



Pomperaug District Department of Health

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General Policy on Water Treatment Wastewater (WTW)

All Water Treatment Wastewater (WTW) systems shall prevent the discharge of WTW to the ground surface, wetlands, or open watercourses, and shall comply with the requirements of the Connecticut Public Health Code.

1. Applicant to submit Application for Water Treatment Wastewater (WTW) Disposal System.
2. All current requirements of the Technical Standards for Subsurface Sewage Disposal Systems of the Connecticut Public Health Code On-site Sewage Disposal Regulations for WTW's must be complied with.
3. The document titled, Water Treatment Wastewater Application shall be accompanied by a fee of \$100.00 and submitted prior to review.
4. Soil testing may be required for approval. The soil test fee for the WTW system, if required, will be \$125.00
5. A Permit to Install a Water Treatment Wastewater System will be issued by the Pomperaug District Department of Health after review of all required information pursuant of the CT Public Health Code requirements and site conditions.
6. A guidance document containing all pertinent CT Public Health Code requirements will be supplied to applicant upon request.
7. An inspection by the Pomperaug District Department of Health District Sanitarian of the WTW system is required. An as-built drawing with distances from two or more reference points to the WTW system must be submitted.

IX. GROUNDWATER AND SURFACE WATER DRAINAGE

Storm water swales shall be constructed to lead storm water away from SSDSs. Minimum separating distances between storm water collection/drainage/infiltration systems and SSDSs are stipulated in Table 1 (Item E, F & H). See Section II A for SSDS separating distance considerations for SWISs. Refer to Section III D and Table 3 for storm water drainage piping requirements.

Impervious cover storm water that discharges via sheet flow or through minor leak-offs is not considered a drainage system. Pervious pavement material is not considered a SWIS. SWISs should not concentrate large quantities of water in close proximity of SSDSs as they can create localized groundwater mounding that can interfere with the operation of the SSDS and diminish wastewater renovation. See Section II for additional storm water system separation distance requirements.

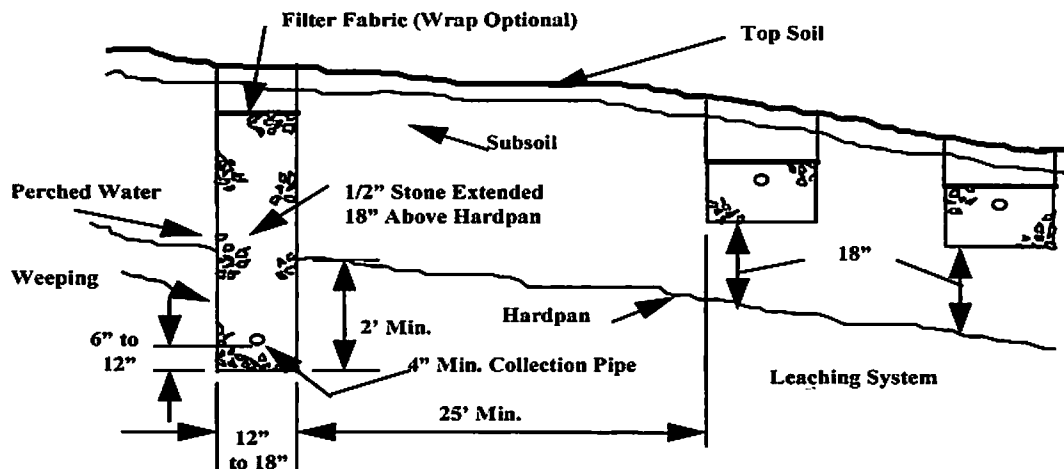


Figure 17 - Typical Curtain Drain Construction

Groundwater control drains (when utilized) shall be located up-gradient of the leaching system, and on the sides if necessary. The depth of these drains shall be designed to lower the groundwater at least 2 feet below the bottom of the entire leaching system (Figure 17). Drains shall be equipped with a collection pipe located 6 to 12 inches above the bottom of the trench to collect and discharge groundwater away from the leaching system area. This collection pipe shall have a minimum diameter of 4 inches and shall consist of open-joint tile, porous or perforated pipe. Perforated collection pipes are typically installed with holes on the bottom of the pipe and surrounded by clean stone or gravel to a depth necessary to control groundwater. Groundwater control drains shall be designed similar to Figure 17, or as otherwise designed by a P.E.

Minimum separation distances for all groundwater drainage systems (e.g., curtain, foundation) are stipulated in Table 1 (Items E & G). Groundwater drainage shall not discharge into or within 25 feet of a SSDS, and increased separation distance may be needed if the discharge location may impact the operation of the leaching system.

X. WATER TREATMENT WASTEWATER

The Commissioners of the Department of Energy and Environmental Protection and the Department of Public Health entered into a delegation agreement in July 2017 that provides the authority for the DOH to approve and permit discharges of water treatment wastewater (WTW) on properties governed by PHC Sections 19-13-B103a through f. The agreement authorizes WTW discharges to approved WTW disposal systems which include (1) WTW dispersal systems, (2) SSDSs, and (3) holding tanks. All WTW disposal systems shall prevent the discharge of WTW to the ground surface, wetlands, or open watercourse, and shall comply with the following requirements and any future regulations promulgated by the Department of Public Health:

1. The applicant (property owner or duly authorized agent) shall submit to the DOH a design plan/sketch of the proposed WTW dispersal system, WTW holding tank, or connection to the SSDS. The submittal shall also include the name and contact information of the installer.
2. If warranted, the applicant shall demonstrate compliance with PHC Section 19-13-B100a (e).
3. The applicant shall specify the type of water treatment device, name and model number, and its anticipated WTW discharge volume per cycle and frequency.

4. WTW solid conveyance piping shall have a minimum separating distance of 25 feet, 75 feet, and 100 feet, respectively, to public and private water supply wells with required withdrawal rates of <10 GPM, 10 to 50 GPM, and >50 GPM. The DOH may further reduce the distance to no less than 10 feet to private wells on existing developed properties if compliance cannot be met due to site limitations. WTW solid conveyance pipe shall be approved by the DOH and protected from freezing. Solid pipe listed in Table 2-A is acceptable for gravity WTW conveyance pipe, and pipe listed in Table 2-B is acceptable for pressure WTW conveyance pipe.
5. Non-discharging WTW disposal system components (e.g., WTW holding tanks, WTW dispersal system settling or filtration structures) shall meet the minimum separation distances cited in Table 9, unless otherwise authorized by the Commissioner.
6. WTW dispersal systems shall meet the separation distances cited in Table 1 (Item Q), and WTW dispersal system receiving structures shall meet the minimum separation distances cited in Table 9. Air gaps/breaks in WTW conveyance pipes that are outside of the building foundation shall meet the minimum separation distances cited in Table 9, unless otherwise authorized by the Commissioner.
7. WTW holding tanks, including piping, shall be located at least 10 feet from SSDSs.
8. WTW dispersal systems and WTW holding tanks shall be H-20 load rated in vehicular travel areas.
9. The bottom of the WTW dispersal system shall be located a minimum 12 inches above maximum groundwater and 24 inches above ledge rock.
10. WTW dispersal systems shall have a minimum storage volume of 1.5 times of either the anticipated discharge per cycle or daily average, whichever is greater.
11. Stone aggregate used shall be free of silt, dirt and debris and covered with approved filter fabric.
12. WTW holding tanks shall provide an access cleanout to grade and be equipped with a high-level alarm.
13. The DOH or registered sanitarian licensed pursuant to Chapter 395 shall approve the design of a WTW dispersal system or WTW holding tank prior to installation. Approval is not required from the Commissioner for WTW holding tanks; however approval from the Commissioner is required for WTW discharges directed to sewage holding tanks (See Section XI).
14. The installer shall provide twenty-four (24) hour minimum notice to the DOH prior to commencement of installation, unless otherwise agreed upon.
15. All applicable permits (electrical, plumbing, etc.) shall be obtained from the local building official.
16. An as-built drawing shall be submitted to the DOH that includes distances from two or more permanent reference points to the WTW disposal system.

The DOH may require an inspection of the WTW disposal system. In areas where well water treatment is anticipated, plans for new SSDSs should designate an area where a WTW dispersal system can be installed in accordance with Table 9. The Commissioner may authorize WTW discharge to a SSDS if it is determined that the nature and volume is unlikely to cause problems with the SSDS. WTW cannot be discharged to a cesspool. WTW from ion exchange systems, either cationic (e.g., water softener) or anionic (e.g., radionuclide treatment), cannot be discharged to a SSDS. WTWs approved to discharge to a SSDS are listed in Appendix E, which may be updated prior to the next publication of these standards.

Table 9

Item	Separation Distance (feet)	Special Provisions
Public or private water supply well with required withdrawal rate of:		The DOH may allow certain separation distance reductions on existing developed properties if compliance cannot be met due to site limitations. ⁽¹⁾⁽²⁾⁽³⁾
< 10 GPM	75	
10 to 50 GPM	150	
> 50 GPM	200	
Open watercourse	25	
Public water supply reservoir	100	
Property line	10	
Subsurface sewage disposal system	See Table 1 (Item Q)	

- (1) Reductions cannot be granted to public water supply reservoirs or public water supply wells.
- (2) Reductions to private wells shall not be reduced to less than 25 feet. WTW discharges less than 75 feet up-gradient of a private well shall be avoided, whenever possible.
- (3) The DOH may not allow reduced setback distances if there is a concern that the WTW may negatively impact the quality of the groundwater.

J. Property line		Distance to sewage tank and reserve leaching area shall be reduced to 10 feet.
Up-gradient and on sides	15 ⁽¹⁾	1. Distance shall be reduced to 10 feet if the top of the leaching system is below original grade, grading rights from affected property owner are secured, or retaining walls are utilized (See Section VIII A for retaining wall provisions).
Down-gradient	25 ⁽²⁾	2. Separating distance between the leaching system and down-gradient property line shall be reduced to 15 feet if MLSS is not applicable or on flat groundwater table lots; further reduction may be allowed as cited in footnote 1 if either condition exists.
K. Water Piping		
Pressure (e.g., potable, irrigation)	10 ⁽¹⁾	1. Water line trench excavations less than 25 feet from leaching system shall not be backfilled with FDM.
Water supply suction	75 ⁽²⁾	2. Distance between water suction pipe and sewage tank shall be reduced to 25 feet if tank is verified to be watertight.
L. Below ground swimming pool	25	See Item G for down-gradient pools with groundwater control drains.
M. Above ground swimming pool	10	Includes hot tubs (except on decks).
N. Accessory structure	10	Distance to structure without full-wall, frost protected footings shall be reduced to 5 feet. See Item G if drains provided.
O. Utility service trench (e.g., electric, gas)	5	Utility trench excavations less than 25 feet from leaching system shall not be backfilled with FDM.
P. Buried fuel tanks	25	Distance to sewage tank shall be reduced to 10 feet. Distance to leaching system shall be reduced to 10 feet if not down-gradient of leaching system. See Item G if drains provided.
Q. Water treatment wastewater (WTW) dispersal system		Distance to sewage tank shall be reduced to 10 feet.
Small discharge (<150 GPD)	25 ⁽¹⁾	Distance to WTW dispersal system non-discharging settling or filtration structures and solid piping shall be reduced to 10 feet; however solid piping excavations shall not backfilled with FDM.
Med. discharge (150 – 500 GPD)	50 ⁽²⁾	1. Distance to leaching system shall be reduced to 10 feet if MLSS is not applicable or the WTW dispersal system does not discharge up-gradient or down-gradient of the leaching system.
Large discharge (>500 GPD)	75 ⁽³⁾	2. Distance to leaching system shall be reduced to 25 feet if MLSS is not applicable or the WTW dispersal system does not discharge up-gradient or down-gradient of the leaching system. 3. The DOH may require an increased distance or an engineered assessment on the impacts of localized groundwater mounding in the vicinity of a SSDS.
R. Closed loop geothermal system		
Bore hole, Trench	50	Distance to leaching system shall be reduced to 25 feet as long as geothermal system is not down-gradient of leaching system. Distance to sewage tank shall be reduced to 25 feet.
Geothermal piping to Borehole/Trench	10	Geothermal piping excavations less than 25 feet from leaching system shall not be backfilled with FDM.
S. Grade cuts or soil disturbance down-gradient of leaching system	50	A soil cut within 50 feet down-gradient of a leaching system shall not be allowed if bleed-out from cut is a concern. Distance may be reduced with the approval of the DOH if it is demonstrated the cut/soil disturbance preserves the leaching system's receiving soil (See MLSS Appendix A).

APPENDIX E: WATER TREATMENT WASTEWATER DISCHARGES TO SSDSs**Authorized WTW Sources**

WTW shall only be from a calcite filter, granular activated carbon filter, or a Point of Use (POU) reverse osmosis unit.

WTW Discharge Limits

Single-family residential buildings: WTW discharge is less than 150 gallons per backwash cycle, and cannot exceed a daily average of 50 GPD.

Other buildings: WTW discharge is less than 150 gallons per backwash cycle or less than 10 percent of the building's SSDS daily design flow, whichever is greater. Additionally, discharges cannot exceed a daily average of 50 GPD or 2 percent of the buildings SSDS daily design flow, whichever is greater.

Existing SSDS Requirements

Septic tanks must have two compartments, an effluent filter, and be properly sized for the daily design flow of the building. Single compartment tanks can remain only if receiving WTW from a POU reverse osmosis unit that discharges less than 50 GPD. Septic tanks must have been cleaned and inspected within three years with no reported signs of malfunctioning.

Leaching systems must provide at least 50 percent of the required ELA and be in good operating condition with no signs of malfunction or at risk of hydraulically overloading the receiving soil.

Proprietary Leaching Systems

Proprietary leaching system companies may not support the discharge of WTW into their SSDS products. Therefore the applicant should consult with the proprietary company to determine if use of their leaching system product is suitable with WTW discharge.