53 Main Street	T5-now not used		Yes	Yes					
9	Fire Department - Rogers Station 3	39 Town Farm Road	39 Town Farm Road	T5, septic system with leach fields	11/14/2001	Yes	Yes	RJ Lacombe		N/A	N/A	11/14/2001
9	Rogers Fire Station 3 floor drains	39 Town Farm Road	39 Town Farm Road	tight tank for floor drains	3000 gallon Tight tank with alarms? BOH record had 1500 gallon tank with 20' x 50' leach field for floor drains, or 2000 gallon holding tank (records had all of those numbers)	Yes	Yes	Lacombe 5/27/2014	740	N/A	N/A	11/14/2001
10	Fletcher Library	50 Main Street	50 Main Street	Center Sewer to Abbot WWTF	Engineering & Whitewater Contract	Yes	Yes	9/13/04 1500 gallons by Greenwood Sewer Service	720 gpd, 1500 gallon septic tank and 30' x 60' leach bed in 1986; original system 900 gallon septic tank with 800 sq ft leach area	Yes 1986 variance granted	1) placement of primary septic system over 100 ft from library building 2) 24 min/in percolation rate in the reserve septic system (both were granted) 9/22/86	6/1/1965
10	Fletcher Library boiler room floor drains	50 Main Street	50 Main Street	TBD	??	Yes	Yes					
11	Highway/ School Maintenance Dept.	30 Beacon Street	30 Beacon Street	T5 leach field has failed		No	Yes only for hazardous material storage					
11	Highway/ School Maintenance Dept. floor drains	30 Beacon Street	30 Beacon Street	tight tank with alarms	alarms functional?	No	Yes only for hazardous material storage					
12	Highway/DPW garage	28 North Street	28 North Street	T5 Septic System	11/13/2006	Yes		R.J Lacombe 6/27/2013 pumped 4000 gallons	1155 gpd, 4000 gallon septic tank			11/13/2006
12	Highway/DPW garage vehicle wash bay	28 North Street	28 North Street	Tight Tank	6/20/04 With alarms	Yes? Look at scans	Yes	R.J. Lacombe Septic 2/27/08 1,000 gal;	> 3,000 gal capacity			
12	Highway Garage floor drains	28 North Street	28 North Street	Tight Tank	6/20/04 With alarms	Yes? Look at scans	Yes					
13	Hills Orchard	4 Hunt Road	4 Hunt Road	T5	10/16/2006	Yes	Yes	Unknown	200 gpd	N/A	N/A	10/16/2006
14	IT department [Old Forge Village Fire Station]	1 East Prescott Street	1 East Prescott Street	Permitted title 5	less than 10 years old?	Yes	Yes	R.J Lacombe 9/4/2008 for 1500 gallons	151 gpd	N/A	N/A	Unknown
15	Westford Museum	2 Boston Road	2 Boston Road		TBD probably older septic system	No	Yes		1000 gallon septic tank and one 6' by 12' leach pit			7/25/1979
15	Museum Cottage	4 Boston Road	2 Boston Road		Probably tied to museum system	No	Yes					

Appendix A Westford Municipal Underground Waste Assets
Draft Listing of all Westford Septic Other Subsurface Disposal/Waste Assets --- Update June 20, 2014

Property #	Westford Municipal Building /Function Description	If failed, fail date	Construction Update/Repair Dates	Responsible Parties	Pumping Frequency/ Dates for last 5 years	Additional Notes/Comments	Scanned Plans
8	Police Station					Not a ton of info in records, check scanned plans	Yes
8	Police Station garages - sally port-boiler room drain					Not a ton of info in records, check scanned plans	Yes
8	Police station (new for 1999) septic system					Not a ton of info in records, check scanned plans, septic system not in use anymore. Need more information whether or not this septic system was properly decommissioned.	Yes
9	Fire Department - Rogers Station 3	N/A	N/A	Owner Fire Dept			Yes
9	Rogers Fire Station 3 floor drains	N/A	N/A	Owner Fire Dept	5/19/03 R.J. Lacombe 2000 gallons		Yes
10	Fletcher Library		10/6/1986	J.V. Fletcher Library	9/13/04 1500 gallons by Greenwood Sewer Service; 10/10/03 1500 gallons by Greenwood Sewer Service; 9/21/01 1000 gallons by Greenwood Sewer Service; 8/14/1995 1000 gallons by Greenwood Sewer Service		Yes
10	Fletcher Library boiler room floor drains			J.V. Fletcher Library			Yes
11	Highway/ School Maintenance Dept.					BOH records only included hazardous material information, leach field failure was from the Town's existing inventory list. More information is need regarding the failure.	
11	Highway/ School Maintenance Dept. floor drains					BOH records only included hazardous material information	
12	Highway/DPW garage		N/A	Owner Town of Westford	R.J Lacombe 6/27/2013 pumped 4000 gallons; 2/28/2013 10,000 gallons by RJ, 1/2/2013 3500 gallons by RJ; 5/13/2009 2000 gallons by RJ; 1/26/2009 3000 gallons by RJ; 3/3/2009 7000 gallons by RJ; R.J. Lacombe 2/27/08 pumped 4,000 gal; R.J. Lacombe 1/7/08 7,000 gal; R.J. Lacombe 12/3/08 1,000 gal	Public works facility with 32 non-office employees	Yes
12	Highway/DPW garage vehicle wash bay						Yes
12	Highway Garage floor drains						Yes
13	Hills Orchard	N/A	N/A	Town of Westford (owner)	Unknown (no records of pumping)	Retail Farm Stand, 1500 gallon septic tank with a 10' by 35' leaching field	Yes
14	IT department [Old Forge Village Fire Station]	May 2002 existing on-site septic system failed title 5 inspection	Repair 1/13/03	owner Town of Westford	R.J Lacombe 9/4/2008 for 1500 gallons	Office bldg maximum of 15 persons, municipal office space for the town of Westford was the forge village fire station annex, note of old cesspool abandoned on BOH job weather card 2002	Yes
15	Westford Museum					Offices and bedroom house	No
15	Museum Cottage						No

Appendix A Westford Municipal Underground Waste Assets
Draft Listing of all Westford Septic Other Subsurface Disposal/Waste Assets --- Update June 20, 2014

Property #	Westford Municipal Building /Function Description	Building Address and Contact Staff Name	Parcel - Site Address	Type of System (cesspool, conventional, tight tank, innovative/alternative (I/A))	Date of Install/Last Upgrade Technical Notes	As Built Plan Y/N	BOH Info	Pumping Contractor & Last Date Service	Capacity	Variances Granted (Y/N)	Type of Variance	Original Construction Date
16	Nabnasset Fire Station	14 Oakhill Rd	14 Oakhill Rd	T5				RJ Lacombe pumped 1000 gallons on 5/19/2003				
16	Nabnasset Fire Station floor drains	14 Oakhill Rd	14 Oakhill Rd	New tight tank	With alarms	Yes	Yes	N/A	1500 gallon tigh	N/A	N/A	4/20/2011
17	New Nabnasset School	99 Plain Road	99 Plain Road	T5	8/7/1996	Yes	Yes					
17	New Nabnasset School kitchen grease trap	99 Plain Road	99 Plain Road									
18	Norman Day School	75 East Prescott Street	75 East Prescott Street	To WWTF Blanchard	Whitewater Contract	Yes	Yes	N/A	N/A	N/A	N/A	Tied in new building 8/20/03
18	Norman Day School Kitchen Grease Trap	75 East Prescott Street	75 East Prescott Street									
19	Parkerville Schoolhouse	110 Carlisle Road	110 Carlisle Road	T5	3/29/1991	Yes	Yes	Unknown	1000 gallon tank	BOH variance granted 8/21/1	Variance for sewage disposal systems to be a minimum of 100' from wetlands	
20	Recreation Department offices at Town Farm	35 Town Farm Road Pat Savage	35 Town Farm Road	Old cesspool			No	recent pump				
21	Recreation Department - Edwards Beach facility	Location address: Birch Road? Contact Address: 35 Town Farm Road Pat Savage	0 Williams Ave	T5, septic system	bathrooms = yes		No					
22	Recreation Department - Forge Beach facility	Location address: 1 W Prescott St Contact Address: 35 Town Farm Road Pat Savage	0 W Prescott St		bathrooms = yes		No					
23	Recreation Department - Graniteville Ball Fields	Location address: 15 River Street Contact Address: 35 Town Farm Road Pat Savage	15 River Street		bathrooms = yes		No					
24	Rita Miller School	1 Mitchell Way	1 Mitchell Way	T5, septic system	2/28/2002 construction permit	Yes	Yes	Andover Septic	4640			
24	Rita Miller School Kitchen Grease Traps	1 Mitchell Way	1 Mitchell Way	Grease Trap								
25	Roudenbush Community Center	65 Main Street	73 Main Street	Center Sewer to Abbot WWTF	Also T5 system (back field) 12/14/1989 no longer, last upgrade 9/7/2004	Yes	Yes	A community Sanitation and RJ Lancombe	5 drm (gpd?)	N/A	N/A	Unknown
25	Roudenbush [Child Care at Frost School]	73 Main Street	73 Main Street	Center Sewer to Abbot WWTF, 3,000 gallon 2 compartment septic tank	Plus cesspool and tight tank under parking lot, Repair construction permit on 9/28/2004 (repair sewage disposal system) new septic system	Yes	Yes		5 drm (gpd?)	Not sure if it was granted, permit was issued on Aug 30, 2004 for percolation rate of 22 min/inch	Variance requested, 9/17/2004, for no sewage disposal system shall be installed in an area that has a percolation rate greater than 22 min/inch	
26	Roudenbush Child Care [Old Nabnasset School]	170 Plain Road	170 Plain Road	T5	9/26/2002	Yes	Yes	Pumped May 2014 by Joseph Nickerson with A Community Sanitation, Lacombe 8/12/2004	518	N/A	N/A	New system 3/12/02
27A	Stony Brook Middle School	9 Farmers Way	9 Farmers Way	WWTF; Industrial Arts Wastewater Holding Tank	8/16/2004; 10/30/2001 Plan Date	Yes	Yes		22,000			
27A	Stony Brook School Kitchen Grease Trap	9 Farmers Way	9 Farmers Way									

Appendix A Westford Municipal Underground Waste Assets
Draft Listing of all Westford Septic Other Subsurface Disposal/Waste Assets --- Update June 20, 2014

Property #	Westford Municipal Building /Function Description	If failed, fail date	Construction Update/Repair Dates	Responsible Parties	Pumping Frequency/ Dates for last 5 years	Additional Notes/Comments	Scanned Plans
16	Nabnasset Fire Station						Yes
16	Nabnasset Fire Station floor drains	N/A	N/A	Owner Town of Westford	N/A	Only record for the tight tank for the floor drains	Yes
17	New Nabnasset School		Refurnishing existing septic tank 8/14/1996	Westford School Department	RJ Lacombe 6000 gallons pumped 5/16/2012	1996 Refurnished existing septic system with dosing tanks, pumps and controls	Yes
17	New Nabnasset School kitchen grease trap					look at scanned as-built plans and pumping records	Yes
18	Norman Day School	N/A	N/A	Town of Westford (owner)	N/A	Tied in new building 8/20/03	Yes
18	Norman Day School Kitchen Grease Trap						Yes
19	Parkerville Schoolhouse	N/A		Owner Town of Westford	Unknown		Yes
20	Recreation Department offices at Town Farm				R.J. Lacombe 2,000 gal 5/30/06; R.J. Lacombe 7,500 gal 2/23/07; R.J. Lacombe 1,000 gal 2/2/07; R.J. Lacombe 1,500 gal 1/29/07; R.J. Lacombe 1,500 gal 6/15/06; R.J. Lacombe 1,500 gal 12/23/05		No
21	Recreation Department - Edwards Beach facility					Confirmed with Patricia A. Savage with Parks and Recreation Dept. that facility has public bathrooms.	No
22	Recreation Department - Forge Beach facility					Confirmed with Patricia A. Savage with Parks and Recreation Dept. that facility has public bathrooms.	No
23	Recreation Department - Graniteville Ball Fields					Empty file from BOH. Confirmed with Patricia A. Savage with Parks and Recreation Dept. that facility has public bathrooms.	No
24	Rita Miller School				Andover Septic 15,000 gal 8/20/07	Greystone elementary school? greystone elementary school sanitary sewage disposal system	Yes
24	Rita Miller School Kitchen Grease Traps				Andover Septic 4,000 gal 8/20/07		Yes
25	Roudenbush Community Center	Yes 10/19/1996	5/26/1989	Owner (No Suggestions) Community Center	Pumped 8/22/2006 for 1500 gallons by A community Sanitation, Pumped 3/8/2005 2000 gallons by RJ Lacombe	permit issued 5/26/1989 for 1500 gallon tank and 60'x 50' leach bed to address repairs to existing failed leaching area	Yes
25	Roudenbush [Child Care at Frost School]	Septic failure 5/20/2004	New septic system 8/27/04,	Town of Westford (owner)		2004 septic tank is 3,000 gallon 2 compartment septic tank	Yes
26	Roudenbush Child Care [Old Nabnasset School]	N/A	3/12/02 construction and repair updates to updates	Owner (No Suggestions) Community Center	5/13/04 1000 gallons by A community sanitation, 7/25/12 1500 gallons by A community Sanitation, 8/10/09 1000 gallons by A community Sanitation	Consists of leach field, 1500 gallon 2 chamber tank, 1000 gallon pump chamber, pump and alarm, school is without a gym, cafeteria or showers (about 100 persons)	
27A	Stony Brook Middle School						Yes
27A	Stony Brook School Kitchen Grease Trap						Yes

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Property #	Westford Municipal Building /Function Description	Building Address and Contact Staff Name	Parcel - Site Address	Type of System (cesspool, conventional, tight tank, innovative/alternative (I/A))	Date of Install/Last Upgrade Technical Notes	As Built Plan Y/N	BOH Info	Pumping Contractor & Last Date Service	Capacity	Variances Granted (Y/N)	Type of Variance	Original Construction Date
27B	Stony Brook Housing Phase 1, serves Middle School, Town Annex office building, recreation fields and public housing	3-7 Farmer Way	3-7 Farmer Way	Connect to Stony Brook WWTF		Yes	Yes		22,000 gpd capacity, 11,693 gpd maximum daily flow from Stonybrook 1			Permit issued April 3, 2002
27B	Stony Brook Housing Phase 2	3-7 Farmer Way	3-7 Farmer Way	Connect to Stony Brook WWTF		Yes	Yes		22,000 gpd capacity, Added maximum daily flow of 7,973 gpd to Stonybrook WTP			
27B	Stony Brook Housing Phase 2 to include Kitchen/dining?	3-7 Farmer Way	3-7 Farmer Way	Connect to Stony Brook WWTF	under development							
28	Water Department Office and Water Treatment Plant (Forge Village Water Treatment Plant)	60/63 Forge Village Road Steve Cronin	60 Forge Village Road Steve Cronin	T5, septic system for the treatment plant and a tight tank for the floor drains in the garage	Septic System 5/16/2008	Yes	Yes		453			
28	Water Department Treatment Plant Garage Floor Drains	60/63 Forge Village Road Steve Cronin	60 Forge Village Road Steve Cronin	T5	tight tank with oil separator and alarms	Yes	Yes					
29	Water Department - Water Treatment Plant	17-19 Nutting Road Steve Cronin	17-19 Nutting Road	T5, septic system for single bathroom, septic system for Nutting Road WTP part-time employees	12/28/2003 septic system	Yes	Yes	N/A	160 gpd septic system	N/A	N/A	New Construction 12/28/03
29	Water Department - Water Treatment Plant	17 Nutting Road Steve Cronin	17-19 Nutting Road	6 floor drains connected to drywell/tight tank	5/20/08 tight tank	Yes	Yes	N/A	14 gpd for tight tank that assumes pump out 2x per year	N/A	N/A	New Construction 5/20/08 tight tank
30	Water Department Garage (Blue Building)	63 Forge Village Road (65?)	65 Forge Village Road	T5	8/8/1978 date installed	No	Yes	R.J. Lacombe Septic Service, Raggs Septic Service Inc.	1000 gallon for septic tank			Construction Permit- Jan. 2002, completed date 5/16/2008 for 5 gal holding tank, permit for 1000 gallon septic tank 7/18/1978
30	Water Department Garage Drains	63 Forge Village Road (65?)	65 Forge Village Road	Tight tank for the floor garage drains?	Tight tank? Alarms?	No	Yes		5 gpd for holding tank for garage			
31	Westford Academy	30 Patten Road	30 Patten Road	Academy WWTF	Whitewater Contract	Yes						
31	Westford Academy Kitchen Grease Trap	30 Patten Road	30 Patten Road	Grease Trap		No	Yes					
31	Westford Academy Laboratory Drain Neutralizing Tanks	30 Patten Road	30 Patten Road	Alarms?	Seals ID during TWFS	No	Yes					

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Property #	Westford Municipal Building /Function Description	If failed, fail date	Construction Update/Repair Dates	Responsible Parties	Pumping Frequency/ Dates for last 5 years	Additional Notes/Comments	Scanned Plans
27B	Stony Brook Housing Phase 1, serves Middle School, Town Annex office building, recreation fields and public housing				10/28/2013 4000 gal for tight tank, 7/22/2009 3,000gal	WWTF and tight tank?; Stonybrook 1 has 16 residential units, Stonybrook 1 sewage is discharged through on-site Pump Station into gravity sewer in Farmer Way, Notice of noncompliance at Stonybrook Center for School Dept's WWTF, issued 4/13/2005, for exceedances of permit limits between October 2004 and January 2005, for BOD, TSS, Nitrate and Total Nitrogen, 2/10/2004 BOH received Temporary Wastewater transfer approval through end of June 2004 to transfer wastewater to Blanchard School in order to comply with Notice of Noncompliance issued to the School Dept. Notice of Noncompliance issued: 2/10/2004 to school department	Yes
27B	Stony Brook Housing Phase 2					WWTF permit limit is 22,000 gpd; Stonybrook 2 has 36 residential units, Stonybrook 2 is also below Farmer way, Stonybrook 1 and 2 WWTP Capacity 19,666 gpd based on September rates	Yes
27B	Stony Brook Housing Phase 2 to include Kitchen/dining?						Yes
28	Water Department Office and Water Treatment Plant (Forge Village Water Treatment Plant)				1500 gallons 6/7/2013, 2/15/2007 1000 gal, R.J. Lacombe 11/10/07 1,000 gal; R.J. Lacombe Septic Service: 11/10/07 1000 gal; pumped 1,000 gallons 2/15/2007, RAGGS Septic: 12/14/1999 Pumped 1500 gallons; 12/1/99 1500 gallons; 11/23/99 1500 gal; 11/12/99 1500 gal; 11/1/99 1500 gal; 10/21/99 1500 gal; 10/8/99 1500 gal; 9/28/99 1500 gal; 9/18/99 1500 gal; 9/11/99 1500 gal; 9/5/99 1500 gal; 8/22/99 1500 gal; 8/12/99 1500 gal; 8/2/99 1500 gal; 7/23/99 1500 gal; 7/14/99 1500 gal; 7/3/99 1500 gal; 6/21/99 1500 gallons; 6/9/99 1500 gallons; 5/28/99 1500 gal; 5/21/99 1500 gal; 5/14/99 1500 gal; 5/3/99 1500 gal; 4/21/99 1500 gal; 4/8/99 1500 gal; 3/29/99 1500 gal; 3/22/99 1500 gal; 3/18/99 1500 gal; 3/11/99 1500 gal; 3/1/99 1500 gal; 2/17/99 1500 gal; 2/6/99 1500 gal; 1/28/99 1500 gallons; 1/19/99 1500 gallons; 1/8/99 1500 gal; 8/20/98 1500 gallons; 9/2/98 1500 gal; 9/15/98 1500 gal; 9/23/98 1500 gal; 10/26/98 1500 gal; 10/4/98 1500 gal; 10/15/98 1500 gal; 12/28/99 1500 gal; 12/15/98 1500 gal; 12/2/98 150 gal;	Holding tank for garage at Forge Village Water Treatment Plant, Sub Surface Sewage Disposal System, percolation rate 2min/inch, tight tank at the site will only be used minimally for the floor drains from the garage, holding tank will be alarmed for high tank level, wastewater from floor drain will be piped through 4in pipe to oil/gas interceptor, prior to 1,000 gallon holding tank, floor drains do not drain to on-site septic system but to the tight tank instead, Also letter dated 1/18/2002 stating that Fitchburg will accept water from the tight tank. Septic Tank designed for maximum of 10 employees at 15 gal/employee/day Notice of noncompliance and return to compliance 5/21/2003: for disinfection residual in water entering system fell below 0.2 mg/L Is this in connection with the other WTP at 63 Forge Village Road?	Yes
28	Water Department Treatment Plant Garage Floor Drains					Smoked 6/14 alarm not functioning	Yes
29	Water Department - Water Treatment Plant	N/A	N/A	Westford Water Department	N/A	Septic system only receives waste water from one single bathroom and sink.	Yes
29	Water Department - Water Treatment Plant	N/A	N/A	Westford Water Department	N/A	Floor drains only in the Filter Room and hazardous materials are stored away from floor drains.	Yes
30	Water Department Garage (Blue Building)			Holding tank will be monitored and inspected once every three months by Westford Water depart, and will be pumped at least once per year, waste will be brought to Fitchburg WWTF, Owner was listed as the Town of Westford, Police Dept.			No
30	Water Department Garage Drains						No
31	Westford Academy				Pumping Records for 30 Pattern Rd: 7/30/15 7,800 gal Pump Chamber 8/30/13 25,000 gal 8/23/11 30,000 gal 9/17/09 28,000 gal		No
31	Westford Academy Kitchen Grease Trap						No
31	Westford Academy Laboratory Drain Neutralizing Tanks					Rm 119 Dark Room has a waste processing tank? Not storage	No

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31	Westford Academy Boiler and Shop Area Floor Drains	30 Patten Road	30 Patten Road	Tight Tank	alarms? Oil traps?	No	No					
32	Westford Town Hall	55 Main Street	Center Sewer to Abbot WWTF	Abbot WWTF		No	Yes		19,680	N/A	N/A	11/2/1966
33	VFW Softball Field	52 W. Prescott Street	52 W. Prescott Street	Sewage Disposal System	3/11/02 Repair	Yes	Yes	None	518	N/A	N/A	

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31	Westford Academy Boiler and Shop Area Floor Drains						No
32	Westford Town Hall						No
33	VFW Softball Field					snack bar, meeting room, public bathrooms, storage, sewage disposal system, maybe porta potties	Yes

Appendix B

Town of Westford Regulations

BOARD OF HEALTH REGULATION REGARDING FLOOR DRAINS

Amend the Code of the Town of Westford by adopting as part of the Board of Health Regulations the following Chapter 211 regarding Floor Drains:

CHAPTER 211 FLOOR DRAINS

211-1. PURPOSE OF REGULATION

Whereas:

* floor drains in industrial and commercial facilities are often tied to a system leading to a leaching structure (e.g. dry well, cesspool, leach field) or a septic system; and
* poor management practices and accidental and/or intentional discharges may lead petroleum and other toxic or hazardous materials into these drainage systems in facilities managing these products; and
* improper maintenance or inappropriate use of these systems may allow the passage of contaminants or pollutants entering the drain to discharge from the leaching structure or septic system to the ground; and
* discharges of hazardous wastes and other pollutants to floor drains leading to leaching structures and septic systems have repeatedly threatened surface and ground water quality throughout Massachusetts; and
* surface and ground water resources in the Town of Westford contribute to the Town's drinking water supplies;

the Town of Westford Board of Health adopts the following regulation, under its authority as specified in Section 211-2., as a preventative measure for the purposes of:

* preserving and protecting the Town of Westford's drinking water resources from discharges of pollutants to the ground via floor drains, and
* minimizing the threat of economic losses to the Town due to such discharges.

211.2. SCOPE OF AUTHORITY

The Town of Westford Board of Health adopts the following regulation pursuant to authorization granted by M.G.L. c.111 s.31 and s.122. The regulation shall apply, as specified herein, to all applicable facilities, **existing and new**, within the Town of Westford.

211.3 DEFINITIONS

For the purposes of this regulation, the following words and phrases shall have the following meanings:

Commercial and Industrial Facility: A public or private establishment where the principal use is the supply, sale, and/or manufacture of services, products, or information, including but not limited to: manufacturing, processing, or other industrial operations; service or retail establishments; printing or publishing establishments; research and development facilities; small or large quantity generators of hazardous waste; laboratories; hospitals.

Department: The Massachusetts Department of Environmental Protection.

Discharge: The accidental or intentional disposal, deposit, injection, dumping, spilling, leaking, incineration, or placing of toxic or hazardous material or waste upon or into any land or water so that such hazardous waste or any constituent thereof may enter the land or waters of the Commonwealth. Discharge includes, without limitation, leakage of such materials from failed or discarded containers or storage systems and disposal of such materials into any on-site leaching structure or sewage disposal system.

Floor Drain: An intended drainage point on a floor constructed to be otherwise impervious which serves as the point of entry into any subsurface drainage, treatment, disposal, containment, or other plumbing system.

Leaching Structure: Any subsurface structure through which a fluid that is introduced will pass and enter the environment, including, but not limited to, drywells, leaching catch basins, cesspools, leach fields, and oil/water separators that are not watertight.

Oil/Water Separator: A device designed and installed so as to separate and retain petroleum based oil or grease, flammable wastes as well as sand and particles from normal wastes while permitting normal sewage or liquid wastes to discharge into the drainage system by gravity. Other common names for such systems include MDC traps, gasoline and sand traps, grit and oil separators, grease traps, and interceptors.

Toxic or Hazardous Material: Any substance or mixture of physical, chemical, or infectious characteristics posing a significant, actual, or potential hazard to water supplies or other hazards to human health if such substance or mixture were discharged to land or water of the Town of Westford. Toxic or hazardous materials

...continued

include, without limitation, synthetic organic chemicals, petroleum products, heavy metals, radioactive or infectious wastes, acids and alkalis, and all substances defined as Toxic or Hazardous under Massachusetts General Laws (MGL) Chapter 21C and 21E or Massachusetts Hazardous Waste regulations (310 CMR 30.000), and also include such products as solvents, thinners, and pesticides in quantities greater than normal household use.

Use of Toxic or Hazardous Material: The handling, generation, treatment. storage, or management of toxic or hazardous materials.

211.4. PROHIBITIONS

With the exception of discharges that have received (or have applied and will receive) a Department issued permit prior to the effective date of this regulation, no floor drain(s) shall be allowed to discharge, with or without pretreatment (such as an oil/water separator), to the ground, a leaching structure, or septic system in any industrial or commercial facility if such floor drain is located in either:

A. an industrial or commercial process area, or

B. a petroleum, toxic, or hazardous materials and/or waste storage area.

211.5. REQUIREMENTS FOR EXISTING FACILITIES

A. The owner of a facility in operation prior to the effective date of this regulation with a prohibited (as defined under Section 211.4) floor drain system shall:

1. disconnect and plug all applicable inlets to and outlets from (where possible) applicable leaching structures, oil/water separators, and/or septic systems;
2. remove all existing sludge in oil/water separators, septic systems, and where accessible, leaching structures. Any sludge determined to be a hazardous waste shall be disposed of in accordance with state hazardous waste regulations (310 CMR 30.000). Remedial activity involving any excavation and/or soil or groundwater sampling must be performed in accordance with appropriate Department policies;
3. Alter the floor drain system so that the floor drain shall be either:
   a. connected to a holding tank that meets all applicable requirements of Department policies and regulations, with hauling records submitted to the Westford Board of Health at the time of hauling;
   b. connected to a municipal sanitary sewer line, if available, with all applicable Department and local permits; or
   c. permanently sealed.

B. Compliance with all provisions of this regulation must be accomplished in a manner consistent with Massachusetts Plumbing, Building, and Fire code requirements.
C. Upon complying with one of the options listed under Section 211.5.A.3, the owner/operator of the facility shall notify the Department of the closure of said system by filing the Department's UIC Notification Form.

211.6. EFFECTIVE DATES FOR ALL FACILITIES

The effective date of this regulation is the date posted on the front page of the regulation, which shall be identical to the date of adoption of the regulation.

A. Existing Facilities:
   1. Owners/Operators of a facility affected by this regulation shall comply with all of its provisions within 120 days of the effective date;
   2. All applicable discharges to the leaching structures and septic systems shall be discontinued immediately through temporary isolation or sealing of the floor drain.

B. New Facilities:
   1. As of the effective date of the regulation, all new construction and/or applicable change of use within the Town of Westford shall comply with the provisions of this regulation.
   2. Certification of conformance with the provisions of this regulation by the Board of Health shall be required prior to issuance of construction and occupancy permits.

211.7. PENALTIES

Failure to comply with provisions of this regulation will result in the levy of fines of not less than $200.00, but no more than $1000.00. Each day's failure to comply with the provisions of this regulation shall constitute a separate violation.

211.8. SEVERABILITY

Each provision of this regulation shall be construed as separate to the end that, if any provision or sentence, clause or phrase thereof, shall be held invalid for any reason, the remainder of that section and all other sections shall continue in full force and effect.

TOWN OF WESTFORD

HAZARDOUS MATERIALS STORAGE AND UNDERGROUND TANK REGULATIONS

REGULATIONS AFFECTING STORAGE OF HAZARDOUS MATERIALS AND HAZARDOUS WASTES AND AFFECTING UNDERGROUND STORAGE TANKS

APPROVED AT BOARD OF HEALTH HEARING: FEBRUARY 19, 2015
EFFECTIVE DATE: APRIL 1, 2015

SECTION 1 - AUTHORITY

The Board of Health of the Town of Westford, Commonwealth of Massachusetts (the Board), pursuant to the authority granted under Massachusetts General Laws (M.G.L.) Chapter 111, Section 31, as amended, and by any other power thereto enabling, and acting thereunder and in accordance therewith, has, in the interest of and for the preservation of the public health, duly made and adopted the following rules and regulations governing storage of hazardous materials and hazardous wastes in the Town of Westford and also governing registration and testing of underground storage tanks. These regulations enforce the Hazardous Materials Storage Bylaw, Chapter 61, as amended on March 22, 2014.

The effective date of this regulation is April 1, 2015.

SECTION 2 - FINDINGS AND PURPOSE

Improper storage of hazardous materials, hazardous wastes and leaking underground storage tanks containing hazardous materials are an important source of contamination of groundwater, surface water, soil, sediment, wetland resources and indoor and outdoor air. The purpose of this regulation is to protect, preserve, and maintain the existing and potential groundwater supply, groundwater recharge areas, surface waters, air quality and natural environment within the Town of Westford from contamination, and to protect public health and safety. Nothing in this regulation shall be construed as inconsistent with, or in interference with, the authority vested upon the Fire Chief under M.G.L. ch. 148, or any state rules and regulations adopted pursuant thereto or with the provisions of the Massachusetts Contingency Plan (MCP) 310 CMR 40.0000 or any other Massachusetts or Federal regulation.

SECTION 3 - DEFINITIONS

As used in this regulation the following words shall have the following meanings unless the context requires otherwise:

Abandoned: A tank or storage facility licensed under M.G.L. ch. 148 that is out of service for more than 180 days or any other tank or storage facility that is out of service for more than 12 months.

Above-ground storage tank (AST) or storage facility: Any tank or storage facility, whether inside or outside a building, without backfill over the sides of the tank. A fuel oil tank contained inside a building or vault, including a cellar, is considered to be an above-ground tank.

Board of Health: The Board of Health of the Town of Westford and/or its Agent.

CASRN: The Chemical Abstract Service Registry Number, which is a unique numerical designation assigned to each chemical substance described in the open literature.

Container: Any portable device in which hazardous materials or wastes or special wastes are stored, transported, treated, disposed of or otherwise handled.

CFR: Code of Federal Regulations.

CMR: Code of Massachusetts Regulations.

Discharge: Disposal, deposit, injection, dumping, spilling, leaking, escape, incineration, or placing of any hazardous material or any constituent thereof into or on any land or water so that such material may enter the environment or be emitted into the ambient or indoor air, a drywell, catch-basin, landfill, sewage system, or discharged into any waters, including groundwater.

Double–walled tank: A container with two complete shells, which provide both primary and secondary containment. The container shall have continuous 360 degrees interstitial space between the primary and secondary shells. The interstitial space shall be designed so that an approved interstitial space monitor is able to continuously monitor this space. All double-walled tanks shall be UL-listed.

Facility: A commercial, industrial, retail, institutional or municipal location, including a home business that requires a permit in accordance with this regulation.

Fire Chief: The Fire Chief of the Town of Westford and any designee of the Fire Chief.

Flood Zone: The 1% annual flood zone (commonly referred to as the 100-year flood zone) as depicted on the most current Flood Insurance Rate Map (FIRM) and/or by other document/amendment recognized by the Federal Emergency Management Agency (FEMA).

Groundwater Protection Area: An area identified as Zones I and II in the Water Resource Protection District (WRPD) in the Town of Westford Zoning Bylaw and the area within a 100-foot radius of private drinking water wells.

Hazardous Materials: Any substance or mixture with physical, chemical, infectious, flammable, combustible, radioactive, genotoxic, carcinogenic or toxic characteristics posing a significant actual or potential hazard to water supplies, air or land or other hazards to human health, safety and welfare if such substance or mixture were discharged to land, water or into the air. Hazardous materials include, without limitation, synthetic organic chemicals, petroleum products, heavy metals, radioactive or infectious wastes, acids and alkalis, and all substances defined as toxic or hazardous under M.G.L. ch. 21C and 21E and 310 CMR 40.0000.

Hazardous Waste: Any substance included on the Massachusetts Oil and Hazardous Materials List (MOHML), 310 CMR 40.1600, when disposed of as a waste.

Health Department: The Health Department of the Town of Westford.

Label: Any written, printed, or graphic material displayed or affixed to containers of toxic or hazardous materials.

Hazardous Waste Generator: Any person or Facility whose processes and actions create hazardous waste.

Hazardous Material User: Any commercial enterprise, government agency, owner or operator that utilizes hazardous materials for any purposes.

MassDEP: The Massachusetts Department of Environmental Protection.

Massachusetts Oil and Hazardous Materials List or MOHML: The MassDEP list that compiles reportable concentrations and reportable quantities of chemicals and is found at 310 CMR 40.1600.

MSDS/SDS: The most current version of the (Material) Safety Data Sheet, which defines any written or printed material concerning a hazardous chemical and which is prepared in accordance with 29 CFR 1910.1200(g).

Owner: Any person or legal entity with legal ownership of a site or facility and/or business.

Operator: A lessee or person(s) in control of and having responsibility for the daily operation of a facility for the storage and dispensing of toxic and hazardous materials.

Out of service: Not in use, with no regular filling or drawing; or not being maintained, without adherence to the requirements of this bylaw; or uncontrolled, without being attended or secured; or any combination thereof.

Release: Any uncontrolled movement of any hazardous material out of a tank or storage facility or its components, or any uncontrolled movement of water into a tank or storage facility or its components, measured as set forth in 527 CMR.

Reportable discharge: The quantity of a specific material under the Massachusetts Contingency Plan, 310 CMR 40.0000 that must be reported to MassDEP; the threshold quantity above which a spill or release of oil or a hazardous material must be reported to the MassDEP as reported in the MOHML.

Residential/Residence: Buildings occupied for living purposes.

Site: A commercial, residential, retail, institutional or municipal establishment and/or property/parcel**.**

Storage Facility: An area where hazardous materials are stored until transported to a treatment facility.

Special Waste: Any solid waste that is determined not to be a hazardous waste pursuant to 310 CMR 30.000 and that exists in such quantity or in such chemical or physical state, or any combination thereof, so that particular management controls are required to prevent an adverse impact from the collection, transport, transfer, storage, processing, treatment or disposal of the solid waste. Without limitation, special wastes include waste that will require special management to ensure protection of public health, safety or the environment based upon the physical, biological or chemical processes of the waste. Special wastes include but are not limited to: asbestos waste, infectious wastes, except as specified in 310 CMR 19.061(6), sludges including wastewater treatment sludges and industrial process wastewater treatment sludges. For the purposes of this regulation, special wastes do not include drinking water treatment sludges. (Ref: 310 CMR 19.006 and 19.061(2) and (3).).

Town: The Town of Westford

UL Listing: UL (Underwriters' Laboratories) has tested representative samples of the product and determined that it meets UL's requirements. These requirements are based primarily on UL's published and nationally recognized Standards for Safety.

Underground Storage Tank (UST): Any tank or storage facility including fill lines, supply lines, vent lines and all associated connections and appurtenant structures where 10 percent or more of the tank volume is below the ground surface (527 CMR). This definition does not include storage in a freestanding container or tank inside a building**.**

SECTION 4 – PERMITS

(1) All residences, home businesses, industrial, commercial, retail, institutional and municipal establishments, including schools, that maintain tanks or other storage containers with an individual capacity to hold more than 50 gallons liquid measure and which are used to store, use, process or generate hazardous materials, hazardous wastes, or special wastes must apply for and obtain a permit for each tank or container from the Health Department. Permits required by the Health Department are in addition to other permits and licenses that may be required by other Town or State regulation, including Fire Prevention regulations.

(2) Permit applications are available from the Health Department or can be downloaded from the Health Department's web page. The permit application shall provide the following information:

a) Name, address and telephone numbers (day and night) of the owner or operator.

b) Capacity and contents of tanks and containers including the names of the hazardous materials or wastes being stored along with the CASRN.

c) The date of installation, if known.

d) Types, sizes, ages, and locations of all tanks and containers.

e) Written emergency plan that includes descriptions of leak detection, spill prevention, spill containment and control measures in use for each tank or container.

f) Evidence that employees have been trained to respond appropriately to emergencies involving hazardous materials per Occupational Safety and Health Act (OSHA) regulations.

g) A site plan or drawing showing the locations of each tank or container. A hand-drawn sketch is acceptable.

(3) For underground tanks, the following information is required for each tank:

a) A plan or drawing of the site showing the location of each tank, fill pipe, vent pipe, and other appurtenant structures. A hand-drawn sketch is acceptable. In complex situations, the Health Department may require a plot plan certified by a Registered Land Surveyor.

b) The depth of the bottom of the tank referenced to ground surface.

c) The capacity of the tank.

d) The date the tank was installed.

e) The tank construction material, i.e. steel, fiberglass, etc.

f) The presence of double walls, interstitial monitoring, or other monitoring systems, i.e. monitoring wells.

g) The results of any previous tightness tests or other tests of tank integrity, if applicable.

(4) All owners or operators of tanks and storage containers must obtain an initial permit within 90 days of the enactment of this regulation and afterwards annually by January 31. Owners and operators that currently are registered under the provisions of Ch. 61 in effect prior to the enactment of this regulation shall obtain a permit within 90 days of enactment.

(5) Owners and operators shall maintain a written inventory, reconciled on a monthly basis, of purchase, sale, use, disposal or discharge of the stored material. The written inventory may be kept using a form available from the Health Department. Upon the request of the Health Department, owners or operators shall produce, within 24 hours, their latest reconciled inventory.

(6) Owners and operators shall notify the Health Department within ten (10) business days of any changes in the information provided on the initial application. The Health Department may require a new permit if there is substantial change in method of generation or storage, or in the types or quantities of materials or wastes stored. The Health Department will require a new permit if the owner changes.

(7) The owners of all residences with an underground fuel storage tank used to store No. 2 fuel oil must obtain a permit from the Health Department. The permit application must include the information required in Sections 4 (2) and (3) above. Residential owners of tanks are not required to maintain a written inventory but must be able to provide the quantity of oil purchased within ten (10) business

days if requested by the Health Department. Sales receipts from the oil delivery company are sufficient for this purpose.

SECTION 5 - EXCEPTIONS

(1) The following activities are exempt from the requirements of this regulation, however, storage of materials referenced is not exempt unless otherwise specified:

a) Application of deicing chemicals in conformance with the Massachusetts Snow and Ice Control Program.

b) Application of water treatment chemicals by the Town of Westford Water Department or by other Community Water Systems and storage of these chemicals.

c) Discharge of ordinary sanitary wastewater into a septic system installed in accordance with applicable state and local regulations.

d) Ordinary use of household or garden products in accordance with labeling instructions and consistent with state and federal regulations.

(2) Permits are not required under this regulation for the following tanks and storage containers:

a) Septic systems

b) Diesel fuel stored in tanks mounted on a vehicle and used to fuel vehicles on a construction site.

c) Hydraulic oil reservoir tanks on heavy equipment.

d) Use and storage of domestic biodegradable cleaners for residential and business maintenance.

e) Aboveground fuel oil tanks, including tanks in a basement, installed solely for the purpose of heating the building, providing hot water, and/or as fuel for an emergency generator. Aboveground fuel oil tanks used to store fuel for industrial processes require a permit.

f) Aboveground and underground propane tanks and liquefied petroleum gas (LPG) tanks installed for the purpose of heating the building and/or providing hot water and/or cooking fuel, to operate an emergency generator or for a propane filling station.

g) Storage of consumer-sized containers of hazardous materials such as motor oil, cleaning supplies, paint, paint thinner, lawn chemicals, weed killer, and any other such commercially available products intended for retail, provided that each individual container holds less than 50 gallons liquid volume.

h) Industrial wastewater holding tanks (IWHT) provided they conform to 314 CMR 18.00.

SECTION 6 - OBLIGATIONS OF PERMIT HOLDERS

In addition to the general requirements in Section 4, all holders of permits under this regulation must comply with the following requirements and obligations.

(1) Owners and operators or other Persons in Charge must take immediate response actions and must report via telephone any discharge of hazardous materials or hazardous wastes, leaking tanks or abnormal loss of material above the Massachusetts Contingency Plan Reportable Quantity (RQ) for the material to the Health Department and the Fire Chief within 12 hours of knowledge of the event. Leaving a message on the Health Department voice mail constitutes reporting under this regulation. This reporting must be done in addition to any required reporting, if applicable, under the Massachusetts Contingency Plan, 310 CMR 40.0300 et seq. All permit holders must familiarize themselves with the Notification Requirements of the Massachusetts Contingency Plan, including Reportable Quantities.

(2) Although releases, spills and discharges less than the RQ do not have to be reported to the MassDEP, permit holders must arrange for cleanup of the release and proper disposal of the material. Use of sorbent material may be an appropriate response in many situations. Permit holders must notify the Health Department and the Fire Chief within 12 hours of spills or releases less than the RQ if those spills enter the environment. Additionally the caller should report how the spill was managed. Spills within the confines of a building do not have to be reported provided those spills do not enter a floor drain to the environment.

(3) Areas where materials governed by this regulation are used, stored, or generated may not contain a floor drain that leads to a storm drain, septic system or leaching structure of any kind or to a wetland or other surface water body. Floor drains in such areas must drain to a containment vessel or tight tank and collected material must be removed by a MassDEP-approved hazardous waste hauler for disposal. If the drain cannot meet these requirements it must be sealed.

(4) All hazardous waste and other waste from materials governed by this regulation must be removed by a MassDEP-approved hazardous waste hauler for disposal.

(5) All storage containers and tanks permitted under this regulation must meet the following criteria:

a) Storage areas must provide adequate systems to prevent spills and to prevent discharges that do occur from entering the environment.

b) Tanks and containers stored indoors must have containment systems that will hold a volume equal to 110 percent of the volume of the largest container.

c) Tanks and containers stored outdoors must have containment systems that will hold a volume equal to the volume of the largest container plus 10 percent of the total storage volume. The containment system must be a permanent dike or other structure constructed of impervious material with an impervious, chemical resistant base. The storage area must be under permanent cover and sheltered from the weather to exclude rain and snow from filling the containment area unless otherwise allowed by the Board of Health. All piping and other appurtenant structures that contain or convey the material being stored must be included within the containment structure.

d) Owners and operators of aboveground storage tanks, with the exception of residential and other heating oil tanks, must monitor tank or container conditions weekly. The monitoring must be recorded in written or electronic form and shall consist of a visual inspection, inventory of materials present, any noted leakage or unaccounted loss, and the condition of the containment/dike structure. The recorded information must be available upon request by the Health Department. Owners and operators that are required to conduct inspections of storage areas under other state or federal regulations may use the same reporting forms to meet the requirements of this regulation. The Health Department will provide a form that others can use to record the required information.

e) All records produced to meet the requirements of this regulation shall be maintained by the applicant for at least seven (7) years.

f) All waste containers must be labeled to conform to the requirements of 310 CMR 30 based on their generator status. At a minimum, hazardous waste containers must have a label that includes the words “Hazardous Waste” and

must also provide the name of the waste and the category of the waste (ignitable, corrosive, reactive, toxic). Satellite Accumulation Area (SAA) containers must be dated when full and moved to a main accumulation area. The main accumulation area containers must be dated upon the first addition of waste.

g) Hazardous materials that are not hazardous waste must be labeled with the name of the chemical in the container.

h) All commercial, industrial, retail, institutional and municipal permit holders must have in place a contingency plan for managing spills or other releases from containers that have permits under this regulation. Upon request the permit holder must provide documentation to the Health Department that relevant employees are trained in proper response to spills or releases, appropriate personal protection equipment (PPE) is available, and that the relevant employees have been trained in their use.

i) Residential and other owners of aboveground or basement fuel oil tanks used solely to store heating oil used to heat the building, provide hot water or to serve emergency generators do not have to comply with the containment requirements of this Section. Owners of heating oil tanks (or diesel tanks used for emergency generators) must comply with the reporting requirements of Sections 6(1) and 6(2). The Health Department recommends that owners of basement tanks consider sealing floor drains to prevent contamination from entering the environment. The Health Department also recommends that owners of basement tanks have the oil company inspect the tank annually.

j) All owners and operators of aboveground fuel oil tanks, including residential or other fuel oil tanks, upon removal of the tank, must ensure that all appurtenant devices and structures, including fill pipes, vents and fuel delivery piping are removed in such a manner as to prevent accidental release of fuel oil to the basement or to the environment.

(6) Aboveground tanks that store propane or liquefied petroleum gas (LPG) are exempt from this regulation.

SECTION 7 - UNDERGROUND STORAGE TANKS

All owners and operators of Underground Storage Tanks, including residential and other fuel oil tanks, must comply with the permit requirements stated in Section 4(3). Owners and operators of Underground Storage Tanks must also comply with the following:

(1) No later than 15 years after the date of installation and annually thereafter, all steel Underground Storage Tanks at industrial, commercial, retail, institutional and municipal facilities must be tested for tightness using a procedure capable of detecting a leak of 0.10 gallons per hour with the probability of detection of 0.95, and the probability of false results of 0.05. The tightness test must include the tank and all piping leading to and from the tank.

(2) All residential Underground Fuel Storage Tanks must be tested for tightness using a procedure capable of detecting a leak of 0.10 gallons per hour with the probability of detection of 0.95, and the probability of false results of 0.05 no later than 20 years after the date of installation of the tank and every third year thereafter.

(3) If an owner or operator does not know the date of tank installation, s/he shall provide the Health Department with alternate information that will allow the Health Department to approximate the age of the tank. Such information includes but is not limited to the year the building or house was construction and how long the owner has owned the building. If the tank is likely to be more than 15 years old (or 20 years old for residential tanks) based on the judgment of the Health Department the owner or operator will be required to perform tightness testing.

(4) Owners and operators must provide the Health Department with a written or electronic copy of the tightness test results within five (5) business days of completion of the test.

(5) Where the Health Department has probable cause to believe that an underground tank may be leaking the Department may order the owner or operator to test for tightness within ten (10) business days at the owner or operators sole expense.

(6) All Underground Storage Tanks that fail a tightness test that cannot be reconciled by the consultant or engineer performing the test must be removed as soon as possible, but under no circumstances more than thirty (30) days after the failed test. Owners and operators of tanks that fail a tightness test must comply with the requirements of the Massachusetts Contingency Plan (310 CMR 40.0000) and the Tanks and Containers regulations of the Massachusetts Board of Fire Prevention Regulations (527 CMR).

(7) In addition to meeting the requirements of the Massachusetts Contingency Plan and the Massachusetts Board of Fire Prevention Regulations, all owners or operators that remove Underground Storage Tanks must notify the Health Department via telephone or electronic correspondence at least 24 hours before the tank will be removed. If the removal is conducted immediately after a failed tightness test or other indication that it is leaking, the Health Department shall be notified verbally at the same time that the Fire Chief is notified and via telephone or electronic correspondence. After the tank is removed, the owner or operator must provide to the Health Department a written or electronic copy of the receipt of disposal signed by the representative of the Approved Tank Yard or salvage yard (Form FP 291) within seventy-two (72) hours of the tank removal.

(8) The Health Department reserves the right to conduct a site visit during tank removals.

(9) No residential Underground Storage Tanks may be repaired in the Town. Any tank determined to be in need of repair must be removed and replaced by an aboveground (i.e. cellar) tank.

(10) New residential Underground Storage Tanks for fuel oil storage are prohibited.

(11) All owners and operators storing flammable or combustible material in Underground Storage Tanks must obtain a permit from the Fire Chief in addition to the Health Department permit. No. 2 fuel oil is not a combustible material.

(12) Underground Storage Tanks must be constructed of materials suitable for the material stored in them. If the material to be stored in a tank is changed from what is noted on the permit application, the owner or operator must notify the Health Department and the Fire Chief, if applicable in the case of flammable or combustible materials. The owner or operator must provide documentation from the tank manufacturer that the tank is compatible with the proposed storage.

(13) Underground tanks that store propane or liquefied petroleum gas (LPG) are exempt from this regulation.

SECTION 8 - SPECIAL CONDITIONS

(1) New Underground Storage Tanks may not be installed in a groundwater protection area, within 100 feet of a private drinking water well, in a WRPD I or II area as indicated in the Town of Westford Zoning Bylaw, or in a flood zone.

(2) The holder of a permit under this regulation shall notify the Health Department in writing within ten (10) business days whenever the activities authorized under the permit cease on a permanent basis.

SECTION 9 - VARIANCES

(1) All requests for variances must be made in writing and must include all required documentation. The applicant, at his/her own expense, must notify all abutters by certified mail at least ten (10) days before the hearing at which the variance request will be considered. The notification must state the variance sought and the reasons therefor. The Board of Health shall notify the Fire Chief, Conservation Commission, Building Inspector and request their comments in writing within 14 days of receipt of the request. The Board of Health shall hold a hearing on the variance request within 45 days of receipt. Any variance granted by the Board of Health shall be in writing as shall be any denial of a variance request, along with a brief statement of the reason for granting or denying the variance.

(2) All requests for variances must include technical justification for the variance including the opinion of a Registered Professional Engineer licensed in Massachusetts and qualified to provide the documentation required.

SECTION 10 - FEES

(1) The Board of Health will publish a fee schedule associated with permits and inspections under Chapter 61.

(2) Fees are due on the same date as the permit application. Failure to pay a fee is a violation and subject to the penalties established within this regulation.

SECTION 11 - ENFORCEMENT

(1) Any person who violates any provision of this bylaw shall be punished by a fine of not more than $300 for each offense as allowed under MGL ch. 40 §21. Each day or portion thereof during which a violation continues shall constitute a separate offense; if more than one violation exists, each violation shall constitute a separate offense. Upon the request of the Board of Health or the Fire Chief, the Board of Selectmen shall take such legal action as is necessary to enforce this regulation.

(2) The Board of Health, the Health Department and/or, the Fire Chief may, upon reasonable notice to the occupant of the premises enter any premises for the purpose of investigating, sampling, or inspecting any record, condition,

equipment, practice, or property relating to activities subject to this regulation and for purposes of enforcing this regulation.

(3) The Board of Health may suspend or revoke any permit issued pursuant to this regulation for any violation of this regulation. Such revocation or suspension may take place after a hearing held by the Board of Health of which the permit holder is given seven (7) days written notice. Such notice shall be deemed given upon sending a letter via certified mail, return receipt requested, to the address listed on the permit application.

(4) This regulation may be enforced by the Health Department, Fire Chief, and/or Police Department. Whoever violates any provision of this regulation may be penalized by a non-criminal disposition process as provided in M.G.L. ch. 40, §21D and the Town's non-criminal disposition Bylaw. If non- criminal disposition is elected, then any person who violates any provision of this regulation shall be subject to a fine of not more than $300 per offense.

(5) The Health Department and/or Fire Chief may enforce this regulation or enjoin violations thereof through any lawful process, and the election of one remedy shall not preclude enforcement through any other lawful means.

SECTION 12 – SEVERABILITY

Each provision of this regulation shall be construed as separate, to the end that if any part of it shall be held invalid for any reason, the remainder shall continue in full force and effect.

SECTION 13 – OTHER APPLICABLE LAWS

Nothing in this regulation is intended to conflict with or supersede any state or federal law or regulation regarding storage or hazardous materials, hazardous wastes and special wastes and management of releases of these materials to the environment.

SECTION 14 – EFFECTIVE DATE

This regulation shall be effective as of April 1, 2015.

WESTFORD BOARD OF HEALTH REGULATIONS

REQUIREMENTS FOR THE SUBSURFACE DISPOSAL OF SANITARY SEWAGE

(Revised through 9/26/05)

Westford Board of Health

ADOPTED 8/14/00
REVISED 9/26/05
EFFECTIVE DATE 12/01/06

TABLE OF CONTENTS

1.0 Purpose and Authority

These regulations are adopted in accordance and with authority from M.G.L c. 111, s. 31 and M.G.L. c. 21A, s.13. The purpose of these regulations is to protect public health, safety, and the environment by requiring the proper siting, design, permitting, construction, inspection, and maintenance of sewage disposal systems located in Westford. All prior regulations adopted by this Board relative to sewage disposal systems are hereby superseded. These regulations should be read with 310 CMR 15.000: Title 5 and 314 CMR 5.00: Massachusetts Groundwater Discharge Program.

2.0 Definitions

Approving Authority- Westford Board of Health or its agent
Bedroom- see definition in 310 CMR 15.002
Board- Westford Board of Health
Conditionally passing Title 5 inspection- as defined in Part A, section B of the Department of Environmental Protection approved system inspection form
Disposal System or Sewage Disposal System- a system or series of systems for the treatment and disposal of sanitary sewage below the ground surface.
Interim Wellhead Protection Area- as defined in 310 CMR 22.02
New Construction/Expansion- as defined in 310 CMR 15.002
Permit-sewage disposal system construction permit
Soil Testing- percolation tests and/or soil evaluation
System Designer- Professional Engineer or Registered Sanitarian who has demonstrated knowledge and experience in sanitary engineering, a qualified system design professional
System Inspection- as defined in 310 CMR 15.302, also known as a title 5 inspection
System Inspector- a person approved by the Department of Environmental Protection pursuant to 310 CMR 15.340
System Installer- a person licensed by the Westford Board of Health who constructs, repairs, or replaces sewage disposal systems
Title 5- 310 CMR 15.000 Massachusetts State Environmental Code: Minimum Requirements for the Subsurface Disposal of Sanitary Sewage
Wetland- any land area or surface so defined by the Massachusetts Wetlands Protection Act M.G.L. c.131, s. 40 or 310 CMR 10.00
Zone I and Zone II- as defined in 310 CMR 22.02
Transmission Line- any solid pipe or conduit for the transmission of sanitary sewage

3.0 Lot Testing- Soil Evaluation and Percolation Testing

Soil evaluation and percolation testing may be conducted year round. At the Boards or Agents discretion, additional soil evaluation and/or percolation testing may be required after groundwater has receded so that either the complete soil profile or the soils hydraulic conductivity can be more accurately evaluated. Additional site evaluation for ledge and wetlands may be required if the site is covered with ice and/or snow.

3.2 All applications for lot testing shall be submitted in duplicate.

4.0 Requirement(s) for Sewage Disposal System Construction Permits

4.1 Applications for a disposal system construction permit shall be considered complete when the following have been received in the Board of Health office.

a) Completed application form
b) Permit fee
c) Two (2) sets of the proposed design plan that are in full-compliance with Title 5 and local Board of Health regulations.

4.2 All facilities for the disposal, treatment, or transmission of sanitary sewage (including but not limited to Wastewater Treatment Facilities) which are located in the Town of Westford shall require approval and a permit from the Approving Authority. The Board's agent may issue repair, upgrade, or component replacement permits as required to protect public health and the environment**.**

4.3 Permits for individual system component replacements, alterations, or relocations may only be issued after a complete system inspection has been conducted and the inspection report has been received in the Board of Health office. The requirement for system inspection before the issuance of a disposal system construction permit may be waived at the Board's or agent's discretion for simple repairs such as the replacement of pipes, tees, etc.

4.4 A lot with an existing dwelling shall not be made smaller so as to subdivide or create another building lot unless either an approved sewage disposal system permit and associated plan of the lot with the existing dwelling is on file in the Board of Health office depicting suitable soils in the designated reserve area, or, other proof is available to the Approving Authority indicating that a reasonable upgrade can be made on the existing lot. This section shall not apply to lots in which disposal systems have been permitted and installed in accordance with the 1995 version of Title 5.

4.5 Permanent structures in excess of four hundred (400**)** square feet, such as but not limited to, buildings, foundations, or swimming pools shall be prohibited on any lot until the owner/applicant has provided proof to the approving authority that the lot with the proposed construction could support a disposal system upgrade.

This section shall not apply to lots in which sewage disposal system permits have been issued since March 31, 1995 in accordance with the 1995 version of Title 5.

5.0 Title 5 System Inspections

5.1 Proposals for permanent structures or additions to permanent structures which are less than four hundred (400*)* square feet and do not increase the sanitary sewage flow from the facility are prohibited unless a system inspection is conducted to determine the location of all system components. This requirement may be waived by the approving authority if official records on file in the Board of Health office depict the location of system components.

5.2 If a dwelling is proposed to be constructed, reconstructed, altered, or repaired to an extent that the gross potential living/occupancy area is increased by fifty percent or greater, a system inspection shall be performed on the disposal system. If inspection determines that the system is failing, the system shall be upgraded. This requirement for inspection shall in no way exempt the owner/operator from the requirement to upgrade the system in full-compliance with the requirements for new construction should the approving authority determine that the construction would result in either an increase in the sanitary sewage flows from the facility or an expansion of use.

5.3 All work and modifications conducted as a result of a "conditionally" passing Title 5 system inspection shall require a sewage disposal system construction permit**.**

6.0 Sewage Disposal System Plans, Specifications and Requirements

6.1 Lot testing that is conducted for disposal system design purposes shall be depicted on a test location plan at a scale of 1"=20', 1"=40' or 1"=60' and shall be submitted to the Board within sixty (60) days of performing said tests. A test location plan shall also depict proposed and existing lot lines, known wetlands, and known topography. If a completed design plan is submitted to the Board within sixty (60) days of testing, the requirement for a test location plan shall be waived. The Board may in the future require that test location plans and disposal system design plans be submitted electronically and/or in a specific digital format.

6.2 Plans designed to serve residential populations shall be designed with a system capacity of one hundred fifty (150) gallons per day per bedroom.

6.3 A minimum of one thousand (1,000) square feet shall be available on each single family residential lot for the installation of the primary sewage disposal system, and an additional one thousand square feet shall be available on the lot for the installation of the reserve or replacement sewage disposal system.

6.4 The disposal systems and all components shall be installed entirely on the same lot as the facility discharging sewage into said system.

6.5 The minimum distance from a soil absorption system to a wetland, retention pond/basin, or detention pond/basin shall be one hundred (100) feet. This distance shall be measured from the top rim of a retention pond/basin and from the elevation of the highest outlet structure in a detention pond/basin.

6.6 The minimum distance from a septic tank, pump chamber, or soil absorption system to a private drinking water well shall be one hundred (100) feet.

6.7 The minimum distance from a soil absorption system to a subsurface stormwater infiltration system that has a storage volume of greater than five thousand (5,000) gallons shall be fifty (50) feet. The storage volume of a subsurface stormwater infiltration system shall be calculated by summing the total volume of all subsurface leaching structures used for stormwater management which are separated by less than twenty five (25) feet.

6.8 A manhole with a riser within twelve (12) inches of final grade shall be provided for every continuous one hundred (100) foot section of gravity sewage transmission line. Gravity sewage transmission lines that serve shared systems or systems serving more than one dwelling may extend three hundred (300) feet between manholes.

6.9 An effluent filter and access port to within 6 inches of final grade is required in and/or above the outlet tee of all septic tanks. All distribution boxes must be able to withstand vehicular loads and shall be designed and constructed so as to withstand H-20 loading. A minimum of schedule 40 PVC (or its approved equal) shall be required for all piping.

6.10 Only 1½ inch stone aggregate shall be used below distribution leaching laterals from the crown of the distribution pipes to the bottom of the soil absorption system.

6.11 No sewage disposal system serving new construction shall be installed in an area that has a percolation rate greater than thirty minutes per inch. Percolation tests that have rates greater than thirty minutes per inch shall be located a minimum of twenty-five feet from the proposed soil absorption system.

6.12 The Board, at its own discretion, may require the applicant at his/her own expense, to conduct environmental and/or hydrogeological studies regarding a proposed development or sewage disposal system(s) to determine what effects the proposal would have on public health or the environment.

6.13 In addition to 310 CMR 15.220 the following items must be depicted on disposal system design plans:

a) Name of person who delineated wetlands, date of delineation, and mean high water elevations for surface waters.

b) Existing and proposed topography for all areas that may affect the disposal system. Topographical elevations shall be provided in increments not more than every two (2) feet. Topographical contours shall be provided for each thirty (30) foot horizontal increment. The datum of topography shall be the USGS National Geological Vertical Datum 1929 (NGVD) wherever practical.

c) All relative topographical and subsurface features or structures, existing and proposed, within one hundred fifty (150) feet of the proposed disposal system. This shall include but not be limited to drinking water wells, subsurface sewage disposal systems, stormwater management structures, wetlands, utilities, easements, driveways, buildings etc.

d) All lot lines to scale, lot size, name of professional who delineated lot boundaries for record plan, record plan number, date, and registry book & page.

e) All soil testing conducted on lot, including unsatisfactory testing

f) A statement as to the disposal system's location relative to nitrogen sensitive areas, specifically: (1) public drinking water supply resource areas such as Zone I's, Zone II's, and Interim Wellhead Protection Areas, and (2) areas served by both private wells and on-site sewage disposal systems.

g) Legal owner of lot to be served by disposal system, if a corporation, include officers, if a trust, include trustees.

h) Street address, subdivision lot number and assessor's map and parcel.

i) A notation depicting that 1½ inch stone aggregate is required from the crown of the distribution pipes to the bottom of the soil absorption system.

j) A notation depicting the required system capacity (gallons per day) and the approved system capacity provided (gallons per day)

k) For systems over two thousand gallons per day, the groundwater mounding effect from the introduction of effluent to the soil shall be calculated and this mounding effect shall be added to the groundwater offsets in 310 CMR 15.212.

l) The original seal and signature of the system designer.

6.14 As-built plan specifications:

a) Two sets of As-built plans and Certifications shall be submitted to the Board of Health office by the same designer who designed the approved plans within thirty days of the completed installation.

b) As-built information must be overlaid onto the approved design plan.

c) As-built topography after finish cover has been applied shall be required for all disposal system designs. This must include breakout elevations and finish elevations above all system components.

d) As-built elevations must be provided for the following: top of foundation; sewer pipe invert at dwelling; pipe inverts in/out of all tanks, pump chambers, distribution boxes, etc.; top of all tanks, pump chambers, distribution boxes, etc.; beginning and ending of all perforated leaching laterals; bottom of soil absorption system.
e) As-built water line and driveway location shall be provided.
f) Horizontal ties from dwelling corners or some other permanent structure to all major system components shall be required.
g) Date and type of all inspections performed by the system designer during construction.

7.0 Inspections Conducted by the Approving Authority

7.1 No inspections will be conducted by the Board of Health or its agent until the licensed system installer has appeared in the Board of Health office and signed the disposal system construction permit and picked up the Job-Weather-Card. No inspections shall be conducted by the Board or its agent unless the licensed installer requests the inspection and is present on site during the inspection.

7.2 All inspections required for a disposal system shall be performed within 30 days of commencement of disposal system construction or disposal system permit shall be considered void, unless a prior agreement has been made with the approving authority that allows for a longer period of time. The Board or agent may prohibit the performance of inspections if weather conditions exist that make good construction practices difficult to adhere to and quality materials difficult to obtain.

7.3 The Board generally conducts the minimum following inspections. However, inspection requirements may vary and shall be determined by the Approving Authority.

1. Bottom of excavation for soil absorption system; fill approved, before placement in excavation
2. Fill in place; stone approved but not in place.
3. Final inspection, when system is complete in every way except for the placement of final cover over the components. Peastone should be in place with the beginning and ends of the pipes exposed. Distribution box should be filled with water and 3 gallons of water in a container must be left next to distribution box for a water test. Pump(s) must be operable.
4. A pump and alarm float test when present (pump systems only)

7.4 Should a retaining wall or impermeable membrane be used as part of the disposal system an inspection of the excavation at its deepest point below the wall or membrane is required. An inspection prior to backfilling is also required.

7.5 No components shall be backfilled or obstructed from view until the Board or agent has signed-off on that particular component(s) on the Job-Weather-Card. The Job-Weather-Card shall be posted in plain view on the building where sewer pipe exits, in the window of excavator or backhoe, or in some other pre-arranged location.

8.0 Inspections Performed and Required by the System Designer

8.1 The designer should perform as many inspections as he/she feels is appropriate depending on site conditions, design specifics, etc. At a minimum however, the designer must perform the following inspections.

1. Bottom of excavation for soil absorption system
2. Final inspection prior to backfilling components

9.0 Certification Required by System Designer and Installer

9.1 Designer must submit an as-built plan and certification statement within thirty days from the time the disposal system installation was completed or, disposal system permit shall be void. Certification must be provided on form shown in Appendix I. This form may be transposed onto designer's letterhead, but language may not be added, deleted, or altered in any way.

9.2 Installer must submit the Job-Weather-Card with the certification section completed within 30 days of completing disposal system installation, or disposal system permit shall be void. A sample Job-Weather-Card is shown in Appendix II.

9.3 As-built plans and certifications in full compliance with Title 5 and these regulations shall be submitted to the approving authority a minimum of ten (10) days prior to the issuance of a certificate of compliance by the approving authority.

10.0 Disposal System Installer's License

Annual licenses, for the period January 1 through December 31, to install or repair disposal systems in Westford shall be issued to all installers who score a 70% or better on the Board's installer's exam, have previous experience with disposal systems, and are of good moral character. Installers who do not renew their license by January 30th are required to take the installer's exam again. The Board or its agent reserves the right to require additional installer examinations if required.

11.0 Variances

11.1 Variances from these regulations may be granted for disposal systems serving new construction only after notification of the variance request and associated

public hearing has been sent by certified mail with cost borne by the applicant to all direct abutters and to abutters-to-abutters within three hundred feet of the applicant's property a minimum of ten days prior to the hearing date. This notification must include the specific nature of the variance request, the date, time, and location of the public hearing.

11.2 Proof showing that the abutter notifications were sent by certified mail, the abutters list as certified by the assessor's office, and a copy of the letter sent to abutters must all be received in the Board of Health office one week prior to the hearing date.

11.3 Variances from these regulations for systems serving existing dwellings with no increase in flow shall be granted in accordance with 310 CMR 15.402 through 15.405 Local Upgrade Approval.