



**Application for the Installation of a Water Treatment Wastewater System (WTW)**

Property Location: Town: \_\_\_\_\_ Street: \_\_\_\_\_ Street #: \_\_\_\_\_

Owner: \_\_\_\_\_ Phone No: \_\_\_\_\_

Address: \_\_\_\_\_ Email address: \_\_\_\_\_

Installer: \_\_\_\_\_ Phone No: \_\_\_\_\_

Address: \_\_\_\_\_ Email address: \_\_\_\_\_

WTW Dispersal System     WTW Holding Tank     Connection to a subsurface sewage disposal system

Name, model number & type of treatment device: \_\_\_\_\_

WTW discharge volume and frequency of discharge: \_\_\_\_\_

What is treatment device being installed to remove? \_\_\_\_\_

Type and size of WTW dispersal system: \_\_\_\_\_

Storage volume of WTW dispersal system: \_\_\_\_\_

Depth to maximum groundwater: \_\_\_\_\_ Depth to ledge: \_\_\_\_\_

Distance to well(s): \_\_\_\_\_ Distance to subsurface sewage disposal system: \_\_\_\_\_

Signature of Installer: \_\_\_\_\_ Date: \_\_\_\_\_

**The design plan submitted for the proposed WTW disposal system must include the following:**

- Property Lines
- Septic system(s)
- Driveway(s)
- WTW disposal system, including piping
- Buildings
- Well(s) (including neighboring properties)
- Watercourses/waterbodies
- Depth of system bottom below grade

***A test hole will be required if there is not any test hole data on file***

**An as-built drawing that includes distances from two or more permanent reference point to all components of the WTW disposal system must be submitted to the Uncas Health District**

**See Pages 2 & 3 for requirements for the installation of a WTW disposal system**

**Applications can be emailed to: [ofcmgr@uncashd.org](mailto:ofcmgr@uncashd.org)**

**401 West Thames Street, Suite 106, Norwich, CT 06360**

**(860) 823-1189 F: (860) 887-7898**

**DISTRICT USE ONLY**

Plan Review Fee \$50.00  Fee Paid: \_\_\_\_\_ Receipt # \_\_\_\_\_ Date: \_\_\_\_\_

Site Testing Fee \$75.00  Cash  Credit Card  Check # \_\_\_\_\_

Reviewed By: \_\_\_\_\_ Date: \_\_\_\_\_

Approved By: \_\_\_\_\_ Date: \_\_\_\_\_

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. The applicant shall specify the type of water treatment device, name and model number, and its anticipated WTW discharge volume per cycle and frequency.
3. 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.
4. 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.
5. 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.
6. WTW holding tanks, including piping, shall be located at least 10 feet from SSDSs.
7. WTW dispersal systems and WTW holding tanks shall be H-20 load rated in vehicular travel areas.
8. The bottom of the WTW dispersal system shall be located a minimum 12 inches above maximum groundwater and 24 inches above ledge rock.
9. 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.
10. Stone aggregate used shall be free of silt, dirt and debris and covered with approved filter fabric.
11. WTW holding tanks shall provide an access cleanout to grade and be equipped with a high-level alarm.
12. 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.
13. The installer shall provide twenty-four (24) hour minimum notice to the DOH prior to commencement of installation, unless otherwise agreed upon.
14. All applicable permits (electrical, plumbing, etc.) shall be obtained from the local building official.
15. 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.

**Table 9 Item Separation Distance (feet) Special Provisions**

Item	Separation Distance (Feet)	Special Provisions
Public or private water supply well with required withdrawal rate of: < 10 GPM 10 to 50 GPM > 50 GPM	75 100 200	The DOH may allow certain separation distance reductions on existing developed properties if compliance cannot be met due to site limitations. (1) (2),(3)
Open watercourses	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.

**Table 1 Q Separation distance to a Subsurface sewage disposal system**

Q - Water treatment wastewater (WTW) dispersal system		Distance to septic tank shall be reduced to 10 feet. 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.
Small Discharge <150 GPD	25' (1)	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.
Med. Discharge 150-500 GPD	50' (2)	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.
Large Discharge > 500 GPD	75' (3)	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.

**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.

## WTW dispersal system capacity

Cubic feet (ft<sup>3</sup>) times 7.48 equals gallons

### Stone filled trenches

For calculation purposes it can be assumed stone filled excavations provide 40% void space (storage volume). Cubic feet (ft<sup>3</sup>) times 7.48 equals gallons. Example: A WTW Dispersal System that consists of a stone filled excavation (Dimensions: 10 feet long, 3 feet wide, 2 feet deep) has a volume of 60 ft<sup>3</sup> (10' x 3' x 2' = 60 ft<sup>3</sup>) and a void space of 24 ft<sup>3</sup> (60 ft<sup>3</sup> x 0.4 = 24 ft<sup>3</sup>), which equates to 179.5 gallons (24 ft<sup>3</sup> x 7.48 gallons/ft<sup>3</sup> = 179.5 gallons) of WTW storage capacity. o WTW dispersal systems that include stone filled excavations, or other receiving structures

### Infiltrators

Quick4 <sup>®</sup> High Capacity Chamber Specifications	
Size	34"W x 53"L x 16"H)
Effective Length	48" (1219 mm)
Storage Capacity	62 gal (235 L)
Invert Height	11.5" (292 mm)

Quick4 <sup>®</sup> Standard Chamber Specifications	
Size	34"W x 53"L x 12"H
Effective Length	48" (1219 mm)
Storage Capacity	43 gal (163 L)
Invert Height	8" (203 mm)

### Gallery capacity – Height x Width x Length x 7.48 = gallons

12"gallery = 239.36 gals/section  
 18"gallery = 359.04 gals/section  
 24"gallery = 478.72 gals/section  
 30"gallery = 598.4 gals/section  
 36"gallery = 718.08 gals/section  
 48"gallery = 478.2 gals/section